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The Replaceable Vault Light

The new system of vault lighting, which gives the maximum amount of light, strength and durability and is the only one that provides for the quick, easy and perfect replacement of broken glass.

Manufactured By
Mullen Brothers Co.
Fulton Bldg.
Pittsburgh Pa.
Non-Shrinkable and Non-Warpable Veneered Doors

The possibility of constructing a hollow sanitary door seems to have been overlooked by architects and manufacturers until a recent invention of W. L. Evans, Washington, Ind., brought such a door to the attention of the trade.

Even after this door had been successfully manufactured and proved to be all that the inventor claimed for it, many architects looked on the scheme as not feasible for the reason that it takes great pressure to force glue into the pores of the wood and they could not see how the under side of the cross banding could be held up without some solid support under it. Here a well known principle had been overlooked, that is, that a wire stretched tightly between two points could not be pushed to one side of a straight line between these two points without stretching the wire, and the same principle applies in the cross banding the wire. Many tests were made in order to arrive at the amount of pressure required to stretch the cross banding sufficient to cause deflection between the wooden ribs, and while the manufacturers use cross bands 3-16 inch thick in order that it may withstand the greatest pressure that will be submitted, with a large factor for safety, yet it was found that cross bands 1-16 inch thick would be sufficient for the general run of work.

The original idea in the invention was to produce a door that would not warp or twist and that was sufficiently light for one man to hang it and that ordinary door hinges would be of sufficient strength to handle it. However, the result of four years work resulted in producing a door that would not shrink or swell in length or breadth, that would not warp or twist, that was as sound proof as a hollow partition and weighed but one-half that of a solid door. The inventor accomplished more than the original idea, but in doing so it was found necessary to provide much special machinery and appliances, in fact, special equipment for the work.

In the experiments and scientific investigation necessitated in the perfecting of this door many new points came to light in the use of veneers. One of these is that the thinner the veneer, the better it can be made to hold, provided...
it is left sufficiently thick to protect the glue. It was found that the best thickness of veneer to put on this door was one-eighth inch before finishing and the manufacturers will turn down an order before using a thicker veneer. The thicker the veneer the more cells to absorb moisture and swell the veneer exerting additional strain on the glue fibres in ratio to the cubes of sections of the comparative veneers forming an equilateral triangle, two sides of the triangle being formed by a line passing through the veneer and one side of the triangle being at the edge of the veneer. This serve to break up the sound waves, giving the door its sound proof qualities.

All the material going into the construction of this door after it is dried in the usual way is then passed through a special shrinking machine, from the same reason that a tailor shrinks cloth, this will shrink commercially dry stock one inch for each 30 inches in width. During the past four years this door has been shipped to nearly every state in the Union, being used in many of the largest hotels, hospitals and office buildings, as well as resident work and the success of the invention is now assured.

The Carnahan Manufacturing Company of Logootee, Ind., which manufacture this door and sell it under one year's guarantee state that during the past three years it has never had an Evans process door returned on account of its construction, nor did it know of one going wrong. It is not a cheap door, but on account of special manufacturing equipment the company is able to meet competition on flush doors.

How do you pile your cement?
Do you lay a row of sacks on the floor, and then cross those bags with the second row?
That's a customary way of doing it, but it isn't the best way. One of the important objects to serve in the piling of cement is to keep out all the air possible. A better way to pile cement is to place a row of bags on the floor, then lay the second row right on top of the first, the sacks laying in the same direction, but be sure to break the joints, the same as in laying shingles.

One man who very conscientiously tried to pile his cement so that it would be kept in the best condition possible was under the impression that all the air space that could be obtained would prevent the absorption of moisture. Therefore, he laid one row of sacks on the floor, and on top of these placed 2x4's, then laid a second row of sacks of cement, and so on until the pile was complete. On nice warm days he would throw the doors of his cement house open, believing that the warm air would dry the cement.

He was mistaken. A warm atmosphere carries more moisture than a cold one, and cement will draw moisture whenever exposed. Therefore, the cement house should be kept closed always, and the cement should be piled so that the pile has as few air spaces as possible.

When cement cakes in the pile, the dealers will frequently lay the blame on the brand of cement, whereas, in fact their method of handling it is responsible.

The Canton (Ohio) Bricklayers' Union has just completed a compromise wage scale calling for 70 cents an hour for the laying of all kinds of material. The new scale will go into effect April 1.

In the past there have been two wage scales for the laying of two kinds of brick. Working with standard brick called for 65 cents an hour while laying "pavers" brought 75 cents an hour. This, however, according to members of the union, caused more or less trouble on jobs where both kinds of material were used. It necessitated two different sets of time books.

It was decided at the last meeting of the union that a compromise scale of 70 cents per hour for either "pavers" or standard brick be established.
Concrete Eye-beam Floor Construction

A new type of floor construction has lately been placed before the building trade by the Concrete Flooring Company, the Arcade, Cleveland, O. This system combines all the requirements of a permanent flooring being constructed of reinforced concrete. The beams are shipped to the place of erection fully hardened and tested.

Placed side by side these beams immediately form a serviceable flooring, the grooved surface providing proper bond for the ceiling surfacing, also for a reinforced concrete wearing surface varying in thickness from one to three inches, upon which a wood or fireproof finish can readily be added. Long clear spans are possible with minimum height and weight of floors.

This type of construction permits long spans without center supports; no wood forms or supports during erection required; conduits for all purposes can be installed in the hollow spaces which can also be utilized for heating and ventilating purposes. The amount of loss by breakage or delay is eliminated while alterations can readily be effected.

The Concrete Flooring Company had tests made at the Case School of Applied Science of a floor section constructed by their system, which proved exceedingly interesting to contractors.

The spans in the construction were 16 feet, with a total load of 300 pounds per square foot. The erection of the forms or supports during erection required; conduits for all purposes can be installed in the hollow spaces which can also be utilized for heating and ventilating purposes. The amount of loss by breakage or delay is eliminated while alterations can readily be effected.

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SELECTING A BUILDING SUPERINTENDENT.

The very first step which a contractor must take in starting the execution of a job is selecting a general superintendent to handle the work. The type that is hired for a single job and discharged at its completion is not worth having. The really desirable superintendent is a development from experience, the one survival from many trials, and when once obtained a firm cannot afford to lose him. Some owners and engineers appreciate the value of personality so much that they have given contracts under condition that a certain superintendent be put in charge.

Frederick W. Taylor, in his excellent paper entitled "Shop Management," specifies nine different qualifications which go to make up a well-rounded man, namely: "Brains; education; special or technical knowledge; manual dexterity or strength; tact; energy; grit; honesty; judgment or common-sense; good health." He states that there are plenty of men to be found who embody three of these qualifications. Four make a higher-priced man. A man combining five is quite hard to get, and one combining six, seven or eight is almost impossible.

If a building superintendent is to be successful, he must combine at least seven of the qualities. He must have brains, special and technical knowledge of both direct contract and sub-contract work, tact, energy, honesty, judgment, and good health. He must have a personality which drives to activity several hundred originally unorganized men who are without special interest in the company they work for or in the result accomplished, and with such tact and judgment as to weld them into a harmonious working force, cheerful and self-respecting, with high morals, and ultimately with enthusiasm for the work in hand. He carries a care so great that he builds in full size, with permanent materials, the intricacies of design which trouble the engineer's drafting room, to show clearly on paper; with an honor so fine that the company is ready to leave its reputation in his hands, to trust him with funds; and with special experience so trained that dangerous operations are carried on as a matter of routine, without worry to himself or the company, yet with a constant oversight of a thousand chances for accident or perhaps death which may occur to the men in his charge; with a forethought so great that he sees ahead and provides for the problems which are to come up perhaps months later; with a temper so good that he never loses self-control under the most provoking circumstances, and is able to take with the best of grace changes in his plans from the office, and to work in the close co-operation with the company which is so necessary to make it an effective contracting organization.

Such men have a temperament that responds quickly to criticism or praise. Praise comes sparingly, even when deserved, while criticism is freely meted out. Superintendents can recall to memory words of appreciation from an owner or an engineer long after the job has faded from their memory. A man's work improves in quality and cost purely through praise for some detail of the work which was ably handled or some difficulty which was ingeniously overcome. The company, including its superintendents, feels as much pride in the job it does as the engineers who have designed these structures.

The members of the executive force on any job which is sharply criticised will try to avoid criticism by refusing the slightest responsibility beyond what they believe to be clearly their own. A company sharply criticised by an engineer is likely to do precisely the same thing and will throw onto the engineer every bit of responsibility it can possibly avoid. The attitude of the engineer in this respect is reflected in the execution of the work. One engineer may call attention to a mistake with a letter that is harsh and ends with a sting, which leaves the feeling of injustice and soreness in the recipient. Another, in calling attention to a similar matter, ends his letter with some expression like the following: "We appreciate your wish to make this work as satisfactory as possible, and recognise that this occurred through failure to understand my exact requirements." In response to such a letter as the first, the tendency is to do just as little as will satisfy the engineer and take your own time about it. But in response to the second letter, you jump to correct the trouble cheerfully, quickly and without comment, and also sometimes do more than was asked for.

BUILDERS TAKE MORE CHANCES.

A greater percentage of bankruptcies occurs among builders than in any other trade, experts declare, because of the hazards of the present competitive system. This is due to the fact that the owner must be protected at any cost, while the contractors say they sometimes suffer because accurate bids are impossible where accurate quantities are not worked out.

One of the principal attacks upon the present system is that it frequently operates to the disadvantage of a competent contractor, because a so-called successful bidder may have been one who made mistakes, or omitted some element from the building scheme.

Those leading the movement to improve present methods of estimating say that under the present faulty custom a contractor takes all the chances and is compelled to adopt a defensive attitude because of possible changing conditions in prices, unforeseen accidents, and labor difficulties.

Architects and contractors must come together if the movement in aid of better estimating methods is to bring the best results possible. Judging from the interest shown in recent joint meetings of architects and contractors, it seems that contractors have arrived at the conclusion that anything, any method, would be better than the present practice of inviting, receiving and opening bids. One humorous contractor recently suggested that the owners might, as a beginning, he indicted for running a "lottery," which they do when they invite bids on buildings or building work, for figuring has become largely a game of chance under existing methods.

PERSONAL.

Charles H. Eglee, for nine years general manager of the Amburson Hydraulic Construction Company, in charge of construction work, has just become connected with the Aberthaw Construction Company of Boston, and will have charge of all dam and reservoir work. Mr. Eglee has had unusual experience in the building of all types of dams. For his new connection he will have opportunity to carry on the same sort of work, as well as sea walls and other structures of similar character.

While the Aberthaw company has not previously been active in the building of dams it has successfully completed 13 of these structures, five being of considerable importance in size and cost; also a number of tide walls, concrete bridges, etc., all of which call for the same general sort of experience. The company has added a dam department to its regular business of concrete construction.

Rasner & Dinger, Pittsburgh, were awarded the composition roofing and sheet metal work for the bank and office building, being constructed at Charleston, W. Va., for the Kanawha National Bank.

The Pittsburgh Marble Company, Fulton building, Pittsburgh, has been awarded the contract for the marble work to be done in the McSorley apartments, Pittsburgh.
**PITTSBURGH BUILDING PERMITS**


Eleventh Ward—Berea place; brick dwelling. Cost, $9,000. Owner, Ellisha Holcombe, 47-49 Wallingford street. Builder, William Woodward, 25 Ken-
wood avenue, Pittsburgh, Pa.


Apartment Dwellings.

Burgettstown, Pa.—Architects Crooks & McMasters, Curry building, Pittsburgh. Are taking bids on erecting a two-story brick store, office and apartment building, for George E. Thompson, to cost $17,000.

Cincinnati, O.—Henry Sieving & Company, 3538 Montgomery avenue, received the contract for erecting a two-story brick residence on Aster Place, for Edward W. Greene, 5526 Belmont avenue. Cost $7,500.

Columbus, O.—Architects Dawson & Holbrook, 514 Outlook building, are taking bids on erecting a two-story frame residence and metal lath residence, on Iuka avenue, for Graham Ackerman, 549 North High street. Cost $4,500.

Architects Julian & Julian, 576 North Main street, have plans in progress for a two-story frame residence, to be erected at Oakwood, for Harry P. Mazzini, South Broad street. Cost $4,000.

LaVerne Hench, 44 Princeton avenue, is taking bids on the erection of a one-story stucco residence, garage and greenhouse, from plans drawn by Architects Peterson & Clark, 520 Market street. Cost $6,000.

Architects Charles Ernst has plans in progress for a two-story frame residence, to be erected at Oakwood, for Otto Casner, South Washington street. Cost $6,000.

Tiffin, O.—Architects Charles Ernst has plans in progress for a two-story brick and stone apartment building, to be constructed on Pinewood avenue, for A. C. Weaver, 851 Spitzer building. Cost $17,000.

Architects Louis Boucherle & Son, 516 Stambaugh building, have plans in progress for a three-story frame residence, to cost $6,000.

The same architects also have plans in progress for a two-story stone and cement plaster residence, to be erected by Mrs. Max Schwartz, 708 Ford avenue. Cost $8,000.

The above architects have plans nearly completed for a two-story stone and cement plaster residence, to be erected by Mrs. W. H. Park, 127 North Phelps street. Cost $15,000.

Bradford, Pa.—Architects E. F. Brickell, is taking bids on the erection of a two-story house and one-half-story frame residence, to cost $10,000.

Architects Homer & Eberle, 230 Avenue street, are taking bids on erecting a two-story brick store and apartment on E. Twenty-seventh street and Croton avenue, for the Disbrow Brewing Company. Cost, $8,000.

Architects Deter & Beer, 220 Avenue street, are taking bids on erecting a two-story brick store and apartment on E. Twenty-seventh street and Croton avenue, for the Disbrow Brewing Company. Cost, $8,000.

Columbus, O.—Architects Julian & Julian, Park Savings & Loan building, have plans in progress for two three-story brick apartment buildings, to be erected on N. High street near Fourteenth avenue, for Cheek Brothers, 24 Fifteenth avenue. Cost, $25,000 each.

Huntington, W. Va.—R. M. Buchanan is about ready for bids on the erection of two two-story brick residences, to be erected at a cost of $4,000 each. Plans by Architect W. E. Snaman, Empire building, Pittsburgh.

Lancaster, O.—Leo F. Brown, 219 S. Broad street, has purchased a site on the northeast corner of Broad and Chesnut streets, on which he contemplates erecting a two-story brick store and apartment building, to cost $15,000.

Middletown, O.—Architect George W. Barkman, Reilly building, Hamilton, is preparing sketches for a two-story frame residence, to be erected for Thomas Harvey, to cost $8,000.

Steubenville, O.—Carl Hartje is taking separate bids on the erection of a one and one-half-story frame and shingle building, from plans drawn by Architects Peterson & Clark, 520 Market street. Cost, $6,000.

Tiffin, O.—Architects Charles Ernst has plans in progress for a three-story brick and stone apartment building, to be constructed on S. Washington street, for H. W. Michaels, Hall and Washington streets. Cost, $36,000.

Toledo, O.—Architects Thal & Aftel, Ohio building, have plans in progress for a three-story brick apartment building, to be constructed on Pinewood avenue, for A. C. Weaver, 851 Spitzer building.

Wilmington, O.—W. H. Hope was awarded the contract for building a two and one-half-story frame residence for Howard Carroll, to cost $2,500.

W. W. Shepherd received the contract for erecting a two and one-half-story frame residence for J. W. Mullenix, to cost $3,500.

Maynard Harland, of Citizens Bank, is taking bids on the erection of a two and one-half-story brick and stucco residence, to cost $6,000.

Youngstown, O.—Architects Louis Boucherle & Son, Stambaugh building, have plans in progress for a three-story brick and stone apartment building, to be constructed for Mrs. Max Schwartz, 708 Ford avenue. Cost $8,000.

Architects Homer & Eberle, 230 Avenue street, are taking bids on erecting a two-story brick store and apartment on E. Twenty-seventh street and Croton avenue, for the Disbrow Brewing Company. Cost, $8,000.

Columbus, O.—Architects Julian & Julian, Park Savings & Loan building, have plans in progress for two three-story brick apartment buildings, to be erected on N. High street near Fourteenth avenue, for Cheek Brothers, 24 Fifteenth avenue. Cost, $25,000 each.
Norwood, O.—Architects I. G. Stein- 
kaup, & Brother, 414 Walnut street, 
Cincinnati, will soon take bids on erecting 
a two and one-half-story brick apartment 
buiding on Mills avenue, for Anthon 
Kramer, Walnut street, Cincinnati. Cost, 
$8,000.

Youngstown, O.—Plans are in pro­ 
gress for a two and one-half-story frame 
residence, to be erected for Harry Miller, 
Bewey avenue. Cost, $4,000.

Columbus, O.—Architect J. A. Jones, 
567 Dispatch Annex building, is taking 
bids on erecting a two-story brick resi­ 
dence on Linwood avenue, for W. J. Car­ 

Architect H. C. Jones, 12 Deshler 
building, will be ready for bids about 
February 2, on erecting a two-story brick 
residence on Wilson avenue, for R. M. Baer, 
404 Mt. Vernon avenue, to cost $3,500.

Middletown, O.—Architect George W. 
Barkman, Reilly building, Hamilton, has 
plans in progress for a two-story brick 
residence, to be erected on Fourth 
street for Edward Sebold, Third and 
Main streets. Cost, $6,000.

West Alexandria, O.—W. S. Copp 
contemplates erecting a one and one­ 
half-story frame farm residence, to cost 
$3,500. Will select architect about Feb­ 
uary 2.

Woodlawn, Pa.—John Harrison of 
East Liverpool, O., is taking separate 
bids on erecting a two-story brick store 
and apartment building, to cost $10,000. Plans 
by Architects Carlisle & Sharrer, Jenkins 
Arcade building, Pittsburgh.

Youngstown, O.—Plans are in pro­ 
gress for a two and one-half-story frame 
residence, to be erected for Frank Price, 
2533 Oak Hill avenue. Cost, $4,000.

Bowling Green, O.—The Kinney 
Lumber Company, Prospect avenue, con­ 
templates erecting a two and one-half-story 
frame residence from private plans.

Clearfield, Pa.—D. W. Spack, N. Main 
street, contemplates erecting a two and 
one-half-story brick residence, from 
private plans. Cost, $5,000.

Cleveland, O.—G. W. Feaga, 
1027 St. Clair avenue, received the contract 
for erecting a two-story brick residence on 
North Boulevard, for G. L. D. Sudbor­ 
ough, 1215 Citizens building. Cost, $8,000. Plans 
by Architect H. A. Conkey, 9610 
Park avenue.

Marion, O.—Architect J. J. Sloan, 120 
Jefferson street, has completed plans for 
a two-story frame residence, to be 
erected for D. A. Frank, Center and

process for a two-story frame residence, 
to be erected on Third street, for 
Thomas Hincks, 809 Queen street. Cost, 
$5,000.

McGees Hills, Pa.—Architect L. S. 
Shilling, of Punxsutawney, has been se­ 
lected to prepare plans for a two and 
one-half-story brick residence, to be 

Pleasant Grove, O.—Architect George 
Vaughn, Central square, Youngstown, 
O., has plans in progress for a two and 
one-half-story brick veneered residence, 
to be erected for F. C. Brown, 168 
Evanston street, Youngstown. Cost, 
$5,000.

Toledo, O.—Architect John W. Matz, 
315 Nasby building, has new plans in 
progress for a three-story stone and 
pressed brick store and apartment building 
and dance hall, to be constructed on 
Detroit avenue, for J. T. Felder, 801 De­ 
troit avenue.

Youngstown, O.—Architect George 
Vaughn, Central building, is completing 
plans for a one and one-half-story brick 
and stucco bungalow, to be erected for 
Frank Besch, 124 Scott street. Cost, 
$1,200.

New Lexington, O.—Architect E. S. 
Matheny, of Crooksville, is taking bids on 
the erection of a two and one-half­ 
story pressed brick residence, for Del­ 
win Simchand, to cost $5,000.

Niles, O.—Daniel Irwin, Mineral 
Ridge, received the contract for erecting 
a two-story brick apartment building, 
for Bruno Koch, to cost $7,000.


Springfield, O.—Architects Dexter & 
McClure, Dayton, will receive estimates 
until February 10, on remodeling a 
banking room in the Bushnell building, 
Main street, for the First National Bank. Cost, 
$10,000.

Columbus, O.—Architect Otto C. 
Darst, Brunson building, will be ready 
for bids about February 10, on 
erecting a two-story brick and concrete 
office building, on South Parsons avenue, 
for the Columbus Iron & Steel Company. 
Cost $10,000.

Toledo, O.—The Central Union Tele­ 
one Company contemplates construc­ 
ting a four-story brick, concrete 
one stone telephone building, to cost 
$200,000. Architect has not been select­

East Liverpool, O.—Architect C. M. 
Metsch, First National Bank building, 
has plans in progress for remodeling a 
two-story store building on Market 
street, for the Erlinger Company. Cost 
$7,500.

Columbus, O.—Architects Stribling 
& Dunn, Desig Ferson building, have 
plans in progress for a one-story brick 
sales garage, to be erected on East 
Long street, near Fifth street, for R. E. 
Jones, 277 East Broad street.

Youngstown, O.—Architects J. G. Stein­
ner, & Brother, 414 Walnut street, Cin­

Marion, O.—Hayes Thompson, Wol­
ford building, contemplates construc­
ting a four-story brick and steel fireproof 
store building, on West Center street. 
Architect has not been selected.

Canton, O.—Architects Walker & 
Weeks, 1900 Euclid building, Cleveland, 
awarded to R. A. Curry Company, Eu­
clid building, Cleveland, the contract 
for the interior and completion work of 
the 10-story brick steel and fireproof 
store and office building, being con­
structed on North Market street and 
Sixth street, for Harry Renkert, Folwell 
building. Cost, $50,000.

East Liverpool, O.—Architect C. M. 
Metsch, First National Bank building, 
has plans in progress for remodeling a 
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sales garage, to be erected on East 
Long street, near Fifth street, for R. E. 
Jones, 277 East Broad street.

East Liverpool, O.—Architect C. M. 
Metsch, First National Bank building, 
has plans in progress for a one-story 
brick store building, to be erected on 
Pennsylvania and First streets, for 
Thomas H. Fisher. Cost $6,000.

Religious.

Bellaire, O.—Sketches are being sub­
mitted for a one-story stone church, to 
be constructed on Belmont street, for 
the Christian Congregation, to cost $40, 
000. Architect will be selected in a few 
weeks.

Findlay, O.—Architects McLaughlin & 
Hulskem, Lima, are taking bids on erect­
ing a one-story pressed brick church on 
Main street, for the First Church of 
Christ Congregations. Cost, $40,000.

Tarentum, Pa.—Architect Ira Cutsell 
will receive bids until February 3 on 
erecting a one and one-half-story brick 
stone or terra cotta church on E. Eighth 
avenue, for the English Lutheran Con­
gration. Cost, $15,000.

Hamilton, O.—Architect George W. 
Barkman, Reilly building, is drawing 
plans for a four-story brick and rein­
forced concrete fireproof church, to be 
constructed on Court street, for the 
First Baptist Congregation.

Namiusburg, O.—Architect C. E. Oed­
en, 212 Jacoby building, Middletown, will 
be ready for bids about February 2 on 
remodeling a one-story brick church for 
the United Brethren Congregation. Cost, 
$3,500.

Hubbard, O.—Architects Kling &
Zenk of Youngstown, are revising plans for a one-story brick, hollow tile and terra cotta school building, to be erected for St. Patrick's Congregation. Cost, $15,000.

Akron, O. — The Christian Scientists contemplate erecting a one-story brick and stone church, to cost $25,000. Sketches will be submitted shortly.

Cleveland, O. — Architect Theo. Connor, 908 Park building, has been selected to prepare plans for a two-story brick church and Sunday school rooms, to be erected on Hampden avenue and E. One Hundred and Fifth street, for the Zion Evangelical Congregation. Cost, $25,000.

Columbus, O. — Architects Richards, McCarty & Bullford, Hartman building, have plans in progress for remodeling a church on E. Broad street and Fifth avenue, for St. Joseph's Cathedral. Cost, $100,000. Will be ready for bids about February 15.

Toledo, O. — Architects J. C. Huber, Jr., 442 Ohio building, and John T. Comes, of Pittsburgh, awarded to Jos. Kesting, H. E. Broadway, the contract for erecting a two-story pressed brick and terra cotta parochial residence on Consul and Genesea streets, for St. Stephen's R. C. Congregation. Cost, $10,000.

Lowell, O. — Architect E. S. Matheny, of Crooksville, has plans in progress for a two-story frame church addition, to be erected for the Methodist Congregation. Cost, $4,000.

Marysville, O. — The Union Evangelistic Congregation, will soon take bids on erecting a frame tabernacle from plans drawn by Architect G. E. McGann.


Zanesville, O. — Architect A. A. Honeywell, 1378 S. Buckeye street, Kokomo, Ind., is preparing preliminary plans for a one and one-half-story brick and stone church and Sunday school building, to be erected for the Park Street M. E. Congregation, to cost $30,000.

Manufacturing.

Cleveland, O. — Architects Richardson & Yost, 354 Rockefeller building, have plans nearly completed for a three-story brick and reinforced concrete fireproof brick plant, to be erected on Superior avenue and E. Forty-ninth street, for the National Telephone Supply Company. Cost, $50,000.

Massillon, O. — The American Stamping Company, Bellaire, contemplates constructing a brick and steel enameling plant, from private plans.

Climax, Pa. — Plans are in progress for a one-story brick fireproof brick plant, to be constructed for the Climax Fire Brick Company. Cost, $125,000.

Postoria, O. — The Diesel-Wenner Company, of Lima, contemplates erecting a two or three-story brick cigar factory, to cost $23,000.

Cleveland, O. — Karl Bohrenroth, 3234 West Fifth street, received the contract for erecting a two-story brick factory addition on Detroit avenue, for the American Mirror & Art Glass Company. Cost, $8,000.

Toledo, O. — The Gottshall Manufacturing Company, contemplates erecting a brick fireproof normal school addition, and a one-story frame temporary chemical laboratory building, for the Board of Trustees of the Miami University.

Youngstown, O. — The Board of Education contemplates erecting a brick fireproof addition to the McKinley school, on Thornton and Florence avenues, to cost $8,000, and for which the architect has not been selected; also a two-story brick fireproof annex, to the Washington school, from plans drawn by Architect C. F. Owsley. Cost, $30,000.

Cleveland, O. — Architects F. C. McCormick and F. S. Barnum, have plans in progress for a two-story brick and reinforced concrete school building, to be constructed on Poe avenue, for the Board of Education. Cost, $100,000.

Greenfield, O. — The Roche-Brunner Building Company, Johnston building, Cincinnati, received the contract for constructing a two-story brick and stone fireproof high school building, for E. L. McClain, care American Pad & Textile Company. Building will contain manual training department, auditorium, gymnasium, dining rooms and offices. Cost, $200,000. Plans by Architect William B. Ittner, St. Louis, Mo.

Roseville, O. — Architect E. S. Matheny, of Crooksville, is writing specifications for a two-story high school building, to be constructed for the Board of Education. Cost, $25,000.

Educational.

Bradford, Pa. — The Board of Education contemplates erecting a two-story brick high school addition, to cost $30,000. Sketches are now being submitted. Also contemplates erecting a two-story brick and concrete grade school building in the Sixth ward, to cost $30,000.

Burgess, O. — Architect C. L. Whitaker, of Dravosburg, has plans nearly completed for a two-story brick high school building, to be erected for the Board of Education. Cost, $30,000.

Forty, O. — Architect C. I. Williams, Davies building, Dayton, will be ready for bids about February 7, on erecting a two-story brick and reinforced concrete high school building, for the Board of Education of Bethel township. Cost, $15,000.

Republican, O. — The Schaffer Engineering & Equipment Company, Tiffin, has plans in progress for a two-story brick grade school building, to be erected on Madison street, for the Board of Education. Cost, $15,000.

Bowerstown, O. — The Board of Education will receive bids until February 16, on constructing a two-story high grade and grade school building, to cost $28,000. Plans by Architects Howard & Merriman, of Columbus.

Jacksonburg, O. — Architect William D. Lingler, Freckling Building, is drawing plans for a one-story brick high school building, to be erected for the Board of Education, of Wayne township. Cost, $20,000.

Marion, O. — The Board of Education contemplates repairing a two-story brick fireproof grade school building on Oney avenue, to cost $25,000. Architect has not been selected.

Middletown, O. — Architect George W. Barkman, of Hamilton, will receive bids until February 12, on constructing a two-story brick and concrete fireproof grade school building, on Sherman street, for the Board of Education. Cost, $66,000.

New Richmond, O. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, have been selected to prepare plans for a two-story brick fireproof public school building, to be erected for the Board of Education. Cost, $40,000.

Youngstown, O. — The Board of Education contemplates constructing a two-story brick fireproof school building, on Briar Hill, West End, to cost $75,000. Architect has not been selected.

 Akron, O. — Architects Fichter & Brooker, Second National Bank building, awarded to the Carmichael Construction Company, Hamilton building, the contract for erecting a brick fireproof addition, to the Leggett School, for the Board of Education. Cost, $80,000.

Lodi, O. — Architect Vernon Redding, of Mansfield, awarded to Beal & Leopold, Elyria, the contract for erecting a two-story brick grade school building, for the Board of Education, to cost $25,000.

Oxford, O. — Architect Frank L. Packard, of Columbus, is about ready for bids on constructing a two-story brick fireproof normal school addition, and a one-story frame temporary chemical laboratory building, for the Board of Trustees of the Miami University.
ing a one-story brick and frame planing mill addition, on Hawthorn avenue, from private plans.

Greensburg, Pa.—Walker & Curley, of Pittsburgh, received the contract for erecting a two-story brick packing plant addition for Armour & Company, Chicago, to cost $15,000.

Uniontown, Pa.—Walker & Curley, of Pittsburgh, received the contract for erecting a two-story brick packing plant addition for Armour & Company, Chicago, to cost $10,000.

Hospitals.

Lima, O.—The Board of Commissioners of the Lima State Hospital will receive estimates until February 25 on laundry and kitchen equipment.

New Brighton, Pa.—Architects Carlisle & Sharrer, Jenkins Arcade building, Pittsburgh, will be ready for bids about February 2, on erecting a two-story brick and stone fireproof home addition on Third avenue, for the Home for the Aged Women. Cost, $18,000.

Petry, O.—The Kaufman Architectural Company, 19 Rose building, Cleveland, has been selected to prepare plans for a two-story brick or frame sanitarium, to be constructed for Dr. John T. Frawley, 409 O'Brien building, Cleveland. Cost, $40,000.

Lima, O.—The Board of Commissioners of the Lima State Hospital for the Insane will receive estimates until February 25 on constructing a two and three-story brick and reinforced concrete administration building, at the State Hospital.

Cincinnati, O.—Architects Samuel Hannafoord & Sons, Halbert Block, will receive bids until February 17 on constructing a two-story brick and stone contagious building, on Eden avenue, adjoining the General Hospital, for the Board of Hospital Commissioners.

Lakewood, O.—Architect Paul T. Cahiili, 310-1900 Euclid building, Cleveland, has plans in progress for a four-story brick and reinforced concrete fireproof hospital building, to be constructed on 14519 Detroit avenue, for the Lakewood Hospital. Cost, $100,000.

Lima, O.—The Board of Commissioners of the Lima State Hospital for the Insane, will receive estimates until February 25, on constructing a two and three-story brick and concrete nurses' building, from plans drawn by Architect Frank L. Packard, of Columbus.

Youngstown, O.—The Youngstown Hospital Association will be ready for estimates about February 10, on constructing a three-story limestone and hollow tile nurses' home, on Oak Hill avenue, to cost $100,000. Plans by Architects Kahn & Wilby, of Detroit, and Stanley & Schelbel.

Society and Club Buildings.

St. Marys, Pa.—Architects A. P. Mount & Son, Corry, have plans in progress for a two-story brick lodge building, to be constructed on Washington and Lafayette streets, for the B. P. O. E. Cost $25,000.

Youngstown, O.—Architects Jackson, Rosecrans & Waterbury, 1328 Broadway, New York city, have plans nearly completed for a six-story fireproof building, to be constructed on Champion and Federal streets, for the Y. M. C. A. Cost $275,000.

Youngstown, O.—Architects Louis Boucherle & Son, Stambaugh building, have plans in progress for a one-story stucco and hollow tile club house, to be constructed for the Ftland Country Club, to cost $25,000.

Bradford, Pa.—The Bradford Council of Knights of Columbus contemplates erecting a three-story brick and steel fireproof club house on Chestnut street, to cost $35,000. Sketches will be received at once.

Sharon, Pa.—Architects Louis Boucherle & Son, Stambaugh building, Youngstown, O., will be ready for bids about February 15, on erecting a tile swimming pool for the Bahl Club. Cost, $6,000.

Findlay, O.—The B. P. O. E. Lodge contemplates constructing a two-story brick building, on East Hardin and Main streets, to cost $80,000. Architect has not been selected.

Youngstown, O.—Architects Jackson, Rosecrans & Waterbury, 1238 Broadway, New York city, has plans nearly completed for a five-story fireproof building, to be constructed on Champion and Federal streets, for the Y. M. C. A. Cost $275,000.

Elyria, O.—Architect R. S. Silsbee, Masonic Temple building, has plans in progress for a two-story brick and reinforced concrete fireproof club house addition, to be erected for the Elks Club, at a cost of $25,000.

Theatres.


Marion, O.—The B. P. O. Elks will be ready for bids about February 15, on rebuilding a two-story brick and concrete theatre building, on State street, to cost $35,000. The Gus Surr Amusement Company, Springfield, are the lessees.

Cincinnati, O.—Architects J. G. Stein­kamp & Brother, 414 Walnut street, have plans in progress for a one-story brick nickelodeon, to be erected on Montgomery road and Dana avenue, for Andrew Niedenthal, Montgomery road. Cost, $15,000.

Dayton, O.—Architect Gustave A. Niehaus, 25 Callahan building, has plans in progress for a one-story brick motion picture theatre, to be erected on Valley street, for Samuel H. Thal, 14 N. Valley street. Cost, $12,000.

Punxsutawney, Pa.—Architect L. S. Shilling has completed sketches for a one-story brick nickelodeon addition, to be erected on Main street, for Frank Tessenni. Cost, $5,000.

Hotels.

Johnstown, Pa.—Architects Janssen & Abbott, Century building, Pittsburgh, are writing specifications for an eight-story brick and stone fireproof hotel, to be constructed on Main street and Potts Place, for the Fort Stanwix Hotel Company, by Contractors Thompson-Starrett Company, of Pittsburgh. Cost, $400,000.

State, County and Municipal.

New Cumberland, W. Va.—Plans and specifications have been completed for two 2-story brick lock-keepers' residences, to be erected at Dam No. 9, for the United States government. Cost, $6,000.

Fremont, O.—The Board of County Commissioners contemplates constructing a court house for which a bond issue of $400,000 has been passed.

Hamilton, O.—Architect George W. Barkman, Reilly building, has been selected to prepare plans for a city building, to be constructed for the city at a cost of $200,000.

Sealed proposals will be received at the office of Superintendent of Prisons, Department of Justice, Washington, D. C., until February 17, for furnishing and delivering at the United States peniten­tary, Leavenworth, Kans., for the hos­pital building of that institution the following materials: Rough lumber for frames and interior finish, doors, cast glass work, finishing hardware.
Liens Filed for Labor and Material Furnished.

Allegheny County.

Miller Brothers vs. Andrew Kocsuta and Mary C. Kocsuta, his wife, owners. Building in North Braddock. Cost $1,623.90.


John Provan, Wilkinsburg, received contract $4,000 residence, Wilkinsburg. Owner, Howard E. Smith, Wilkinsburg.

E. C. Craig, Pittsburgh, received contract $100,000 store building, Pittsburgh. Owner, L. A. Meyran, Pittsburgh.

Lumber Corporation is erecting a big saw mill and an extensive power plant, including a turbo-generator plant, giving power for pulp making largely of structural steel with concrete exterior, the interior structure being largely of steel. The buildings have cost $15,000,000, and will be completed in September. The buildings have cost $15,000,000, and will be completed in September. The buildings have been erected by the Aberthaw Construction Company, a harbor for safe wharfage for ships up to 6,000 tons burden.

Scholes Brothers, Pittsburgh, received contract $30,000 bakery addition, Pittsburgh. Owner, Ward Baking Company, Pittsburgh.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded:</th>
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<tbody>
<tr>
<td>1914</td>
<td>$4,926,000</td>
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<tr>
<td>1913</td>
<td>$11,221,000</td>
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<tr>
<td>1912</td>
<td>$7,280,000</td>
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<tr>
<td>1911</td>
<td>$13,799,000</td>
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<tr>
<td>1910</td>
<td>$5,454,000</td>
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<td>1909</td>
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<td>$1,095,000</td>
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<td>1904</td>
<td>$1,677,000</td>
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<tr>
<td>1903</td>
<td>$1,700,000</td>
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</tbody>
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LARGE PULP MILL.

On the south side of the Gulf of St. Lawrence, about 60 miles back from the end of land, the St. Lawrence Pulp & Lumber Corporation is erecting a big plant which when finished will represent an investment of close to $4,000,000. There is an irregular group of buildings, mostly one-story and measuring something like $600,000 feet in plan, forming a complete pulp mill for making high grade bleached sulphite pulp, together with a digester building covering digesters reaching 160 feet above the ground. All of this is now being built by the Aberthaw Construction Company, New York, to be finished by next September. The buildings have concrete exterior, the interior structure being largely of structural steel with yellow pine roofs.

There is to be an independent steam turbo-generator plant, giving power for both the pulp mill and a saw mill which is being erected separately. A private railroad is to supply the mill with logs from the extensive timber and pulp wood lands of the company, aggregating some 500 square miles. The Dominion Government has undertaken to develop a harbor for safe wharfage for ships up to 6,000 tons burden.
THE LIGHTING OF HOSPITALS.

For some unexplainable reason the question of proper artificial illumination has received little or no consideration, thus greatly lowering the efficiency of the splendid service characteristic of these institutions.

Light, like any other form of energy, may become an agent of destruction or a minister of health, precisely in accordance with the wisdom shown in its application, and it is the duty of the professional advisor, whether he be architect or engineer, to understand these particular conditions before he can pretend to satisfactorily specify a lighting system.

The operating rooms and wards which are the most important parts of a hospital naturally present the most difficulties, and it is the object of this paper to treat particularly the lighting of these two rooms.

The operating table should have, on account of the large amount of surgical work performed at night, a system capable of concentrating on the field of operation an illumination intensity of not less than 25 foot-candles, preferably higher, and of approximately the color of daylight. The equipment should be designed along plain smooth lines, thus avoiding the septic risks of dust collection and rendering it easily and thoroughly cleaned. When it is necessary to suspend a fixture in close proximity to the table and when over 250 watts are consumed by the equipment, it is most important that the heat generated by the lamp be directed away from the patient and the head of the surgeon.

Some hospitals object to any suspended lighting equipment in the operating rooms; this usually applies to rooms having a sky-light, and provided sufficient head room is available a satisfactory system may be designed by placing a series of reflectors around the edge of the sky-light. These reflectors may be so designed that the maximum reflection falls at a point directly over the table. This scheme is likely to be more satisfactory than an attempt to illuminate the entire sky-light so as to provide a sufficient amount of light for an operation in any part of the room. The latter scheme would necessitate a large energy consumption, but many satisfactory installations of the kind have been made.

In the wards the evils of glare have to be most carefully avoided, as influence of glare upon the reina of the debilitated or depressed is usually followed by serious results.

The average ward of 20 beds should be provided with two kinds of illumination, general and localized. The general lighting should not average more than one foot-candle and should be obtained from a totally or partially indirect source, so arranged that violent contrasts are entirely eliminated. It is advisable that the ceiling be treated with a flat white or French zinc surface and the walls in a slightly darker tone, such as buff or French gray.

The fixtures must be of special design and the same hygienic conditions apply as in the operating room, viz., elimination of dirt and heat. Also that portion of the light which is diverted to the ceiling should be evenly distributed without spots and streaks. The exterior finish should be a restful color such as green enamel or matt nickel. This will not give a violent contrast, and will overcome the sameness of the white enamel finish which many fixture manufacturers seem to think is necessary for hospitals.

A form of indirect fixtures which has met with great success in ward lighting is made for any number of lamps up to six. The interior is lined with a series of mirrors set at any angle to insure an even distribution of light over the ceiling. The angle at which these are set depends on the distance between outlets and the size of the ward. Over the top of the bowl is set a thin blown glass plate which may be easily raised for lamp renewal by means of the sliding metal holder, and which renders the interior of the fixture dust and dirt proof. Ventilation is accomplished by means of vent holes at the bottom where the air enters and passes through and escapes between the housing of the fixture and the glass plate.

If it is so desired one lamp in a fixture may be arranged to operate on a separate switch, but this is not advisable on account of its effect on the patients. Night lights, wherever necessary should be in the form of brackets and as inconspicuous and as far out of the range of vision as possible.

An excellent form of the direct-indirect type is constructed along strict sanitary lines. The ventilation is accomplished by the air entering through the hole in the rosette, which supports the lower hemisphere, passing through the iron pipe inside of the brass casing and out into the enclosed space through the holes in the inside pipe and the outside casing and escaping at the holes in the casing near the canopy.

Lamp renewals, etc., are made by unscrewing the rosette at the bottom which enables the hemisphere to drop down, as this portion is independent of the glass cover. The glass cover overlaps the metal band around the upper edge of the hemisphere in such a way that it sheds the dust over the metal band. This metal band has on the inside surface a ring of felt rendering it impossible for dust to accumulate on the interior.

The character of the glassware used for the bowl or hemisphere must receive a thorough study, it should be of sufficient density to maintain the presently given intensities per square inch of exposed sources and have diffusion qualities which render it impossible to have any bright spots or streaks from the lamps exposed to the eyes of the patients. It is also advisable to eliminate the necessary gas emergency equipment from these fixtures, but it may be included in the localized equipment.

For the localized lighting of the ward the two forms most advisable are proper brackets or "bedside" lights; everything depends on the word "proper." No source of light or illuminated surface exceeding 0.1 candle-power per square inch (14 candle-power per square foot) should be exposed to a patient's eye; therefore, the usual direct lighting equipment is quite out of the question. It is adjustable in every direction and it is equipped with a reversible glass reflector with opaque sides. The reflector is of a concentrating type, designed especially for bedside examination, thus eliminating any necessity of the use of a special portable lamp by attending physicians; and by reversing directly upward this concentrated light is directed to the ceiling, thus giving an excellent form of indirect illumination.

The opaque sides render it impossible for a ray of light to reach the eye of a patient in any part of the ward and enable any bed to be immediately illuminated without any disturbance to other patients. An entire ward equipped with one of these brackets to each bed would not require any other form of illumination and the emergency gas equipment may be easily incorporated in this fixture. Many hospital equipment specialists and authorities predict this to be the future form of ward lighting.

"Bedside" lights are the least desirable for a localized equipment, but where absolutely necessary, they should be carefully designed. The reflector portion should preferably be hemispherical in form, opaque and mounted on a plain standard heavily weighted at the base. The reflector should be adjustable by means of a knuckle joint. The reflecting surface should give a diffused reflection as from opal glass or flat white enamel. Of course an additional light is required for the physician for bedside examination, thus making this equipment more costly in both initial expense and maintenance, as both equipments have to obtain the energy from base board receptacles which naturally necessitate a considerable portion of exposed cord, making the liability of breakage consid-
In the examination of bacteria under a powerful microscope, it is always difficult to arrive at definite results when observers at various points are working under light sources of varying spectral value. Varying light sources naturally produce a different tonal value to a germ so that it is often difficult, if not impossible, to be sure of identification.

There is an instrument whereby there may be obtained at any time a uniform light source giving approximately the effect of a slightly veiled north light, which is so much desired in precision work, and far superior to the average illumination obtainable from city windows. The light from a 60-watt all freshed tungsten lamp operating at exact line voltage is directed by means of a double convex reflector with the lower surface of silvered glass and the upper surface of opal glass.

A carefully calibrated liquid lens is inserted at the aperture. After the light has passed through this lens the resultant illumination on the microscopical field is of a daylight spectral value. For dark field work this lens is changed to one giving an illumination of a powerful violet character.

The lighting of halls and corridors is in a class with the lighting of hotels and office building corridors. The nurses and doctors' quarters should receive the same careful treatment required for the lighting of the home. The dispensary should be given the same treatment as the modern drug store; particular attention should be given to the lighting of the prescription counter.

**EXCHANGE SECRETARIES MEET.**

The annual meeting of the secretaries of the National Building Trades & Employers' Association was held in Louisville last week and was largely attended by representatives throughout the country. Many subjects of interest were taken up, the principal one being the uniform contract between the architects and builders. It appears that there are several clauses in the standard contract documents as prepared by the American Institute of Architects which do not meet the full approval of the builders' organization. These demand arbitration as the chief method of settling building trade conflicts and are as follows:

Article 1.—The builder contracts only to furnish such materials as are shown on the architect's drawings, or are mentioned in the specifications. Plans and specifications must be identified, and any work or materials not included in the identified drawings or specifications fail without the limit of the contract.

Article 2.—Contractor assumes no responsibility or liability for any defect, fault or insufficiency of the building, except for negligence on his own part, and final payment made by the owner releases the contractor of all future obligations of any nature whatsoever.

Article 3.—Nothing shall be shown on detail drawings which will in any way increase the amount of work or material as shown on the identified plans, though detail drawings must be furnished by the architect according to contract.

Article 4.—While the architect shall retain all drawings and specifications, it is specified that both contractor and owner shall be furnished with copies of the identified exhibits for purposes of record.

Article 5.—In cases of alteration in the original identified plans and specifications, an agreed price shall be fixed on the work and either added to or subtracted from the original estimate.

Article 6.—The decision of the architect or engineer shall control, except that in case of varying opinion the contractor may insist upon arbitration, and shall have the right of redress.

Article 7.—Equitable adjustment of all conflicts is provided for, especially in the event of vague or general specifications.

Article 8.—Materials for building shall be inspected before they are placed in the building, and workmanship shall be inspected the day it is finished, in order not to delay the remainder of the work in hand. All rejections shall be reduced to writing.

Article 9.—Where material or labor not essential to the completion of the building is omitted and a change would be necessary to remedy the defect, its value shall be deducted from the total.

Article 10.—Arbitration of conflicts shall be determined by three disinterested persons acting under oath—one to be appointed by the contractor and one by the owner, the two to choose the third. The litigant whose claim is lost shall pay the expense. Should one party refuse to appoint an arbitrator, then he shall be deemed to have confessed his stand ill taken.

Addresses were made by Charles Carroll of Louisville, on "The Legal Phase of Building Contracts Under Present Conditions"; W. Austin Phelps, of Dayton, O., "Suggestions on Organization," and G. Alexander Wright, who spoke on "The Quantity System."

Before adjournment it was decided to hold next year's convention at Columbus, O.

**PROTECTION OF FLOOR OPENINGS.**

When so-called fireproof buildings which are now being designated as "fire-resisting" or "fire-resistive" buildings were erected the architects and general public felt that the so-called fireproof construction was such a step in advance and such a great improvement over the old wooden beam construction that little or no thought was given to the protection of floor openings. As fire-resisting buildings grew larger in area and taller in height with the consequent increased amount of valuable contents, says Julius Franke in "Insurance Engineering," attention began to be directed toward the spread of fire from one part of a building to the other.

Fully 20 years ago this principle was admitted by architects, and loft buildings in the city of New York were built with enclosed fireproof stairs, and elevator with solid doors. Sometimes these doors were of wood for the staircases and open grille work for the elevators.

Shortly thereafter the doors for the stairs and elevators began to be made fireproof, and the vent shaft openings that pierce these also had fireproof windows and wireglass provided; and at the present time for tall buildings, with a view of preventing the spread of fire from one part of the building to another, it is not only important to protect all openings, either horizontal or vertical, that communicate with parts above or adjoining, but also to construct the exterior windows with metal and wire glass so that the fire will not communicate from one floor to the other by the outside of the buildings.

**WATERPROOF CONCRETE.**

The College of Engineering of the University of Wisconsin has been carrying on experiments to determine the permeability of undried concrete and tests already made show that good results are obtained if the concrete remains in the mixture from two to three minutes when gravel or stone is damp, a much longer time is required.

The use of wet sand is not advised if water-tight concrete is desired. The experiments showed that mixtures of one cement, one and one-half Janssenville gravel, when mixed to a wet consistency, are impervious to water and subjected to a pressure of 40 lbs. per sq. inch. Mixtures as lean as one part cement to six parts of gravel (a graded mixture) have been made impervious at high pressures by using care in proportioning the amount of water and in mixing batch. The specimens used in these tests are cylindrical in form and so made that the faces of the cylinders, 13 1/8 inches in diameter, are exposed to the predeter-
The thickness of the concrete through which the water must pass can be varied from four to 18 inches. A test is now being made to study the effect of varying the percentages of cement and water, the graduation of the sand and gravel, the proportioning of the mixture and the thoroughness of mixing, on the hardening of the specimens.

**ARTIFICIAL STONE PLANT.**

The Cast Stone Company, Wyandotte building, Columbus, O., contemplates building a one-story factory building for the manufacture of artificial stone. Private plans are being made for the work, which will be started in a week or two. Slate roofing will be used while the exterior of the building will be of cast stone.

**HUNDRED THOUSAND SCHOOL.**

The Cleveland, O., Board of Education, Sixth street and Rockwell avenue, will build a $100,000 school building on Poe avenue, from designs being made by the board's architect, F. C. McCormack with F. S. Barnum as associate architect. The building will be two stories and basement, brick and reinforced concrete construction, composition roofing, metal lath partitions, structural steel

The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plate as illustrated.

**A High-Grade Pump at a Moderate Cost.**

Send us your Conditions

Special Circulars and Prices on application

Reineke-Wagner Pump & Supply Co.
PITTSBURGH, PENN.

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PITTSBURGH, PENN.
frame, skylights, etc. An electric lighting and steam heating system will be installed.

**SUB-CONTRACTS FOR SCHOOL.**

Foundation work on the new Glads tone school building for the Board of Education, Pittsburgh, has about been Homestead, general contractors, have awarded the steel work to the John Eichley, J., Company, Pittsburgh; ornamental iron work to the Thomas Lane Company, Pittsburgh; cut stone work to Samuel Holmes, Wilkinsburg; fireproofing to Vailowe & Trautwein, Curry building, Pittsburgh; plastering to the L. & E. T. Plastering Company, Homestead.

**CHURCH CONSTRUCTION AT CHARLESTON.**

Preliminary plans have been completed for the one and one-half-story marble or stone church building, to be erected at Charleston, W. Va., for the First South M. E. Congregation. These plans were made by Architect H. Rus Warne, Capital street, Charleston, who will take bids on the work about March 1. The building will measure 36x96 feet and will cost about $75,000. The materials required will consist of tile and copper roofing, marble or stone work, exterior plaster relief work, tile work, plumbing, heating and lighting work, art glass, etc.

**CHURCH CONSTRUCTION OPEN.**

Bids will be taken until February 4 by Architect Edward J. Weber, Renshaw building, Pittsburgh, for constructing a two-story chancery building, 44x60 feet, and an auditorium 64x76 feet, for the Diocese of Pittsburgh, Craig street, near Fifth avenue, Pittsburgh. The buildings will be of stone and brick construction, and will cost $90,000. The specified material includes structural steel and iron, hollow brick, face brick, concrete foundations, reinforced concrete floor construction, metal lath, interior finish of oak, poplar and yellow pine, metal weather strips, etc. The electric lighting has been reserved.

**GENERAL NEWS.**

Fred. S. Fravel, lately connected with the Columbus Heating & Ventilating Company, Columbus, O., and C. H. Barienbrock, formerly with the National Fireproofing Company, announce that they have taken charge of the reinforced bar department of the Republic Structural Iron Works Company, Cleveland, Ohio.

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<td>0.0688 sq. in.</td>
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Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.

Vol. 51. February 7, 1914. No. 2

ALMSHOUSE FOR BEAVER.

The Beaver County Commissioners, Beaver, Pa., are having preliminary plans for a brick almshouse, which will be constructed at a cost of $100,000. There are to be three buildings erected, administration building 40x600 feet, three stories; men's cottage 41x120 feet, two stories and women's cottage 41x100 feet, two stories. Several other buildings of smaller size are to be constructed.

OIL CITY'S NEW WORK.

A store and lodge building is to be built at Oil City, Pa., by the Oil City Lodge I. O. O. F., Fred C. McGill, chairman. The E. E. Bailey Company, Oil City, is designing the building, which will be four stories high and measuring 67x180 feet. It will be constructed of brick and steel with fire escapes, skylights, sprinkler system, fire doors, tile floors in vestibule and baths, etc.

WILL BUILD RIVER DOCK WALL.

The Jones & Laughlin Steel Company, Pittsburgh, is having plans made by the company's engineer for building a large concrete dock wall, which will be 2,000 feet long, 23 feet wide at base and four feet wide at top, the wall to extend from S. Twenty-fifth street to the Monongahela Connecting Railroad Company's bridge. It is probable that only one section of the work covering 1,000 feet will be built this year. Before any work is started all plans for the work must be approved by the government engineers at Washington. The estimated cost of the work is $300,000.

NEW FREIGHT STATION.

The Pennsylvania Railroad Company is to build an addition to its Duquesne freight station, Pittsburgh, the plans for which are now being prepared by the engineering department, Broad street, Philadelphia. The new building will be 50x450 feet, three stories and will be of brick, steel and reinforced concrete construction. Slag roofing will be used for covering the building. The estimated cost is $280,000.

COMPLETING Y. M. C. A. PLANS.

The plans for the Y. M. C. A. building, to be built at Youngstown, O., at a cost of $275,000, are being rapidly completed by Architects Jackson, Rosecrans & Watebury, 1328 Broadway, New York City. The building is to be 90x216 feet, six stories high and will be of fireproof construction throughout. The heating engineer is Paul J. Piatti, 47 W. Thirty-fourth street, New York City.

CLUB HOUSE CONTEMPLATED.

The Knights of Columbus, Bradford, Pa., have in view the building of a three-story club house 50x125 feet, brick and steel construction. No definite plans have been formed but sketches are being requested from various architects. The building will contain lodge rooms, gymnasium, pool rooms, etc. D. W. Daley, 125 William street, Bradford, is chairman of the building committee.

HOME FOR NURSES.

The Youngstown Hospital Association, Youngstown, O., is having plans made by Architects Stanley & Scheibel, Youngstown, for a three-story limestone and hollow tile building, 86x96 feet, to be used as a nurses home. Bids on the foundation work are being requested from various architects. The building will contain sixteen nurses' rooms and an operating room, and will be five stories high. The estimated cost of the work is $100,000.

MAKING STEEL FORMS IN WARREN.

The Hetzel Steel Form & Iron Works, Warren, O., has just placed its plant in operation for making steel forms for concrete construction. These are of special design and can be used for foundation work, walls, sewers, bridge work, sidewalk construction, etc., etc. The company also makes a complete line of concrete buckets and chutes, hoppers, mixing-platforms. M. C. Boyd, Pittsburgh, who has been identified with this line of work for several years past will assume the position of sales manager on the 15th inst.

WILL PLAN HOSPITAL.

The building committee of Charity Hospital, Cleveland, O., has engaged Architects Walker & Weeks, Cleveland, to prepare plans for the new $300,000 building, to be erected at Central avenue and East Twenty-second street, and it is expected that ground will be broken for the hospital early in the summer. Myer J. Stern, of Chicago, a noted specialist on hospital construction, will be associate architect. The building will be of simple design externally, it is announced, but the interior will be of the most modern and up-to-date type and equipment and the committee expects a hospital that will be a model in all appointments.

BUILD HEINZ PLANT IN SECTIONS.

The large storage warehouse which will be built on Main street, Northside, Pittsburgh, for the H. J. Heinz Company, will be built in sections. The plans for the structure are being made by Architect George Bisquis, 1062 Main street, Northside, and call for a building six stories high, 115x224 feet, brick and steel frame construction. The concrete foundation work will be done by the owners. Some of the building requirements will consist of hollow metal sash, concrete and composition roofing, concrete flooring, skylights and ventilators, electric freight elevators, etc. The company plans to spend $450,000 on the work.
Last week the contract for building the warehouse for the McKinney Manufacturing Company, Northside, Pittsburgh, was placed with the Henry Shenk Company, Pittsburgh. The building as designed by the Hunting-Davis Company, Century building, Pittsburgh, will be approximately 105x120 feet, six stories high with basement. It will be of reinforced concrete throughout. There will be no steel beams or girders used in the construction work except those for the outside lintels and elevator framing.

In order that the reinforced concrete work may be properly constructed, thus eliminating any possibility of poor workmanship and accidents, it is agreed that superintendent of five years experience on reinforced concrete building must remain on the work at all times. The mixture of the concrete will be one part cement, two parts sand and four parts gravel. All columns will have a one to two cement and sand mortar placed to a depth of three inches before the concrete is placed. The columns will be cast a day ahead of the beams and slabs. Care is to be exercised in removing the forms so that no board marks or imperfections on the exterior of the building are noticeable.

The building will be one of the heaviest loaded flat slab buildings ever designed in the country. A four-way diagonal reinforcement will be used in the slab construction. The columns will have hoop-reinforced concrete. All ceilings will be flat. The floor loads per square foot will be as follows: First floor, 800 pounds; second floor, 1,200 pounds; third floor, 650 pounds; fourth floor, 450 pounds; fifth and sixth floors, 300 pounds. The basement floor and walls will be reinforced to take care of flood water pressure with flood gates on basement windows.

The design carries with the proposed work the building of a tunnel to connect with the present plant and the construction of a bridge to connect up with the second floor. Solid steel sash will be used on all windows. A sprinkler system will be installed. All floors in the basement tunnel and pent houses will have a granolithic finish.

For the connecting bridge the walls and roof will be constructed of self-centering material plastered with cement mortar. The walls will be two inches thick and finished smooth on both sides. The roof will be two and one-half inches thick and finished with a smooth undercoat. Composition roofing will be used throughout all the work.
Tin Roofers Have "Come Back"

A correspondent in a late issue of the Construction Record made the statement that practically 75 per cent of the roofing specifications written today call for composition material, that the material which the tin roofing manufacturers were putting on the market was not the same quality heretofore offered to the trade and that the question of the difference in cost between the tin and composition roofings was not such a factor as the tin interests would have builders believe.

The tin roofing interests are fully in opposite belief as is attested by the following communications:

Editor Construction Record:

There is, of course, no comparison between the relative merits of a roof of good tin and any one of the patent or built-up composition roofings. The patent roofing can be bought for less than one cent per square foot, while a roof of good tin will cost in the neighborhood of 12 cents per square foot. The patent roofing may last four or five years before it has to be replaced, while the tin roof will outlast the building itself and may then be used over again for other roofing work. This is the actual record of many old roofs.

To be sure, cheap roofings which are easy to apply, have replaced cheap tin to a considerable extent, but this, in the writer's opinion, has been due more to the architects not supervising closely the grade of terne plate that is used; and the cheaper qualities, that are intended only for temporary work, have been placed on the better class of buildings because there was a saving in the first cost.

Very truly,

W. H. Abbott.

Wheeling, W. Va., Jan. 27, 1913.

A representative of one of the largest concerns in the country who does not wish to be known in the discussion believes that "the author of the article in question is undeniably misinformed with reference to the percentage of roofs now covered with prepared roofing. It cannot be denied that the manufacturers of prepared roofing have increased their business very substantially and while the percentage of such roofs is greater than formerly, it is also true that there is as much terne plate or tin roofing manufactured today as before.

"The writer of the article is misinformed concerning the quality of tin roofing now being placed upon the market. The agitation for better terne plate which has been going on for several years has had most beneficial results, and there is no hesitancy in stating that the tin roofings made by this company, also by some of the so-called independent manufacturers, is just as serviceable as the imported article 25 years ago."

Editor Construction Record:

Referring to the letter published in your January 24 issue, relative to the specifying of tin roofing vs. composition roofing "F. G. R." makes the broad statement that 75 per cent of the architects will continue to specify composition material, but seems to consider tin and composition roofing the only factors in the roofing field. How about the thousands and thousands of tons of galvanized and painted sheet metal roofing sold annually? Statistics indicate that the use of composition and tin roofing is as a drop in the bucket as compared with the heavy gauge steel roofings in use to-day.

As a matter of fact it was the poor quality of roofing in all forms that led to the investigation of a durable material and a metal corrosion resisting roofing is the result.

Men who do nothing but call on architects report that the architects who specify metal are in the majority. Composition roofings are used very extensively on the farms where the atmospheric conditions are not so severe as in the city and a cheaper roofing material answers their purpose well enough. In places where corrosion is a damaging factor, however, it is essential that something more durable than paper or felt saturated with a solution of coal tar products be used.

Yours very truly,

Canton, O.  
H. A. Greenberger.

Prices May Advance.

Building material producers have adopted the policy of encouraging new business instead of placing obstacles in its way by keeping prices stationary except in such cases where an advance in price was positively warranted by an increase in demand.

There is a feeling that certain lines will advance before long. Structural steel is one of these. Portland cement may prove to be another. Certain lines of hardwoods are almost sure to advance, noticeably maple and oak flooring. The price of common brick will, at least, stay where it is, unless an unforeseen demand develops. Wire reinforcement is still without formal quotation and the demand is such as to warrant expectations of a continuation of this policy. Roofing slate was the best example of the tendency on the part of manufacturers to meet prospective business half way. The talked-of advance was definitely postponed because of a feeling that an improvement in conditions was at hand.
Price Cutting vs. Salesmanship

By H. W. Holmes, Detroit.

Selling and salesmanship are not the same today as they once were. They have advanced with civilization. Years ago, buying and selling was entirely a conflict of wits. There was no attempt to tell the truth. No one was expected to. They wouldn't have been believed if they had. The buyer selected some article and offered 10 cents for it. The seller tore his hair and swore he would go bankrupt if he let go for less than eight dollars. So they argued back and forth for hours, each giving a little until they at least reached a common price and the deal was closed. The merchant may have made 1,000 per cent or 10 per cent—nobody knew. He had no price. He started where he dared and ended where he had to. Price cutting and lying was his life and it took centuries of time and civilization to bring the same merchant to represent a man who could be trusted and his business respected.

Times have changed. Conditions just related are not tolerated in modern business. Even conditions that a few years ago were considered proper are not tolerated now. New elements have entered into business—consideration, fairness, frankness—and these elements are gaining strength.

It is no longer considered smart or clever to bargain with a man until you know he will lose money and then hold him to his unfair contract. I have seen business given to a man at prices above what was offered would not cover a proper performance of the work at a fair profit. Was that sentimentalism? No—it was good, honest, modern business.

An open price free to all and a uniform price alike to all are the modern watchwords of buying and selling. So quickly do such new elements come into business and so promptly are they assimilated that it is hard to realize that five years ago such a policy was rare, 10 years ago it was unknown. Today the policy is jumping from one business to another, spreading like a forest fire; tomorrow it will be a law of the land. You doubt? Are not railroads compelled to publish their tariffs and furnish service to all alike? Are not express companies compelled to publish their rates and make them the same to all? Can a telephone company or an electric light company furnish you service for one price and me the same service for another? It is the advance of public opinion and it is taking hold fast.

Why do people argue about prices and feel dissatisfied? Is it because the price is too high? No. Just what the price is has very little to do with it. People in Columbus, O., argue about a brick costing $15 per thousand just as much as people in Detroit do over the same brick at $20, or people in Milwaukee over the same brick at $25, or people in Boston at $30. Why? Because none of them is sure he is getting the bottom price. A man doesn't care so much what the price is, but he does want to know that no one else can buy the same article any cheaper.

Two men are competitors. They fix a price and agree positively to stick to it. They separate. Immediately they begin to distrust each other. Soon there are rumors of cuts, then attempts to evade the agreement, it is stretched, torn and war is on.

But, let these men agree to have a free, open price, and let them mark their goods plainly and the price will soon become fixed.

Why? Because each man has been in the habit of cutting prices as he understood his competitor had or was going to. When the day comes he can walk into his competitor's store and see the prices on his goods, not in cipher, but in plain figures, his chief incentive to cut prices will be gone.

When a contractor, an architect, or an owner can feel sure that the price you name on a brick is the same to him or any other man, he will stop arguing price and turn his attention to just which brick he wants.

When the manufacturers and dealers find their competitors are pursuing that open policy and that they can know their prices, there will be little price cutting.

Why does a brick man cut his price? Because he doesn't think his brick are worth the money? No—because he is afraid his competitor with a similar brick has already cut to get the job.

Why does a brick man give a contractor 50 cents or so a thousand brick? To help the contractor? No—because he is afraid his competitor has or will do the same thing. He scares himself out of 50 cents or $1.00 a thousand.

Show me the man who is afraid to hold his price when he knows his competitor is doing so and I will show you a man who is down and out.

Once let prices become open and stationary and we give room for salesmanship.

Price cutting is not salesmanship. Bribery is not salesmanship. Misrepresenting is not salesmanship. It used to be a saying that salesmanship was the art of making a man buy what he didn't want.

That may still be the conception some men have, but it does not agree with modern practice.

The success of any business depends on its customers being satisfied.

Salesmanship is the art of making a man buy what he ought to buy, what he will be satisfied with afterward.

If we could sell brick to every man who ought to have brick we would be swamped.

Let us get up to date: Put aside price cutting, misrepresentation, and kindred practices, realize that our interests lie together, not apart; put brick in the places they ought to go, and bring our business to be respected by the public.

There are brick men today who see every other brick man as a wild beast ready to tear them to pieces, who can't imagine cooperation, and who don't believe there are such things as consideration, frankness and fairness in business.

There are brick men today who bribe, rebate, misrepresent, deliver inferior goods and commit all the other crimes ever heard of.

There are brick men today who just want to be disagreeable and different and not fraternize.

There will probably always be some such. Let them haggle and fight.

There are enough who are different. Let them keep their faces to the light. Take up the slogan of good salesmanship and better business; a uniform price, a free price, consideration, fairness, frankness.

NO ACTION ON CODE LAW.

No action will be taken by the present session of the Legislature on the proposed State building code. This information is pleasing to many members of various builders' exchanges throughout the State who wish to have revisions made.
COMPULSORY VENTILATION.

In the new building code of Cleveland provision is made for the regulation of the ventilation and heating of school houses, tenements, theatres, department stores, the idea being, of course, to promote better conditions of hygiene in these buildings. Frequent air tests will be made by T. R. Quay, the city heating and ventilating engineer, to see that the ventilation provisions of the code, at least so far as public buildings are concerned, are carried out.

The code provides that halls, auditoriums, school rooms, theatres and other places of public assembly or entertainment shall have in continuous operation while occupied a system of ventilation that will provide at least 25 cubic feet of outside air per minute for each person for whom seating accommodation is provided. Department stores shall have a mechanical system of ventilation that will provide the following number of complete air changes per hour: Basements used for retailing merchandise, locker rooms, rest rooms and other rooms that are required by ordinance to be ventilated, six changes of air per hour; ground floor, six changes per hour; floors above the first, four changes per hour, unless natural ventilation is provided.

A mechanical system of exhaust ventilation is required for kitchens connected with restaurants, that will exhaust the air six times per hour. However, if the restaurant and its kitchen are not separate, six changes per hour are required for both the restaurant and its kitchen. In factories in which there is less than 20 square feet floor space for each employee, a system of ventilation is required that will provide six changes of air per hour. If more than 20 square feet of floor space is provided for each employee, a system of ventilation is required that will provide four changes of air per hour, unless natural ventilation is provided as required by the city ordinance. In hospitals, jails, asylums, homes for the aged, houses of correction and detention, etc., where there are sleeping accommodations for more than 10 persons, ventilation systems are required that will provide at least six changes of air per hour in dormitories, cell blocks, wards, public sitting rooms, toilet rooms and in other rooms where the inmates congregate.

Churches with a seating capacity of over 300, or where the clear story height is less than 15 feet, must have a mechanical system of ventilation providing six changes of air per hour. If the seating capacity is less than 300 or more, a modified system of ventilation which shall meet the approval of the engineer shall be installed.

The amount of carbon dioxide in any new building in the foregoing classifications shall not be permitted to exceed 10 parts per 10,000 parts of air. The amount of carbon dioxide in buildings erected prior to the enactment of the code shall not exceed 12 parts per 10,000 parts of air. It is of ventilation tests that show that the percentage of carbon dioxide in the air is greater than the maximum prescribed, the building inspector may require additional ventilation, even if the requirements of the code as to air changes have been complied with.

An exception to these standards of ventilation is made in the case of storage rooms and vaults or where manufacturing processes would be materially interfered with. However, the code provides that the air in such places shall not be permitted to become detrimental to health or safety.

No part of the fresh air supply is to be taken from the cellar or basement. No person shall be exposed to any direct draft from any air inlet. All poisonous or noxious gases and all dust which is of a character that is injurious to health in manufacturing plants must be removed by mechanical ventilation or exhaust devices.

The code provides that the ventilation system for toilet rooms shall not be connected with any other building, but shall be a complete system, discharging above the roof. Compartments containing no more than four water closets and without sufficient outside windows must have a gravity or mechanical system of exhaust ventilation that will change the air six times per hour. Compartments having more than four water closets and having sufficient outside windows shall have a gravity or mechanical system of exhaust that will change the air six times per hour. In the latter case, if the outside windows are insufficient, a mechanical system must be used that will provide six changes per hour. Rooms containing latrines or arinals with local vents are to be ventilated through the fixtures, and when such ventilation does not provide six changes per hour, additional ventilation must be provided. Wire or cloth screens are required for filtering air in all fresh air openings unless some other method is provided.

No floor registers will be allowed in any aisle or passage way excepting in churches, and no register there shall be larger than 18 inches square. In theatres, churches, etc., at least one-fifth of the ventilated air shall be removed by registers located near the floor. No radiator coil or other heating surface shall be supported on any supply or return piping construction to the same, but must be carried on the floor or on hangers fastened to the floor, wall or ceiling.

Warm air furnaces must be supplied with fresh air from outside of the building through a duct having an area of at least 60 per cent of the area of all warm air pipes. This fresh air duct may have a by-pass connection to the vestibule or hall near an outer door, but no such connection shall be permitted for the use of air from the cellar. Floor furnaces are prohibited, and those now in use must be removed within 30 days.

REASON FOR CHICAGO'S DROP IN BUILDING.

Reduction of the limit in height of buildings in the downtown district of Chicago from 260 to 200 feet by the ordinance of 1911 has had a deterrent effect in the erection of new buildings during 1913 in that section, according to the annual report of the building commissioner, Mr. H. F. Ericsson. Many of the larger buildings still in course of erection are structures for which permits were issued previous to restrictions imposed. The advantage lost downtown has been made up in residences, flats and apartment buildings, so that the total estimated cost of structures for the year is not far different from that in 1912. For 1913 the estimated cost of the 76 office buildings was $2,706,400, while in 1912 it was $4,571,000 for 49 similar buildings. The 5534 flats and apartments cost on an average of $7,800 each, and the 3,519 residences, $2,600 each.

Inspections of theatres resulted in the condemnation of nine buildings, five were closed permanently and four brought to compliance with ordinances passed in July, 1913. Two of the latter required remodeling from the ground up. Of 8,300 buildings covered at the annual inspection, 6,225 were found violating the ordinance. The commissioner is of the opinion the orders issued will be found obeyed to such an extent that few violations will be encountered this year.

Plans examined by the architectural and engineering bureau numbered 2,030 while 48 theatre roofs were tested, 68 reinforced concrete floor tests conducted and 918 buildingdollings were placarded with cards giving safe loadings.

SCHOOL CONTRACTS AWARDED.

The steam heating contract for the Watt street school building, for the Board of Education, Pittsburgh, was awarded to C. F. Higgins, Wabash building, Pittsburgh; plumbing work was placed with Weldon & Kelly, Pittsburgh, and electric work to James L. Thompson, 330 Liberty avenue, Pittsburgh.
CONCISE BUILDING INFORMATION

Authentic Building News on New Dwellings, Stores and Offices, Churches, Schools, Theatres, Etc.

These verified reports appear in advance of all other trade publications.

Pittsburgh.

Architect Paul W. Irwin, Renshaw building, awarded to S. G. Baldensperger, 214 North Highland avenue, the contract for erecting a 2½-story stone and cement plaster residence, on Dallas and Penn avenues, for U. W. Tinker. Dallas avenue. Cost $20,000.

Architects Janssen & Abbott, Century building, have preliminary plans in progress for a 2½-story brick residence, to be erected on Northumberland street, for Charles Drefus, Oliver building. Cost $30,000.

John Morrow, Jr., 1230 Pennsylvania avenue, Northside, contemplates remodeling a two-story frame residence, on Woods Run avenue, to cost $5,000.

Preliminary plans are in progress for two 2- and 3-story brick apartment buildings, to be erected on Frankstown avenue, for William G. Weston, Brinon avenue, Trafford City. Cost $20,000.

John Sykes, 5220 Butler street, is taking bids on erecting three 2-story brick residences on 5262-5-6 Natrona Valley, from plans drawn by Architect W. A. Thomas, Park building. Cost $6,000.

Architect William H. Cookman, Philadelphia, will be ready for bids about February 4, on constructing a three-story steel, brick and concrete freight station, on Duquesne Way, for the Pennsylvania Railroad Company, Broad street station, Philadelphia. Cost about $250,000.

Architects Bartherger & Bartherger, Westinghouse building, are taking bids on remodeling a four-story brick bakery, on Stanton avenue, Millvale, for the Eagle Baking Company, Millvale. Cost $5,000.

Architect R. Brock, Jr., Carrick, will be ready for bids about February 10, on erecting a three-story brick apartment building, on Alice street, Knoxville, for A. Rahe, Brownsville Road and Hobert street, Mt. Oliver. Cost $9,000.

W. J. Dibble, 603 Penn avenue, Wilkinsburg, is taking separate bids on erecting a two-story brick and concrete fireproof commercial garage on Coal and Penn avenues, Wilkinsburg, to cost $15,000. Plans by Architects Carlisle & Sharrer, Jenkins Arcade building.

W. N. Zottman, Bessemer building, is taking separate bids on erecting a 2½-story brick and stucco apartment building, on North Harrison avenue, Belleview, to cost $9,000.

H. A. Johnson, 347 Millvale avenue, received the contract for erecting a brick and hollow tile residence on Millvale avenue and Cypress street, for John McGowan. Cost $6,000.

Architect Adam Wickersham, Homestead, will be ready for bids about February 14, on constructing a three-story brick or reinforced concrete light manufacturing plant, at end of Thomas boulevard, for the Lawson Manufacturing Company, 215 Ninth avenue, Homestead. Cost $50,000.

Architect A. F. Link, 407 North Craig street, will prepare new plans for a two-story brick fireproof church, to be constructed in Beechview, for St. Catherine's Roman Catholic Congregation. Cost $30,000.

Engineer D. D. McKeel, Twenty-seventh and Carson streets, have preliminary plans completed for a concrete dock wall, to be constructed on the Monongahela river, from South Twenty-fifth street to the Monongahela Connecting Railroad bridge, for the Jones & Laughlin Steel Company. Cost $300,000.

William Whitefield, 563 Hobart street, contemplates erecting two 2-story brick double residences on Murray avenue, near Hobart street, to cost $14,000 each.

Charles S. Smith, 500 Center avenue, received the contract for superstructure for the brick and stone fireproof church and rectory, being constructed on North avenue, Millvale, for St. Anthony's Congregation. Plans by Architect John T. Comes, Renshaw building. Cost $15,000.

Architect M. Nickelinger, Diamond Bank building, awarded to the Thompson-Starrtett Company, Second National Bank building, the contract for constructing a 3-story brick and terra-cotta fireproof mercantile building on 220 Fifth avenue, for the Bedell Company, 14 W. Fourteenth street, New York City. Cost, $125,000.

Nathaniel Brothers, 2247 Valera avenue, Carrick, received the contract for erecting a two-story brick apartment building on Hays avenue, Carrick, for William E. Bank, 2112 Carson street. Cost, $12,000.

Architects W. G. Wilkins Company, Westinghouse building, have revised plans in progress for a two-story brick armory, to be erected on Penn avenue and station street, East Liberty, for the State Armory Board. Cost, $25,000.

The United States Government contemplates erecting a two-story brick veneered lockkeeper's residence at Lock No. 1, Monongahela river, to cost $6,000. Engineer Col. Francis R. Shunk, Farmers Bank building, is preparing plans.

George C. Bunney, 708 Keystone avenue, Bellevue, received the contract for building a 2½-story brick and shingle residence, on Cornell avenue, West View, for Henry J. Gross, 686 Forest avenue, Bellevue. Cost $4,500.

Architects H. E. Kennedy & Company, Home Trust building, awarded to Henry Busse & Company, Main and Wabasso avenues, West End, the contract for remodeling a three-story brick and terra cotta mercantile building, on 104 Federal street, Northside, for William C. King, 360 Winfield avenue. Cost $7,000.

R. J. Shields, 1839 Everett street, Wilkinsburg, is taking bids on erecting a two-story brick veneered residence, on the Johnson Plan, Wilkinsburg. Cost $5,000.

Architects E. M. Butz & Company, 417 Park building, will receive bids until February 28, on constructing three 3-story brick fireproof apartment buildings, on Elm street, Edgewood, for the Edgewood Dwellings Company. Cost $50,000.

Architect W. N. Zottman, Bessemer building, will receive bids until February 11, on constructing a 2½-story brick veneered and shingle residence, on Duquesne avenue, Ben Avon, for J. E. Dermott, Manufacturers building. Cost $7,500.

Architect E. B. Lee, Peoples Bank building, will revise plans for remodeling a brick mercantile building, on 815 Liberty avenue, for the S. Hamilton Company.
PITTSBURGH BUILDING PERMITS


 Apartments and Dwellings.

Chillicothe, O.—Architect J. W. Coulter will be ready for bids about February 10 on erecting a two-story frame residence on Fifth avenue, for Charles Herrmann. Cost, $4,000.

The same architect will also be ready for bids about February 10, on erecting a two-story frame residence, for John McRoberts, to cost $4,000.

Coshcton, O.—Gunn Smith contemplates erecting a brick residence, office and garage, to cost $2,500. Architect has not been selected.

Dayton, O.—Architect A. F. Meyer, 17 Louis building, will be ready for bids about February 10, on erecting a two-story brick and tile residence for R. N. Sanchetter, 50 S. Hopeland street, to cost $5,500.

Imperial, Pa.—Architect J. H. Phillips of McKees Rocks, has plans nearly completed for a two-story brick store and apartment building, to be erected for G. B. Cratsley, to cost $6,000.

Lima, O.—Architects Leech & Leech have plans in progress for a two and one-half-story tile residence, to be erected for W. J. Storm, to cost $3,000.

Johnstown, Pa.—Architect W. S. Powell, 320 Ohio street, has plans in progress for a two-story brick double residence, to be erected for James V. Morlock, 1214 Spring street. Cost, $8,000.

The same architects have plans in progress for a two and one-half-story tile residence, to be erected on North street, for M. M. Kaltner, 237 N. Main street. Cost, $5,000.


Architect C. L. Harding, Woodward building, Washington, D. C., has plans in progress for a three-story brick house, stone, hollow tile and stucco residence, and a pergola, to be constructed four miles out of Martinsburg, on Winchester Pike, for John N. Stewart. Cost, $30,000.


Springfield, O.—Architect William H. Russ of Indianapolis, Ind., has plans in progress for remodeling a two-story brick apartment building on North and Larch streets, for C. P. McGilvray, Laconia avenue. Cost, $4,000.

Architects Robert C. Gotwald awarded to Joseph C. Foss, 128 E. First street, the contract for constructing a three-story brick store and apartment building, on North and Fountain avenues, for the Maxter Naiz Company.

Cincinnati, O.—Walter H. Hoeller, 166 East McKinley street, will take bids for the construction of a two-story frame residence on Trimble street, Evanston, from plans drawn by Architects W. F. Wisman, 278 E. Second street, East Cleveland, Cost, $3,000.
making separate bids on erecting a 2½-story frame residence, on Conant street, from private plans. Cost $2,500.

Cleveland, O.—Architects McKea & Hamilton, 1002 Garfield building, are taking bids on erecting a two-story plaster and hollow tile residence and garage, on East Eighty-seventh street, for H. D. Hillman, 929 Leader News building. Cost $12,000.

Columbus, O.—Architect H. C. Jones, 12 Deshler building, is about ready for bids on erecting a two-story brick residence on Granville street, for John L. Jones, Outlook building. Cost $4,000.

Architects Dawson & Holbrook, 611 Outlook building, will be ready for bids about February 10, on erecting a two-story brick terrace on Gilbert street and McAllister avenue, for the Stewart Estate, 667 North High street. Cost $10,000.

Cory, Pa.—Architect A. P. Mount, Traction building, will be ready for bids about March 1, on erecting a two-story brick and cement apartment and garage for William Cady & Son, to cost $8,000.

Silverton, O.—Architect J. M. Baker, Cincinnati, is drawing plans for a 2½-story brick veneered residence for A. A. Sprague, Pine avenue, to cost $10,000.

Springfield, O.—Gustave Baedel is taking bids on the erection of a 2½-story brick residence, from plans drawn by Architect J. A. Chapin, of Lima. Cost $5,000.

Business Buildings.

Cleveland, O.—Architects E. F. Gibbons, 408-1900 Euclid building, has plans in progress for a live-story brick and reinforced concrete fireproof store and warehouse to be constructed on E. Fifty-first street, near Hough avenue, for the Scott Brothers Company. Cost, $75,000.

Coshocton, O.—The Tribune Publishing Company is preparing sketches for a three-story brick and stone office and store building on Market street and Cherry street, for the Western & Southern Life Insurance Company. Cost, $35,000.

Scottsdale, Pa.—Architect C. B. Dickey, Amhurst building, has plans in progress for a three-story brick and concrete building to be constructed for the First National Bank of Scottsdale, on Pittsburgh street, to cost $10,000.

Cambridge Springs, Pa.—W. H. Hill, contemplates erecting a concrete block fireproof commercial garage addition from private plans. Cost, $2,000.

Cleveland, O.—A. M. Gordon, 1325 Williamson building, is taking bids on erecting a three-story brick store and apartment building on Hough avenue and E. Seventy-ninth street, to cost $100,000. Plan by Architect A. F. Janowitz, 322 Permanent building.

DuBois, Pa.—Architects Harrington & Howard, Deposit Bank building, has plans in progress for a bank building addition, to be erected for the Deposit National Bank.

Lima, O.—Architects B. F. Mathews, 250 West Main street, for the Lima Business College. Contemplating a four or five-story brick and concrete warehouse. Architect will be announced later.

Meadville, Pa.—Architect E. J. Weaver, Crawford County Trust building, is taking bids on erecting a three-story brick bungalow, on the Olden Extension, for S. E. Stein, 240 North Main street. Cost $7,000.

Springfield, O.—Architect Robert C. Gotwald, awarded to A. C. Hess, the contract for erecting a three-story brick store and apartment building, on North and Clinton avenues, for the Baxtor Nafz Company.

Architect William F. Miller, Kelly building, will be ready for bids about February 10, on remodeling a three-story brick store and apartment building on 62 West Main street, for Adam Schmidt, 63 West Main street. Cost $12,000.

Cincinnati, O.—Architect Anton Rieg, 255 Vine street, will receive bids until February 10, on erecting a 2½-story brick residence, on Ohio avenue, for J. E. Sickling, 102 Clinton avenue. Cost $16,000.

Cleveland, O.—Architect H. Halley, 514 Williamson building, has plans in progress for a two-story brick apartment building and garage, to be erected on West Fourteenth street, for Thomas Urbanksy, 2364 Ontario street.

Religious.

Chillicothe, O.—Architect John Schweitzer, Court House, has been se-
selected to prepare plans for a one-story brick church, to be erected on Church and Mill street, for the High Street United Brethren Congregation. Cost, $10,000.

Brownsville, Pa. — Architect H. J. Lindemans, McKeesport, is taking bids on erecting a 2½-story brick parsonage, for St. Mary's Roman Catholic Slovak Congregation. Cost $5,000.


Cincinnati, O. — Architect E. H. Dornette, Pickering building, has plans in progress for a one and one-half-story brick church, to be erected on Thirty-fourth street and Webster avenue, for the Oakley Presbyterian Congregation. Cost, $25,000.

Lima, O. — Architects McLaughlin & Hulsken are taking bids on erecting a one-story pressed brick synagogue on Market street, for a Congregation now organizing, care Max Berstein. Cost, $15,000.

The Grace Methodist Congregation will select an architect to prepare plans for a two-story brick and stone church, to be constructed on Kibby and Elizabeth streets, to cost $60,000.

Bellevue, Ky. — Architect J. F. Shelessey, of Cincinnati, O. has been selected to prepare plans for a parochial school building, to be constructed on Taylor & Division avenues, for the Sacred Heart of Jesus Congregation. Cost, $30,000.

Cleveland, O. — Architects Holett Company, 361 Lennox building, have preliminary plans in progress for a two-story brick church addition, to be erected on Meyer avenue and Schonton road, for St. Matthews Evangelical Lutheran Congregation. Cost, $15,000.

Architect E. J. Schneider, 506 Cuyahoga building, has been selected to prepare plans for a three-story brick and concrete and steel fireproof parochial school and club building, to be constructed on 1924 W. Fifty-fourth street, S. W., for St. Stephen's R. C. Congregation. Cost, $100,000.

Architects Maurer & Mills, 1335 Schofield building, are taking bids on erecting a one and a two-story brick church and Sunday school rooms on One Hundred and Twentieth street and Miles avenue, for the Schaefer Memorial Congregation, Cost, $20,000.

Johnstown, Pa. — The Moxham Lutheran Congregation contemplates erecting a one and one-half-story brick and stone church on Park avenue and Ohio street, to cost $150,000. Architect has not been selected.

Architect W. R. Myron, Lincoln building, is drawing preliminary plans for a one and one-half-story brick and stone church addition, to be erected for the Moxham U. B. Congregation. Cost, $25,000.

Toldeo, O. — Architects Mills, Rhines, Fellman & Nordhoff, 1234 Ohio building, have plans in progress for a one-story stone church addition, to be constructed on Collingwood avenue and Virginia street, for the First Congregational church. Cost, $10,000.

Richfield Center, O. — Architect W. F. Dowling of West Toledo, has plans in progress for a two-story brick, steel and concrete parochial school and chapel, to be constructed for St. Elizabeth's R. C. Congregation. Cost, $25,000.

Mahoning, Pa. — Architect Clinton Strong, Union Bank building, Pittsburgh, will prepare new plans for a one-story brick chapel, to be erected on Seventh street, for St. Margaret's R. C. Congregation. Cost, $10,000.

Educational.

Fort Thomas, Ky. — Architects Weber, Werner & Adkins, of Cincinnati, O., are revising plans for a three-story brick and stone fireproof high school building, to be constructed for the Board of Education of District No. 2. Cost, $50,000.

Niles, O. — The Board of Education will advertise for bids until March 8 on constructing a two-story brick and stone fireproof high school building, to cost $25,000. Plans by Architects Howard & Merrill, of Columbus.


Marion, O. — Architects Howard & Merrill of Columbus, have plans in progress for a one and one-half-story brick and stone fireproof Carnegie Library, to cost $25,000. Plans by Architects Culpeper & Owen, of Youngstown.

Paulding, O. — Architects Marriott, Allen & Hall, of Columbus, have been selected to prepare plans for remodeling a two-story brick fireproof grade school building, on Olney avenue, for the Board of Education. Cost, $25,000.

Nelson Center, O. — Architects Miller & Ford, of Youngstown, awarded to Louis Adavasio & Company, Youngstown, contract for constructing a two-story brick, hollow tile and reinforced concrete high school building, for the Board of Education. Cost, $30,000.

North Lima, O. — C. F. Oswoy, of Youngstown, has been selected to prepare plans for a brick high school addition, to be erected for the Board of Education. Cost, $25,000.

Fort Thomas, Ky. — Architects Weber, Werner & Adkins, of Cincinnati, will receive bids until February 11, on constructing a three-story brick and stone fireproof high school building, for the Board of Education, District No. 2. Cost, $55,000.

Marion, O. — Architects Marriott, Allen & Hall, Hayden Clinton building, Columbus, have been selected to prepare plans for altering a central grade school
building, on West Center street, for the Board of Education.

Alliance, O. — Architect Frank L. Packard, of Columbus, has been selected to prepare plans for a two- and three-story brick fireproof addition, to be erected to the Freedom School for the Board of Education. Cost $15,000.

Bowerstown, O. — The Board of Education will receive bids until February 16 on erecting a two-story brick high and grade school building, to cost $25,000. Plans by Architects Howard & Merriam, of Columbus.

Franklin, Pa. — Architect J. E. Adams, Roxbury, Johnstown, is drawing preliminary plans for a two-story brick and steel fireproof grade school building addition, to be erected for the Board of Education. Cost $15,000.

Ludlow, Pa. — The Board of Education of Hamilton township, is taking bids on constructing a two-story brick fireproof high school building, to cost $35,000. Architect W. G. Eckles, of New Castle, prepared the plans.

Lowellville, O. — A. & S. Wilson, 541 Manufacturing.

Circleville, O. — Plans have been completed for a one-story brick club building, to be erected for the Circleville Athletic Club. Cost, $16,000.

East Toledo, O. — Architect F. E. Walker, 211 E. Main street, Toledo, has plans in progress for a one-story frame temporary Y. M. C. A. building, to be erected for the East Toledo Moral Improvement Company. Cost, $5,000.

Good Hope, O. — Architect Joseph Williams, Dennis Block, Washington Court House, is preparing sketches for a two-story brick or concrete block store and lodge building, to be erected for the Junior Order of United American Mechanics.

Tucson, O. — The Red Men's Lodge contemplates erecting a two-story frame lodge building, from private plans.

State, County and Municipal.

Cambridge, O. — James Devault, of Canton, received the contract for constructing a two-story brick and stone postoffice building, for the United States government. Cost $70,000.

Charleroi, Pa. — The United States government contemplates erecting a two-story brick veneered lockkeeper's residence, on the Monongahela river, to cost $5,000.

Norwood, O. — Architects Weber, Werner & Adkins, Cincinnati, have plans in progress for a three-story brick and stone fireproof administration building, to be constructed at Main and Elm avenues, for the city. Cost $30,000.

Greensburg, Pa. — Architects W. G. Wilkins Company, Westinghouse building, Pittsburgh, have revised plans in progress for a one-story brick and stone armory, to be erected for the State Armory Board. Cost, $30,000.

Waynesburg, Pa. — Architects W. G. Wilkins Company, Pittsburgh, have plans in progress for a one and two-story brick armory, to be erected on Washington street and Strawberry alley, for the State Armory Board. Cost, $30,000.

Lima, O. — Engineer John Price has plans in progress for a concrete retaining wall, to be constructed on E. North street, for the city.

Norwood, O. — Architects Weber, Werner & Adkins, of Cincinnati, are writing specifications for a three-story brick and stone fireproof administration building, to be constructed on Main and Elm avenues, for the city, to cost $90,000.
Altoona, Pa.—Plans are being prepared for a concrete reservoir to be constructed for the city. Cost, $100,000.

Norwood, O.—The city contemplates erecting a water works and electric light plant addition on Harris avenue, to cost $105,000.

East Pittsburgh, Pa.—The United States Government has purchased a site on Cable and Linden avenues, on which will be erected a postoffice building, to cost $61,000.

Theatres.

Coshottin, O.—E. O. Selby will be ready for bids about February 15, on erecting a two and one-half-story brick motion picture theatre, on Main street, to cost $30,000. Plans by Architect Fred Jacobs.

East Liverpool, O.—Architects Clepper & Owen, Youngstown, have been selected to prepare plans for a brick, hollow tile and reinforced concrete theatre and store building, to be constructed for J. C. Walsh.

Cleveland, O.—H. F. Geinz, Olivet avenue and E. Kohl, 7507 Linwood avenue, are taking separate bids on constructing a two-story brick and steel fireproof theatre and office building, on East One Hundred and Fifth street, to cost $30,000. Plans by Architect Albert Richter, 2219 View Road.

Springfield, O.—Architect William F. Miller, Kelly building, has plans in progress for a two-story reinforced concrete fireproof vaudeville theatre building, to be constructed for Louis Cuchares, care Majesty and Princess theatre. Cost $150,000.

Cincinnati, O.—John J. Ditigcr, 621 Main street, has purchased a site on Reading road and Shilalto street, on which he will erect a one-story brick fireproof motion picture theatre, to cost $30,000. Architect has not been selected.

Cleveland, O.—Architects W. W. Hodges Company, 119 Schofield building, will soon take bids on erecting a one-story brick and reinforced concrete fireproof motion picture theatre on Woodhill road and Stockwell avenue, for John Ferke, 2207 Tennyson road. Cost, $10,000.

Hospitals.

Elm Grove, W. Va.—Architect Albert Dayton, Wheeling, awarded to Finnegan & Amos, Elm Grove, Wheeling, the contract for erecting a two-story frame hospital building, for the Board of County Commissioners. Cost, $4,000.

Lima, O.—The Board of Commissioners of the Lima State Hospital for the Insane will receive bids until February 25 on constructing a two and three-story brick and concrete nurses' building, from plans drawn by Architect Frank L. Packard of Columbus.

Hotels.

Wilmington, O.—Architects Robertson & Fahnstock, 801 Gerke building, Cincinnati, have plans in progress for a three-story hotel addition, to be erected for the Martin Hotel, to cost $5,000.

Cairnbrook, Pa.—Architect H. M. Rodgers, Johnstown, has plans in progress for a two and three-story frame hotel building, to be erected for A. L. Walters, of Johnstown. Cost, $12,000.

Springfield, O.—Architects Allyn Company, Cincinnati, awarded to the Reno-Bruuner Building Company, Cincinnati, the contract for constructing a six-story brick and terra cotta fireproof hotel building on Fountain avenue and North Market street, for the Bashein Hotel Company. Cost, $400,000.

Miscellaneous.

Leipsic, O.—Architect J. A. Chapin, Holland block, Lima, has completed plans for a two-story hollow tile, steel and concrete garage addition, to be erected on Main street, for H. H. Townsend, Main street. Cost, $6,000.

Marion, O.—Rutherford & Company, Cleveland, received the contract for constructing a brick icing station for the Homelie Ice & Cold Storage Company, to cost $120,000.

Liens Filed for Labor and Material Furnished.

ALLEGHENY COUNTY, PA.

Ferdinand Velan vs. George Monyak or Gyorgy Monyak, owner, with notice to Mary Monyak, widow, Anne Monyak, Mary Harbor, John Monyak, George Monyak, Joe Monyak, Elizabeth Monyak and John Monyak, all liens at law of the said George Monyak, terce tenant. Building in Sixteenth ward, Pittsburgh. Cost $1,500.

NO-LIEN CONTRACTS.

W. E. Brown vs. Trustees of the Elizabeth Steel Magee Hospital. Agreement made January 22 and filed January 27, to do the brick work in the Magee Hospital, Emily and Halket streets, for $63,200.

Harrisburg Foundry & Machine Company vs. Trustees of the Magee Hospital. Agreement made January 19, and filed January 27, to supply engines for the Magee Hospital, for $4,000.

Westinghouse Electric & Manufacturing Company vs. Trustees of the Magee Hospital. Agreement made January 19 and filed January 28, to install generators in Magee Hospital, for $3,400.

Sub-Contract Notes.

Electric Work.

Carpenter & Company, Meadville, Pa., received contract $60,000 temple, Meadville. Owner, Masonic Order, Meadville. A. W. Fraley, Pittsburgh, received contract $4,000 residence, Pittsburgh. Owner, Emma B. Jordan, Pittsburgh.

Heating.


Mill Work.

Zeigler Lumber Company, Duquesne, Pa., received contract $15,000 store and apartment building, Duquesne. Owner, Mrs. Jennie S. Erwin, Duquesne.

Zeigler Lumber Company, Duquesne, received contract six residences, Duquesne. Owner, Duquesne Bakery.


Oil City Wood Working Company, received contract $100,000 building. Oil City. Owner, V. M. C. A.

Bruckman Lumber Company, Northside, Pittsburgh, received contract $7,500 duplex residence, Pittsburgh. Owner, Charles H. Gundlach, Pittsburgh.

Painting.

William Poskey, Duquesne, Pa., received contract six residences, Duquesne. Owner, Duquesne Bakery.

J. Drexler, Pittsburgh, received contract $100,000 store and apartment building, Pittsburgh. Owner. Andre Weisberg, Pittsburgh.

Plumbing.

Gibson Plumbing Company, Duquesne,
THE CONSTRUCTION RECORD

received contract $15,000 store and apartment building, Duquesne. Owner, Mrs. Jennie S. Erwin, Duquesne.


W. H. O'Brien & Son, Butler, Pa., received contract $20,000 club house, Butler. Owner, Knights of Columbus.

Steel.

McClintic-Marshall Steel Construction Company received contract $15,000 store and apartment building, Duquesne. Owner, Mrs. Jennie Erwin, Duquesne.

Tile Work.


A STANDARD BUILDING.

The Committee on Fireproof Construction of the National Fire Prevention Association in a report defined a "standard building" as one in which the lives of the occupants are properly safeguarded against fire and panic; one so designed and equipped that damage resulting from exposure to fire from either within or without shall be reduced to a minimum, and one capable of surviving a complete burn-out of its contents without serious injury to its structural members.

The specifications for the construction of a standard building are given in the report, the principal ones being these:

Height—The height from grade to roof-line, irrespective of its occupancy, shall not exceed 75 feet, unless the building is fully equipped with automatic sprinklers, in which case the height shall not exceed 125 feet; nor shall any standard building exceed a height of two and one-half times the width of the widest street upon which it is located.

Area—The area within including or fire walls shall not exceed 7,500 square feet, with no dimension greater than 125 feet: for a building without automatic sprinklers; or 20,000 square feet, unrestricted as to linear dimensions, for a building fully equipped with automatic sprinklers.

Exits.—Wherever the word "Exit" is used in these specifications it shall be one of the two following forms:

1. Stair Exit. That consists of the direct connection of any floor area to an approved stairway built in conformity with the specifications hereinafter detailed, either as (a) an enclosed interior stairway, or (b) a smokeproof tower.

2. Horizontal Exit. The connection of any floor area through a fire exit partition, fire wall, or an open air balcony or vestibule to another floor area in the same or an adjoining building having its own independent stair exits; the other area shall be of sufficient size to contain temporarily the joint occupancy of the two areas thus joined, allowing not less than five square feet of unobstructed floor space per person.

Number of Exits Required—Every floor area except the ground floor, shall have at least one stair exit directly connected thereto. Every such floor area shall have at least one additional exit when it exceeds 2,500 square feet in area, or when the building has a total occupancy greater than 75 people above the ground floor. Every ground floor area of more than 4,000 square feet, or having an occupancy of more than 25, shall have at least two means of exit. Where more than one exit is required to any floor area they shall be remote from each other. In all buildings, every room having an occupancy greater than 75 shall have at least two doorways leading to exits.

No part of any floor area shall be more than 100 feet distant from the entrance to an exit. Wherever any building is more than four stories high, and has an occupancy greater than 25 people above the fourth floor, then each floor area of such building shall be connected, either directly to a smokeproof tower, or indirectly through a horizontal exit to such smokeproof tower. Wherever any floor area exceeds 5,000 square feet, at least one additional means of exit shall be provided for each additional 5,000 square feet or part thereof.

PROCESSES FOR FIREPROOFING WOOD.

Considerable attention has been given in Europe to the best method for fireproofing wood, especially in connection with railroad construction. The following is a description of a process which, it is claimed, has received the favorable consideration of the British admiral.

The wood is placed in large iron cylinders, the doors of which are hermetically sealed. The wood is then subjected to a course of steaming; and, under vacuum the air and moisture in the pores of the wood are removed and the sap vaporized. The fireproofing solution is thereafter run into the cylinders, and under pressure forced throughout the pores and fibers. Subsequently the water in the solution is evaporated in drying kilns, and the chemicals, in minute crystal form, are left embedded in the wood. When heat is applied, these crystals expand to many times their original size, forming a glassy coating to the fibers of the wood which excludes the oxygen in the air. In time the heat causes the crystals to collapse, but further crystals in the wood immediately expand, and the same process of resistance against fire continues. The chemicals used are antiseptic and preservative, consisting chiefly of phosphate of ammonia. As a result of the treatment, the life of the wood is also lengthened, for the cause of decay (sap water) is eliminated. This process is claimed to be especially satisfactory, inasmuch as the material treated is not saturated with a solution of salt, nor are such chemicals used as tungsate of soda, sulphate of ammonia, sublimate of alumina, alum, etc., which invariably cause discoloration of the wood.

NO MORE SKYSCRAPERS IN DETROIT.

An ordinance limiting the height of buildings in Detroit to 10 stories was referred to the ordinance committee recently. The following reasons were advanced why skyscrapers should not be erected: First, the disordering of thousands of office men by the tall buildings at the same time causes congestion, inasmuch as the material treated is not saturated with a solution of salt, nor are such chemicals used as tungsate of soda, sulphate of ammonia, sublimate of alumina, alum, etc., which invariably cause discoloration of the wood.

The cost of rendering wood fireproof by this process is a uniform one of 73 cents per cubic foot, for all woods excepting oak and teak, for which the charge is 85 cents per cubic foot.
CLEVELAND SHOWS GAIN.

Building operations reached record-breaking proportions during January when permits for structures, valued at $1,208,620, were issued by the commissioner of building inspection, according to statistics made public yesterday.

The value of buildings for which permits were issued during the month was $853,880 in excess of building operations for the corresponding month a year ago, despite the fact that 1913 was a record-breaking year in the history of the division of building inspection. Five hundred and fifty-seven permits were granted, as against 515 a year ago.

New brick buildings made up the bulk of the work and the value of these structures was estimated at $693,500. Frame buildings were valued at $435,809 and additions and alterations to old buildings made an additional $179,320.

ARCHITECT GRANTED VACATION

After 19 years' service as architect for the Cleveland, O., Board of Education, F. S. Barnum has been given three months' leave of absence with full pay and a salary of $25 per day as consulting architect. Mr. Barnum will be succeeded by W. R. McCormack, now assistant architect.

The agreement leaves Mr. Barnum free to devote his time to other projects, but gives the board of education first call on his services. The contract may be terminated by either the board of Mr. Barnum with 30 days' notice.

During Mr. Barnum's service he has designed and superintended the construction of 88 buildings as well as planning the rehabilitation of old buildings.

LUMBER DEALERS TO CONVENE.

The retail Lumber Dealers Association will hold its seventh annual convention at the Monongahela House, Pittsburgh, Wednesday and Thursday, next. The sessions will start Tuesday evening with a dinner and entertainment given by the Pittsburgh Lumbermen's Club while a joint session of the wholesale and retail dealers will convene Wednesday afternoon. J. McF. Carpenter, a well known attorney of Pittsburgh, is to address the members on the subject "Mechanic Lien Laws."

Wednesday evening, a vaudeville and smoker is to be held in the Monongahela House, under the auspices of the Pittsburgh Wholesale Lumber Dealers Association.

Open discussions on subjects pertaining to the retail lumber trade, election of officers and various reports of committees will take up the time Thursday morning and afternoon.

The banquet is to be held Thursday night at which President Frank E. Lillo will preside. The following arrangements for addresses have been made:


The retail association has had a successful year, the membership having been largely increased and more general interest manifested in its welfare.

SOME RESIDENCE.

Work has been started on a modern Italian type of residence for M. B. Nelson, Kansas City. All rooms on both the first and second floors will open on a patio or inner court, which can be opened to the sky. The house will be completed in one year.

A trip through Mexico won Mr. Nelson to the idea of a residence built around a patio. In Mexico the patio had been adopted from old Italian palaces. In carrying out Mr. Nelson's idea in the modern Italian style, the architect has drawn the first and second floors around a patio 32 feet square. Overhead an art glass ceiling light and an additional skylight are arranged to slide from view when an open sky over the patio is desired.

The over-all dimensions of the house are 71x78 feet. On the interior Pome- cian brick, cut stone and terra cotta trimming will be used. The roof will be tile. A 24-foot terrace extends around the four sides of the house, with an enclosed porch on the south side just off the dining room.

The main entrance will be on the north side through a vestibule into a reception stair hall that opens into the patio and a salon. The latter room, 17x24 feet, is to be in white enamel. To the north is the living room, 20x33 feet, with three French doors opening onto the terrace. The living-room will be finished in mahogany. The library at the southeast corner will be finished in quarter-sawn oak. It will be 17x24 feet, and the dining-room to the west is 17x25 feet. A billiard room at the northeast corner will be 17x24 feet.

The house will have 33 rooms. The second floor is divided into four suites. Servant's rooms are on the third floor. A large sleeping porch will be placed on the west. The basement will have a laundry, a vegetable room, a fruit room, a canning room, a fuel storage room, a refrigerating plant and an air-washing cooler room for ventilating the entire house. A hot-water heating system will be installed.

The bath equipment is to be exceptional. The tubs are to be built-in and enclosed in glass fitted in nickel-plated metal bars. The other three sides of the bath compartment will be tiled, to permit shower baths. Entrance to the bath tub through the glass front will be through a glass door. The fixtures will be electric welded to prevent leaking.

THE TENDENCY IN DOORS.

The tendency in doors, that is, of interior doors where discrimination enters into the selection to get nice decorative effects, is toward the single panel door. In solid doors and perhaps in the quantity to door stock sold, the cross panel door is the leading item right now. Many cross panel doors are to be found both in the solid and in veneered work. Usually the solid doors are five cross panel doors and the veneered doors are either five-panel or six panel. Many of these are used both in the homes and in the public buildings, and they perhaps make up the largest item. However, notwithstanding the present popularity of the cross panel door, the tendency of the discriminating buyer in selecting doors is toward fewer panels, in fact toward the single panel door.

At the present time there are perhaps more two panel rooms purchased than single panel doors, that is two broad panels generally. Part of the south country where there is a peculiar mixture of architecture including a bungalow type, some mission and a strong tendency toward colonial, there is quite a call for the two panel door with two narrow full length panels running up and down. There is some call for this type in other sections of the country, but the result of inquiries made through jobbers indicates that the south country calls for more comparatively of these than any other section. In other sections the call is for two broad panels in the veneered door, the division being in the length instead of up and down, and there is evidence that the single panel, full size and length is finding favor, indeed the favor shown the single panel is strong enough that the prediction is that this is the door of the future, especially where veneered doors are used.

There are several reasons givin for this. One is that it is at carrying out the final conclusion and tendency that has been manifesting itself for some time in the door trade. Another is that it makes a more sanitary as well as a better looking door. It is the next thing along this line to the smooth or flush faced door which has been featured extensively the past few years for hospitals, schools and
other public buildings because of the sanitary features, as it has no shoulders or corners to catch or hold dust and germs. It is easy to keep clean and would perhaps have made more progress before this were it not that the full, smooth face is lacking some in beauty and needs a frame or border to set it off. In the single panel door we have this same broad faced idea with the frame around it to set it off and relieve the monotony, and it is confidently predicted that the single panel veneer door is to be the popular door of the future.

GAIN IN CEMENT OUTPUT.

Cement production for 1913, according to estimates of the United States Geological Survey, represents a total of 92,406,000 barrels or a gain of 12 per cent over that produced in 1912, when the total quantity was 82,438,000 barrels.

The following table shows the total production, shipments and stocks of 1912 and 1913 (estimated), together with the percentage of change:

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
<th>Shipments</th>
<th>Stocks</th>
</tr>
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<tbody>
<tr>
<td>1912</td>
<td>82,438,069</td>
<td>78,835,000</td>
<td>11,375,000</td>
</tr>
<tr>
<td>1913</td>
<td>92,406,000</td>
<td>88,853,000</td>
<td>11,375,000</td>
</tr>
</tbody>
</table>

The Lehigh district contributed 27,469,000 barrels, nearly one-third of the total production, an increase of 9.4 per cent over 1912. Illinois and northwest Indiana produced 12,406,000 barrels, an increase of 15.4 per cent. The output of the Pacific coast States amounted to 8,916,000 barrels, an increase of 21.5 per cent. New York State contributed 5,208,000 barrels, an increase of 15.9 per cent.

The average selling price of Portland cement in 1913 was appreciably higher than in 1912. Increases of from 10 to 25 cents per barrel are reported from several plants in the central and eastern States, but there were slight decreases reported from a few plants in the Rocky Mountain district. Two plants, both in Washington, were added to the list of producers during 1913.

OFFICIALS FOR GYPSUM COMPANY.

At the annual meeting of the stockholders of the American Gypsum Company held lately at Port Clinton, O., the following directors and officers were elected: J. H. McCrady, Braddock, Pa., president; F. J. Griswold, Port Clinton, vice president; J. D. Davis, Cleveland, secretary and treasurer; E. K. Tadsen, Port Clinton; Ed. McCrady, Braddock, Pa.; Charles Miller, Cleveland; E. D. Gillespie, Whiting, W. Va.; F. J. Griswold was re-appointed general manager and A. Black general salesman for another year.

NEW ELECTRIC LAMP.

An incandescent electric lamp that may revolutionize electric lighting is being exhibited in the electric engineering college of the University of Minnesota by Professor C. D. Shepardson, head of the department. The space in the globe of the lamp is filled with nitrogen instead of being a vacuum and the filament is made of a fine wire twisted into the shape of a small spring. The lamp is 1,500 candle power and uses only one-third the current necessary to produce the same light with the ordinary incandescent lamp. Experimental work still is being done on the new lamp.

PLAN ADDITION TO SCHOOL.

The Board of Education, Berea, O., is having plans made by Architect W. H. Nicklas, 1900 Euclid building, Cleveland, for a two-story addition, 48x130 feet, to the present high school building. Bids on the work will be taken until March 2. Specifications will call for face brick, hollow brick, fireproof doors and window frames, tile floors, yellow pine interior finish, electric wiring, heating and ventilating system, composition roofing, etc.

COLLEGE TO BUILD BUSINESS BUILDING.

The Lima Business College, Lima, O., is having plans prepared by Architect B. F. Matthews, Opera House Block, Lima, for a five-story brick, reinforced concrete building, 51x85 feet. The first floor will contain three stories, second and third floors will be used for offices, while the fourth and fifth floors will contain the business college. Specifications will call for concrete roofing, concrete foundations, hardwood floors, marble and tile work, face brick, stucco work, steam heating system, plate and prism glass, etc.

LIMA STATE HOSPITAL TO BUILD.

A two- and three-story brick and concrete building, 47x130 feet, is to be built at Lima, O., by the Board of Commissioners Lima State Hospital for Insane. The plans for the work are being made by Architect Frank L. Packard, Hayden building, Columbus, O., who has specified composition roofing, veneered doors, cut stone, steam heating system, face brick, tile floors, marble wainscoting, etc. The work will cost $50,000.

LAST MONTH'S BUILDING IN PITTSBURGH.

For the first time in eight years, January building operations in Pittsburgh showed a total of $1,090,000 or more. The number of permits totaled 145, the estimated cost being $1,171,937, this being far in excess of building valuation for January 1912, when the cost reached but $885,488. One permit alone helped materially in boosting last month's figures, this being for the Mage Hospital, the work to cost $550,000. Of new buildings authorized, 29 were brick, 18 veneered, and four frame.

BIDDING ON PIQUA BUILDING.

Bids are to close on the 27th inst. for building a two-story stone-faced post office building, at Piqua, O., for the United States Government. The building is to have reinforced concrete foundations, concrete steps, terra cotta fagade, hard and ornamental plastering, composition roofing, interior marble and tile work, terrazzo pressed brick, metal window frames and sash, etc. The work will cost $146,000.

INSURANCE COMPANY TO BUILD.

Plans are under way by Architects Harry Hake and Charles Kuch, Provident Bank building, Cincinnati, for a brick and stone fireproof office building, 84x180 feet, three stories, to be built on Fourth street and Broadway, Cincinnati, for the Western & Southern Life Insurance Company, Cincinnati. The structural steel work is to be awarded separately. Other required material will consist of hollow tile partitions and fireproofing, bronze grille work, private electric light plant, tile or composition roofing, steam heating system, etc.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded</th>
<th>January 1, 1914, to date $</th>
<th>Corresponding period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1913</td>
<td></td>
<td>$6,770,000</td>
<td>16,616,000</td>
</tr>
<tr>
<td>1912</td>
<td></td>
<td>6,777,000</td>
<td>15,386,000</td>
</tr>
<tr>
<td>1911</td>
<td></td>
<td>6,778,000</td>
<td>15,388,000</td>
</tr>
<tr>
<td>1910</td>
<td></td>
<td>6,779,000</td>
<td>15,390,000</td>
</tr>
<tr>
<td>1909</td>
<td></td>
<td>6,780,000</td>
<td>15,392,000</td>
</tr>
<tr>
<td>1908</td>
<td></td>
<td>6,781,000</td>
<td>15,394,000</td>
</tr>
</tbody>
</table>

Scholes Brothers, Reedsdale street, Northside, Pittsburgh, have been awarded the skylight construction in the 100-000 high school building at Hudson, O., Hovis Brothers, Wilkinsburg, secured the plastering contract.
R. M. Ott, who was formerly chief clerk of the Pittsburgh warehouse of the Carnegie Steel Company, has associated himself with Lau & Hogan, 452 West Federal street, Youngstown, in the capacity of general manager.

The Lau & Hogan Company has removed its offices from 151 North avenue to 452 West Federal street, Youngstown, where it has erected a new shop. The company will continue smaller work at the old shop on North avenue, but heavier structural work will be carried on from the shop on West Federal street. The contract for the structural steel work on the power house addition, to be built at Lowellville, Ohio, for the Republic Railway Light & Power Company, has just been secured.

Separate contracts are being placed for the construction of the $125,000 theatre building for the Nicola Building Company, Schenley Park, Pittsburgh. The George H. Soffel Company, Pittsburgh, received the plumbing work; sheet metal work, Canton Manufacturing Company, Canton, O.; tile roofing, Scott A. White, Pittsburgh; plastering, Beatty Brothers, Pittsburgh; painting to John Morrow, Pittsburgh.

The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct connected outfits can be furnished in one week, mounted either on cast iron base or on channels and platters as illustrated.

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<thead>
<tr>
<th>Style</th>
<th>Span</th>
<th>Thickness</th>
<th>Sec. Area</th>
<th>Ult. load per sq.ft. of slab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pgh.</td>
<td>12 A</td>
<td>6' 4&quot;</td>
<td>0.0346 sq. in.</td>
<td>1330 lbs.</td>
</tr>
<tr>
<td>Phone</td>
<td>9 A</td>
<td>6' 4&quot;</td>
<td>0.0688 sq. in.</td>
<td>3270 lbs.</td>
</tr>
<tr>
<td>Court</td>
<td>11 A</td>
<td>7' 4&quot;</td>
<td>0.0452 sq. in.</td>
<td>1500 lbs.</td>
</tr>
<tr>
<td>1604</td>
<td>11 A</td>
<td>8' 5&quot;</td>
<td>0.0452 sq. in.</td>
<td>1440 lbs.</td>
</tr>
</tbody>
</table>

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Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.

Vol. 51. February 14, 1914. No. 3.

PREPARING SCHOOL SPECIFICATIONS.

Architect W. G. Eckles, New Castle, Pa., has completed plans and is engaged in writing specifications for the proposed $150,000 school building, to be erected at Niles, O., for the Board of Education. It will be a three-story building, 90x200 feet, brick and stone construction. Bids are to be asked for within a month. The heating, plumbing and electric work are to be separate contracts.

SCHOOL BUILDING AT FARRELL.

The time for closing bids on the erection of a two-story brick and hollow tile school building for the Board of Education, Farrell, Pa., has been extended to March 1. The building was designed by Architects Clepper & Owen, Sharon, Pa., and will contain 12 rooms. It will have concrete foundations, face brick, hollow tile partitions, patent plaster, metal lath, white pine and oak interior finish, composition roofing, electric lighting fixtures, etc.

BESSEMER TO BUILD FREIGHT STATION.

Plans have been submitted to the officials of the Bessemer & Lake Erie Railroad Company, Carnegie building, Pittsburgh, for the building of a one-story steel and corrugated iron fireproof freight station at Erie, Pa., which will cost about $100,000. The present freight station will be dismantled and the passenger station removed. The new structure will be 30x344 feet and will have corrugated iron roofing.

NEW CASTLE ELKS TO BUILD.

A three-story brick and stucco lodge building is to be built at New Castle, Pa., by the R. P. O. E., which will be 75x60 feet in size and to cost $30,000. Architect Frank Foulk, Pearson block, New Castle, has completed the plans for the superstructure and will take bids on the work about March 1. H. M. Wirsing, Bleakley block, New Castle, will act as supervising architect. Specifications for the construction work will be written in a short time. The heating and plumbing will be separate contracts.

APPROVE MARKET HOUSE PLANS.

The plans prepared by Architects Rutan & Russell, Pittsburgh, for the proposed market building, to be built on Market and Diamond streets, Pittsburgh, for the City of Pittsburgh, have been approved by council. These plans call for two buildings, each to have a mezzanine floor and a story above. Market street will be bridged so that access can be had to both buildings from the second floor. The Department of Public Works will be authorized to proceed with the construction at once.

BANK BUILDING FOR WHEELING.

While no site has been secured to erect the building, it is the intention of the Security Trust Company, Wheeling, W. Va., to build a 10-story bank and office building, plans for which are being made by Architects F. F. Farris and Edward Bates, Schmulbach building, Wheeling. The building will have a steel frame, terra cotta exterior, reinforced concrete roof and floor slab construction, composition roofing, steam heating system, etc.

SUB-BIDS FOR JOHNSTOWN HOTEL.

The Thompson-Starrett Company, Pittsburgh, will ask sub-bids on material for constructing the eight-story hotel building at Johnstown, Pa., for the Fort Stanwix Hotel Company, which is to be built at a cost of $400,000. The building will measure 66x150 feet and will be constructed of brick and terra cotta. It will have concrete foundations, face brick, metal facing and lath, cut stone, composition roofing, marble and tile work, ornamental plaster, terra cotta, concrete floor construction, terra cotta tile partitions, low pressure steam heating system, freight and passenger elevators, etc.

AMUSEMENT BUILDING FOR STEUBENVILLE.

Bids are now being taken on the construction of a one and two-story steel, brick and hollow tile building, to contain stores, offices and motion picture theatre at Steubenville, O., for the Athenian Amusement Company. Plans for the building were made by Architect Edward Bates Franzheim, Schmulbach building, Wheeling. The building will measure 90x115 feet and will contain two stories, four offices and theatre having a capacity of 700. Specifications will include ornamental iron, tile or terrazzo resilient flooring, first floor flooring of concrete and second floor of white pine, metal ceilings, roof ribbed glass, patent store fronts, etc.

LATEST HOTEL PROJECTS.

Preliminary sketches for a 16-story brick and terra cotta hotel building, to be of irregular size, are being made by Architects Rutan & Russell, Magee building, Pittsburgh. The building is to be erected on Liberty avenue near Grant street, and will cost about $2,000,000. A stock company is now being formed, headed by R. H. Heyn, Shenley Hotel and an option has been secured for the proposed site. The other hotel project is that of the William Penn Hotel Company, headed by C. A. Blanchard, James H. Park, Grant McCargo and others, who have selected a site on Sixth avenue, Cherry alley and Oliver avenue, on which they will construct a 26-story building, probably brick and granite construction. No architect has been selected to prepare plans for the building, which will contain about 1,000 rooms. The owners expect to consummate the deal for the ground and to select an architect before March 15.
New Type of Window

Of late years there has been little change noted in window construction. The old-fashioned sliding frame which necessitated some stick or catch to hold the window open gave way to the weight and cord plan. Then a few other types came into vogue. Of course, all these changes were simply the process of advancement in window designing.

The latest type put on the market is brought out by the Standard Spiral Window Company, Jenkins Arcade, Pittsburgh. This window has features which does away entirely with weights and cords and pulleys. The views herewith design for hospitals, hotels, schools and residences.

One of the main points of this type of window is that the casement is swung on hinges as in the ordinary dormer; also that neither the top or bottom sash (or both) can be opened or closed. These features are particularly valuable for the rolled steel and malleable iron.

If the specifications for any building call for fireproof windows this window can be furnished with all the woodwork encased with sheet copper, thereby insuring absolute protection from fire.

Figure 2 shows a sectional view of the operating device. The traverse nut B

Figure 1.—Cross sectional drawing showing the working parts of window.
is securely fastened into each side of both sashes. This nut moves up and down on spiral rod A, when either sash is opened or closed. In Figure 1, the locking device D is shown. By means of swinging keepers on a pivoted bolt D, it is possible to securely lock the window sashes—both closed; or either the upper or lower sash open, or closed. A rolling screen which is attached to the window sash by means of easily detachable hooks, is automatically rolled up or unrolled by means of two beveled gears, thereby always keeping the screen taat. The simplicity of the working parts of this window make it absolutely impossible for it to get out of order. If however, it should be desired to remove any or all of the few moving parts, it can easily be done by taking out the screws holding the four bearings in place.

**Fighting Fire with Forethought.**

By W. H. Price,

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"Fireproofing"—a word invariably misspelled and much misunderstood; a word that some manufacturers of building materials have conjured with for their commercial benefit and to the detriment of good building construction.

"Fireproof" is a misnomer. There is no such thing—there is ample evidence which conclusively shows that it was undoubtedly the intention of the Creator of the universe that there should be nothing fireproof.

On the principle that nothing is fireproof and that there is no building that can be constructed that could not be destroyed under extreme conditions by the action of fire and water, it is proper to consider which of the two materials available for fireproofing can best resist the action of fire and water.

It has been supposed very generally that burned clay or terra cotta tile is "fireproof," this false impression probably originating for the reason that clay tile has already been burned during the process of manufacture at a long continued high heat. Because of this, it is supposed to be able to stand high temperatures for the reason that it is manifestly incombustible or will not burn up or consume, and because it was economical to use, and further, because it has been in use for a long time almost to the exclusion of other materials for partitions, steel protection and elevator enclosures in so-called fireproof buildings up to comparatively recent years.

There are certain physical facts which determine the value of any material from a "fireproof," or to better state it, "fire-resisting" standpoint. These physical characteristics are:

1.—Its expansibility under heat or the rate at which the material expands under the application of heat, which is technically known as its "coefficient of expansion."

2.—Conversely with the above, its contractibility under cooling action, or the rate at which the material will contract when suddenly cooled by water or air.

3.—Rate and amount of heat transmitted through the material and effect of this on inflammable materials in contact with the opposite side.

4.—Extent of disintegration under sudden increases and lowering of temperature continued alternately during the progress of a fire, and application of water streams.

Summarizing the above, it will be evident that the material which stands the action of high temperatures and sudden cooling—the conditions existing during a fire, are that it shall not expand appreciably under the application of fire; that it shall not contract when hot under the application of cold water or air; that it shall not transmit heat through itself sufficiently to ignite any kind of inflammable substance on the opposite side; that it shall not spill; crumble, or disintegrate in any other way to a point where it ceases to be a fire-stop during the progress of the fire.

Considering terra cotta tile from these standpoints, we find that it has a coefficient of expansion of 0.00012, which means that it increases in dimension that fraction of an inch for every degree of Fahrenheit rise in temperature. This rate of expansion is just exactly that of steel and also of Portland cement concrete.

Taking a wall 10 feet long and 10 feet high and assuming a rise of temperature from 70 degrees to 1,700 degrees Fahrenheit, which in ordinary conflagration is readily and quickly reached, it means an increase in each dimension of one and thirty-five one hundredths inches.

The result of this rapid and great expansion of clay tile under heat means that the outer shell exposed to the fire expands more rapidly than the webs which hold the two outer shells together and which also separates the core holes. The result of this is that a large percentage of shells are broken loose at their junction to the webs. This fact can be observed in the records of every fire where photographic records have been made of wreckage after fires where clay tile was used for partition construction, for steel protection or for arched floor construction.

This expansion frequently completely wrecks the partition by crushing it, or bulges the wall toward the fire, or results in large fissures through the wall. It also results, when used in steel construction, in permitting the fire to gain direct access to the steel members, resulting in their softening, buckling, or even collapsing. This is a most important point. Steel softens to a point where it will not hold up its own weight at a temperature of 1,700 degrees Fahrenheit, and many a so-called fireproof building has collapsed through this cause, during the progress of the fire. These results are accentuated or made worse when streams of cold water strike the clay tile, which if not already seriously injured by the heat expansion, is further disintegrated by the sudden contraction which takes place when the cold water from the hose stream strikes the heated surfaces.

The regular type of hard burned clay or terra cotta tile permits the passage of heat through itself very rapidly and this brings about certain results which tend to aggravate the bad results of fires inasmuch as invariably inflammable materials of the opposite side of the wall are frequently set on fire, even should the partition not be wrecked, thus communicating fire from room to room even though the flame has not actually passed through the wall.

It will be seen, therefore, that the ineffective results of clay tile in resisting the action of fire and water is only the logical sequence of its physical characteristics.

Laboratory tests have demonstrated that the expansion of gypsum tile under the application of heat is so slight that it has never been measured and these reports of the laboratories testing this material give the coefficient of expansion as practically zero. It follows from this, as
The transmission of heat through gypsum tile is extremely slow and never rises above 212 degrees Fahrenheit, until the material is calcined. The action of the fire against gypsum tile is to calcine or liberate the water of crystallization amounting to 20 per cent of water from which the hydrated sulphate of lime of which the gypsum tile is composed.

The liberation of the water of crystallization proceeds very slowly, and more slowly and with increasing slowness the longer the heat is applied and this is the case irrespective of the severity of the exposure. The reason for this is that water, when liberated, is liberated partly in the form of steam and partly in the form of vapor which recedes into the tile. This is continually occurring during the contact of the fire and furnishes more water for the fire to evaporate the longer the fire is applied. Behind the thin strata of zone of calcination, the material that is not hydrated does not rise above 212 degrees Fahrenheit because the heat units are absorbed in the process of evaporating the water.

This phenomenon was aptly described by a prominent fire underwriting engineer in his statement that "the material furnishes its own sprinkler system in itself."

These facts are not theoretical, but have been demonstrated by rigid and elaborate laboratory tests.

It follows from these facts, therefore, that when used for steel protection that as long as the materials around the steel are uncalcined, the heat penetrating to the steel cannot reach above 212 degrees Fahrenheit.

The injury to a gypsum tile partition resulting from application of fire, is that the surface material is first calcined by the heat, and then when the water stream strikes it, the material that has been calcined is washed away. Exhaustive laboratory tests have been made (records available) to determine what thickness of the material is calcined, under different intensities of heat and for different periods of time up to 2,000 degrees Fahrenheit applied for four hours.

The results of these tests permit the engineer to determine exactly what thickness of the material will stand against definite temperatures and for definite periods of time and to what thickness the steel should be covered for definite exposures so that all guess work can be positively eliminated and absolute assurance be secured for the real protection of steel and real protection of definite areas enclosed by the partition walls.

This subject of real fire protection is of vital importance to the American people in view of the excessive annual fire waste of this country. While the facts cited above are known to many engineers, architects, and builders, there remain a vast number of people who should know them and it is the duty of every person interested in good construction to know the exact facts regarding materials used for fireproofing purposes.

Well Planned School Building

The plans of the Covven, W. Va., High school building, which were made by Architect A. F. Wysong, Princeton, W. Va., calls for a two-story and basement building, 70x126 feet. The basement contains a gymnasium 28x68 feet, laboratories, manual training, domestic science, play room for the girls, and toilet rooms for both sex.

The first floor contains six class rooms, with cloak rooms joining the same, principal's room and auditorium with a seating capacity of 650. The cloak rooms in every case have one entrance from the hall and one from class room, with a small window opposite the teacher's desk, to prevent students from doing mischief. The second floor contains six class rooms, gallery, principal's room, storage, library and toilet room; also six cloak rooms, arranged similar to those on the first floor.

The roof is what is known as a flat roof, covered with composition roofing.

FAILURE OF HEAT-EXPOSED CONCRETE WALL.

The failure of a 20-inch concrete wall due to heat action recently occurred in the open-hearth plant of an Eastern steel mill. This wall, which served the double purpose of a retaining wall and a support for the charging floor, was at the end of the cellar and adjacent to the wall of the furnace regenerator, the two walls being fastened together by a film of fire clay.

On tearing out the furnace for rebuilding, it was discovered that the heat from the regenerator had penetrated the entire thickness of the concrete and caused the whole mass to disintegrate to a soft chalky substance which broke up easily under a hammer. In making the concrete the cement apparently had been combined with the aggregate to form a substance similar to limestone, and the disintegration had therefore taken place by a process similar to that in limestone. In rebuilding the concrete wall was replaced by one made of used firebrick. This type of wall has been in use under similar conditions, and is expected to stand up without deterioration.
Mechanics’ Lien Law

By J. McP. Carpenter.

The very mention of the subject “Mechanics’ Lien Law” in the presence of any man dependent on the legal validity of his lien for payment of the money due him for work or materials or both, produces a feeling akin to that experienced when one is compelled to listen to the filing of a rip-saw or the gumming of a circular saw. The mechanics lien law of Pennsylvania furnishes an ample supply of unfinish materials to keep the legal mill running full time.

The principle on which the law is based has been recognized for centuries—the law as written by Moses required the payment of wages daily. I apprehend that an employer would, under such circumstances, prefer to pay rather than have the laborer lien upon him for board and lodging “Marking time” while he waited for his cash.

The right of an artisan to retain materials placed in his hands, and on which he has bestowed labor, has been recognized for centuries, and is the law of Pennsylvania today. In 1835 John E. Carver, was employed by Nicholson to do the carpenter work on a house then being built for the latter in Philadelphia. Carver employed McIntyre to make 31 panel-doors for the house. In 1836 a measurement of the work on the doors was made for defendant in the absence of plaintiff. A controversy arose between the parties and McIntyre refused to deliver the doors until he was paid. The trial judge held that McIntyre had no lien upon the doors, but on appeal to the Supreme Court this ruling was reversed. Mr. Chief Justice Gibson delivering the opinion said:

"It is not to be doubted that the law of particular or specific lien on goods in the hands of a tradesman or artisan for the price of work done on them, though there is no trace of its recognition in our books, was brought hither by our ancestors, and that it is part of our common law. It has never been intimated that a particular lien on specific chattels for the price of labor bestowed upon them does not grow necessarily and naturally out of the transactions of mankind as a matter of public policy. Originally the remedy of retainer seems to have been co-extensive with the workman’s obligations to receive the goods, a limitation of it which would, perhaps, be inconsistent with its existence here, for we have no instance of a mechanic being compelled to do jobs for another. British decisions have extended it to the case of every bailee who has, by his labor or skill conferred value on the thing bailed to him.”

"Exclusive right of possession of the thing is the basis of the lien.” This opinion was delivered in 1841. As late as 1880 Mr. Justice Sterrett of the Pennsylvania Supreme Court delivered the opinion in Hensel vs. Noble. The amount in controversy was $1.50. Noble alleged that he had requested Hensel & Reeg to re-tire one wheel of his wagon and that he was to pay $1.50, which sum he rendered. Hensel & Reeg testified that they were to re-tire two wheels for $3.00 and that they had done so and they refused to deliver the wheel. Suit was brought and the court charged that if the contract was as claimed by Hensel & Reeg, that is $3.00 for two wheels, and Noble offered to pay $1.50 for one wheel he was entitled to have it. The defendants contended that whilst they could re-tire two wheels for $3.00 they could not re-tire one for $1.50, because it required an odd size iron and three bars would be required for two wheels while two must be used to get enough iron for one and they would have half a bar left. The verdict was in favor of Noble. On appeal the judgment was reversed.

The mechanics lien law is in principle very old, but is in fact purely statutory and comparatively modern, and is class legislation. The first act giving a lien on buildings, so far as I have been able to discover, was approved April 1, 1803. It is entitled “An act securing to mechanics and others, payment for their labor and materials in erecting any house or other building, within the city and county of Philadelphia, the district of Southwark and the township of Northern Liberties.”

The second act was passed March 17, 1865, and repealed the act of April 1, 1803—except as to rights then existing under said act. This act was supplemented by the act of March 28, 1866, extending the law to the borough of Erie, Lancaster, and Pittsburgh.

The act under which mechanics liens were filed for many years, was approved June 18, 1836, and is always referred to as the “Mechanics Lien Act of ’36.” It is the only act which preserved the right of lien as will plainly appear when we consider the decisions since the act of 1801. This act (1836) is subdivided into 30 sections. It was a general act and while it was class legislation, it did not offend against the Constitution. But when the present Constitution was adopted “class legislation,” “special legislation,” “local legislation,” became living questions, and very troublesome. You will understand that all that I have to say about mechanics liens from this on, has to do with the building trade, and has no reference to the lien allowed to artisans for work done in making or repairing chattels, such as is given to the man who saws logs into lumber, makes or repairs your auto, etc. So far as I know every section of the act of 1801 that has been stricken down has been held to be in violation of the Constitution. It must be borne in mind that our present Constitution curbs the power of the legislature. Special legislation was permissible under the constitutions of earlier dates, but the power was so frequently and so flagrantly abused that the framers of the Constitution of 1873 in their zeal to correct abuses went to the opposite extreme and our courts have been burdened with arguments affecting laws since enacted. It is alleged that the decisions are not uniform, and it is not improbable that seeming inconsistencies can be discovered. But this it may, we know that the Act of 1836 gave rise to much less litigation than the Act of June 1801. This latter act contains 61 sections, and whatever may be said as to the merits of any or all of the first 60, everybody agrees that the 61st was of great benefit. It repeal 109 acts and parts of acts, many of which were local and also repealed all other acts general special or local appertain to the subject of the same Act of 1836—section after section has been declared unconstitutional. The act never was popular or contained provisions that were unnecessarily burdensome, and that did not in the slightest degree tend to protect the rights of parties. Amendments were adopted which tended to simplify the very complex machinery, but these did not cure fundamental defects. It would not be prudent to enter upon a discussion of the duration of, or the notices required to be given and proofs filed to sustain the lien of a subcontractor, whether he be a material man or one who has the subcontract for part of the work. My observation is that it is necessary to read the act and all the decisions bearing upon any particular point before advising, or making preparation to file a lien. Even then the attorney is uneasy until he secures a judgment and an affirmance thereof by one or both appellate courts. It is far more pleasant to have the money paid just after you have filed...
Pittsburgh.

Architect E. J. Weber, Kershaw building, has preliminary plans in progress for a two and one-half story brick building, to be erected on Frankstown avenue and Standard street, for Our Lady of the Blessed Sacrament R. C. Congregation. Cost, $7,000.

Architect T. H. Scott, Machin building, has plans almost completed for a two and one-half story stone, brick and half timber residence, to be erected on Forbes street, for George J. Michel, 940 Liberty avenue. Cost, $8,000.

Architect L. N. Stevens, Columbia Bank building, has plans in progress for a two and one-half story brick residence, to be erected on Fairfield lane, for Dr. Acheson Stewart, care Schenley Farms. Cost, $13,000.

A. V. Purnell, 8 David avenue, Bellevue, is low bidder on the rebuilding of the sewer in Thirty-third street, from Mulberry street to Caingaza street, for the City. Contract will be awarded, and, is taking bids on remodeling a Cost $125,000.

The Eagle Baking Company, of Millis, four-story brick building on Stanton avenue, Millvale, to cost $5,000. Plans by Architects Bartherber & Bartherber, Westinghouse building.

Architect C. W. Hodgson, Penn building, has completed plans for two two-story brick residences, to be erected on William street, Millvale, for E. T. Lippert, Lincoln avenue, Millvale. Cost, $4,000 each.


The American Bridge Company, Frick building, received the contract for structural steel for the 12-story brick and terra cotta fireproof department store building, to be constructed at Sixth street and Liberty avenue, for Rosenbaum Company. Cost, $1,000,000. Architect Jarvis Hunt of Chicago, has completed the plans.

The City will advertise for bids about February 20 on the sewer line of Penn avenue, to cost $5,000.

Architect W. A. Thomas, Park building, is taking bids on remodeling a three-story brick apartment building on Overhill & Linton streets, for Samuel Kratz, 1814 Linton avenue. Cost, $7,000.

Architect A. R. Douglas, 313 Penn avenue, Wilkinsburg, is taking bids on erecting a three-story brick store and apartment on 238 Fifth avenue, for John Heneghan, 2028 Fifth avenue. Cost, $6,000.

Plans are in progress for a two-story brick and steel fireproof passenger station, to be constructed on Hay & Ross avenues, Wilkinsburg, for the Pennsylvania Railroad Company. Cost, $100,000.

A. Rahm, Brownsville Road and Hobart street, Mt. Oliver, is taking bids on erecting an apartment building on Alice street, Knoxville, from plans drawn by Architect R. Berg, Jr., Carrick. Cost $9,000.

Architects Hunting-Davis Company, Century building, have preliminary plans in progress for a one-story brick and concrete Italian mission, to be erected on Hamilton avenue, near Hale street, for the Brashon Italian Mission. Cost $12,000.


Architect Louis Stevens, Columbia Bank building, has plans in progress for a 2½-story brick residence, to be erected on Grant Boulevard, for A. J. Kelly, Jr., care Schenley Farm Company, 101 Tenney avenue. Cost, $25,000.

Calhoun & Miller, 6200 Penn avenue, have been awarded the contract to remodel a building at 813 Liberty avenue, for the S. Hamilton Company, 531 Wood street. Work will consist of a new front and general interior alteration.

Architects Michael & Elliott, Publications building, have plans for four two-story brick and hollow tile residences, to be built on Aurelia and Partnership streets, for Frederick Bauer, 6448 Penn avenue. It is probable that bids will not be taken until April 1.

Central Home Company, Vandergrift building, will take sub-bids for erecting a two and one-half story brick veneer residence on Clarissa street, for James Conlin, 903 Cherokee street, to cost $46,000. The Central Home Company also received the contract to build a two and one-half story brick veneer residence on Anaheim street, for James Leggett, Bryn Mawr road.

Lee Brunner, Ingram, was awarded the contract to remodel a frame residence on Linden avenue, Ingram, for John R. Bell. Sub-bids are now being asked by Mr. Brunner.

Plans are nearing completion by Architects Vrydaugh & Wolfe, 347 Fifth avenue, for a two-story stone chapel, to be built on Breading avenue for the Ben Avon M. E. Congregation. The estimated cost of which is $23,000.

PITTSBURGH BUILDING PERMITS


Tenth Ward — Rosetta street. Two frame dwellings. Cost $1,000. Owner, Mrs. Mary Kane, 4924 Rosetta street.


**Apartments and Dwellings.**

**Cincinnati, O.**—Architect E. B. Slochtermyer, Lincoln Inn Court building, will take bids on the erection of a two and one-half-story brick residence on Rosemont street, for H. E. Bohmann, 4105 Glenway avenue. Cost, $4,000.

**Cleveland, O.**—Architect Frederick Baird, 368 Langar building, will be ready for bids about February 16, on erecting a three-story brick apartment building, on Cedar avenue, for J. C. McClure, 915 James avenue, N. W. Cost, $30,000.

**Dayton, O.**—Architects F. J. Hughes & Company, U. B. Annex, have plans in progress for a two-story brick apartment building to be erected on Riverside, for J. Sinden, 345 N. Crescent street. Cost, $15,000, also for a three-story brick apartment building, to cost $25,000.

**Lakewood, O.**—Architect Frederick Baird of Cleveland, will be ready for bids about February 16 on erecting a two and one-half-story frame residence on Thoreau road, for Frank Haveman. Cost, $5,000.

**Wheeling, W. Va.**—Architect J. W. Veseet, 406 Mutual Bank building, has plans nearly completed for a three-story brick apartment building, to be constructed on Main street, near Fifth street, for Jacob Sentlinger, Jr., 29 Fifth street. Cost, $14,000.


**McMachon, W. Va.**—Architect Charles McCoy, Wheeling, will be ready for bids about February 19 on the erection of a two-story frame residence, for W. S. Leach, E. 4th street, Wheeling. Cost, $3,500.

**Shaker Lakes, O.**—Architect R. H. Hinsdale, 732 Ohio building, Cleveland, has plans in progress for a two-story brick residence and garage, to be erected on Beaton street, for B. D. Broyce, Euclid avenue, Cleveland, Cost, $16,000.

**Toledo, O.**—Architects Huber & Gamble, Spitzer building, will be ready for bids about March 1, on erecting a two-story brick and stone apartment building, on Hollywood avenue, for the Weise Realty Company, Navy building.

Architect M. M. Stophlet, Nashy building, has plans in progress for two two and one-half-story frame residences, to be erected on Cherry street, for N. E. Heffler, 2716 Scottwood avenue. Cost, $5,500 each.

**Warwood, W. Va.**—Architect Charles McCarty, Exchange Bank building, Wheeling, will be ready for bids about February 19, on erecting a two-story frame store and apartment building, on Main street, for W. L. Coleman. Cost, $5,000.

**Beaver Falls, Pa.**—Architects Boyd & Stewart, Century building, Pittsburgh, have plans nearly completed for a two-story brick residence and garage, to be erected for W. L. Sutter, 512 W. Ninth street, for Thomas McPherson, to cost $5,000; one two-story brick residence and garage for J. J. Buser, of Freedom, to cost $5,000; and one two-story brick residence and garage for F. S. E. Sutter, to cost $4,000.

**Cincinatti, O.**—Architect Philip Pfeiffer, 10 E. McMillan street, is taking new bids on erecting a two and one-half-story brick residence on 5th avenue, College Hill, for Charles Neilinga, 2714 Massachusetts avenue. Cost, $6,000.

**Cleveland, O.**—Architect Edward J. Moundstephen, 30 Massachusetts avenue, has been selected to prepare plans for a 2½-story brick and stucco residence, to be erected on Roselawn and Beechwood avenues, for Dr. Percy Shields, 5 Garfield Place. Cost, $15,000.

**Cleveland, O.**—Architect A. C. Wolf, 827 Rose building, is taking bids on erecting a 2½-story brick and stone residence and garage, on Coventry Road and Park Boulevard, Cleveland Heights, for David J. Champion, Rice avenue and E. 40th avenue. Cost $40,000.

**Columbus, O.**—Architect Forest S. Rusk, Brunson building, is taking separate bids on erecting a two-story brick residence on Franklin avenue, for Charles Welsh, 600 Carpenter street. Cost, $7,000.

**Dayton, O.**—Architects F. J. Hughes & Company, United Brethren Annex, have plans in progress for a three-story brick apartment building, to be constructed on Salem and Cottage Grove avenues, for E. F. Renner, 405 United Brethren building. Cost, $30,000.

**Edward J. Moonstephen, 805 United Brethren building, is taking bids on erecting a two-story brick residence on the Park Hill Plat, for Edward O. Wright, 611-12 United Brethren building. Cost, $8,000.

**Sandusky, O.**—Architects Wachter, Bellman & Schreiber, of Toledo, will be ready for bids about February 20, on erecting a 2½-story brick residence, for Miss A. B. Woolworth, to cost $20,000.

**Shadyside, O.**—Architect John Wood, 805 United Brethren building, is ready for bids on the erection of a two-story brick veneered residence, on Pike street, for James L. Frey, of Belleair, Cost, $4,500.

**St. Clairsville, O.**—Architect John Wood, of Belleair, will be ready for bids about February 20, on erecting a two and one-half-story frame residence, on Main street, for Miss A. B. Woolworth, to cost $20,000.

**WHEELING, W. Va.**—Architect George H. Dieringer, Twelfth & Chapline streets, will be ready for bids about February 20, on erecting a two and one-half-story brick residence on Lenox place, for Dr. John Spillman, to cost $4,000.

The same architect is taking bids on erecting a frame and stucco residence on Lenox place, for Mr. John W. Spillman, to cost $4,500.

**Cincinatti, O.**—Architect Louis G. Dittoe, Provident Bank building, has been selected to prepare plans for a 2½-story brick residence and garage on the erection of a two and one-half-story brick residence on Lenox place, for Mr. John W. Spillman, to cost $4,500.

The same architect is taking bids on erecting a frame and stucco residence on Lenox place, for Mr. John W. Spillman, to cost $4,500.
O.—Architect H. E. McManus, 135 North Main street, has plans for a two-story brick and hollow tile residence, to be built for F. E. Wigton, 414 Spruce street. Bids will be taken on the work within a short time.

Architect William Foster has plans for the following work: Two-story brick residence, costing $4,500, to be built on Oak street, for S. N. Kidd; two-story brick and tile residence, costing $5,500, to be built on the Freedom park, for John Kemper; two-story brick country residence, costing $6,000, to be built on Southeast, for A. A. Kemper. Bids on the above work will be taken within a week or two.

Architect W. C. Kline, Butler Savings & Trust building, has plans under way for a 2½-story brick and hollow tile residence, to be built on Washington street, for Jacob Henninger. The building will measure 42x58 feet and cost $15,000.

Edward Weigand, 225 Franklin street, will be awarded the contract to build a 2½-story brick residence, costing $5,000, for H. J. Klinger. Architect O. C. Johnson, 241 South Main street, prepared the plans.

Business Buildings.

Belleville, O.—Architect John Wood will receive bids until February 20 on erecting a brick store building, motion picture theatre and warehouse on Belmont street, for the J. R. Greenlee Paint Company. Cost, $25,000.

The same architect has plans in progress for a three-story brick fireproof bank and apartment building, to be erected on Belmont and Crescent streets, for the Lary Witt Italian Bank. Cost, $10,000.

Cincinnati, O.—Architect E. H. Donnell. Pickering building has plans in progress for a four-story brick and steel fireproof store building, to be constructed on Main street, for Hanke Brothers, Main and Twenty-first streets. Cost, $25,000.

George R. Falch, Hotel Sinton, contemplates constructing a 12-story brick and steel fireproof department store building on Ninth and Main streets, to cost $400,000. Building will be occupied by Spear & Company, Fifth and Central avenues.

Clarksburg, W. Va.—The Empire Laundry Company, 129 Pike street, will soon select an architect to prepare plans for a two-story brick laundry, to cost $15,000.

Cleveland, O.—Architect A. C. Wefl, S27 Rose building, has been selected to prepare plans for a one-story brick store building, to be erected on Central avenue for H. H. Hackman, 1540 W. Third street. Cost, $12,000.


Erie, Pa.—The Reed Manufacturing Company contemplates erecting a one-story brick and steel fireproof warehouse on W. Eighth street and E. & P. R. R., to cost $10,000.

Grove City, Pa.—Architect W. E. Stithum, Superb building, Pittsburgh, awarded to Foss Atwell, the contract for erecting a one-story brick and hollow tile store building, for the Grove City Improvement Company. Cost, $6,000.

Toledo, O.—Architect M. M. Stophlet, 608 Nasky building, has plans in progress for a two-story brick, marble and terra cotta bank building, to be constructed on the corner of Superior and Adams streets, for the Dime Savings Bank. Cost, $30,000.

Uniontown, Pa.—Architect A. P. Cooper, First National Bank building, awarded to Cuthbert Brothers of Pittsburgh, the contract for erecting a brick and terra cotta store building, on 22 E. Main street, for Hogsett & Hanks, 48 Mill street. Cost, $25,000.

Wheeling, W. Va.—Architect Charles Bates, Board of Trade building, has plans in progress for a four-story brick and the fireproof store and warehouse, to be constructed on 1018-20 Market street, for T. A. Hoge & Company. Cost, $20,000.

Newark, O.—Architect J. C. O'Sullivan, 146 E. Twelfth street, will be ready for bids about March 15, on erecting a two-story brick and steel fireproof store building, to be erected on Main street, for T. A. Hoge & Company. Cost, $10,000.

Newark, O.—Architect J. C. O'Sullivan, 146 E. Twelfth street, will be ready for bids about March 15, on erecting a two-story brick and steel fireproof store building, to be erected on Main street, for T. A. Hoge & Company. Cost, $10,000.

Wheeling, W. Va.—Architects Cooley & Fisher, Century building, Pittsburgh, awarded to Cuthbert Brothers Company, Bessemer building, the contract for erecting a three- and four-story brick and concrete building, for the Wheeling Baking Company, to cost $10,000.

Toledo, O.—Architects Huber & Gamble, Spitzer building, awarded to A. Bentley & Sons, 201 Belmont avenue, the contract for erecting a three-story brick and concrete store building, to be erected for the Buckeye Brewing Company, Michigan and Champlain streets. Cost $10,000.

Cincinnati, O.—Architects Garber & Woodward, Union Central building, awarded to D. Meiklen, 2120 Western avenue, the contract for remodeling a three-story brick store building, on 101-03 West Fourth street, for the Union Central Life Insurance Company. Cost $25,000.

Cleveland, O. — The Moore Engineering Company, 403 New England building, awarded to C. C. Metz, care Newark Trust Company, is receiving competitive sketches for a two-story brick cement block warehouse and warehouse, to be erected on Old Canal street.

Cleveland, O.—Architect R. H. Hindsdale, 720 Osborne building, is drawing plans for a two-story brick store and apartment building, to be erected on Fulton Road and Denison avenue, for Martin Feader, 4440 Denison avenue, cost $5,000.

Columbus, O.—Architect Jacob S. Goldsmith, 611 Wyandotte building, is ready for bids on erecting a two-story brick store and apartment building, on West Goodale street, for Nathan Cohen, 410 Goodale street.

Dayton, O.—Architects F. J. Hughes & Company, United Brethren Annex, have plans in progress for a three-story brick store and apartment building, to be constructed on Main and Lehman streets, Riverdale, for J. W. Sinden, 205 N. North Crescent street, cost $30,000.

Irwin, Pa.—Architects Cooley & Fisher, Century building, Pittsburgh, awarded to Cuthbert Brothers Company, Bessemer building, the contract for erecting a three- and four-story brick and concrete building, for the Wheeling Baking Company, to cost $17,000.

Toledo, O.—Architects Huber & Gamble, Spitzer building, awarded to A. Bentley & Sons, 201 Belmont avenue, the contract for erecting a three-story brick and concrete store building, to be erected for the Buckeye Brewing Company, Michigan and Champlain streets. Cost $6,000.
Jefferson avenue. Cost $45,000.

Wheeling, W. Va. — Architect Edward A. Bates Franzheim, Schmulbach building, is taking bids on erecting a five-story brick and steel fireproof store building addition on Market street, for the Hub Clothing Company. Cost $30,000.

The same architect will be ready for bids about February 20, on remodeling a four-story brick and terra cotta bank building on Twelfth and Main streets, for the Peoples Bank of Wheeling. Cost $35,000.

Woodlawn, Pa. — Architect F. M. Collins, of Aliquippa, has completed plans for a three-story brick store and apartment building, to be constructed on Station street, for A. Danza Company. Cost $11,000.

Youngstown, O. — Architect George Vaughn, Diamond Block, has plans in progress for a three-story brick and hollow tile store and apartment building to be erected on South and Myrtle avenues, for Pasquale Deniro, 120 South Watt street. Cost $12,000.

Ambridge, Pa. — Architect D. Middletoon Cooper, 1641 Church street, will revise plans for a 2½-story brick bake shop and apartment building to be erected on Twelfth and Merchant streets, for W. H. White. Cost $12,000.

Cleveland, O. — Architect H. E. Shimmin, 857 Rose building, is ready for bids on constructing a three-story brick and terra cotta stone and apartment building on Euclid avenue and Lakeview Road, for Sponse Brothers, 12906 Euclid avenue, East Cleveland. Cost $40,000.

Dayton, O. — Architect Gustave A. Nichols, 25 Callahan building, awarded to the F. A. Regnhar Company, Monument avenue, the contract for remodeling a one-story brick restaurant on North Main street, for Frank H. Sargent, 105 East Third street. Cost $6,000.

Erie, Pa. — Plans have been completed for a two-story brick, steel and corrugated iron office building and freight station, to be constructed on Sassafras street, for the Pennsylvania Railroad Company, Erie & Pittsburgh Division. Cost $50,000.

Ford City, Pa. — Architect H. C. Clepper, Park building, Pittsburgh, has new plans for a two-story brick and stone business building, 22x106 feet, to be constructed for L. Leftoskey. Bids will be taken about the 16th inst. Estimated cost of the work is $12,000.

Imperial, Pa. — Architect J. A. Phillips, McKees Rocks, Pa., prepared the plans for a two-story brick store and apartment building, to be built for C. B. Cratsley, who will take bids at once.

Religious.

Youngstown, O. — The Himrod Avenue Baptist Congregation contemplates rebuilding its church, which was recently destroyed by fire. The new work will also include an auditorium and Sunday School. The work will cost $25,000.

Celina, O. — Architect J. A. Hasecoster, Second National Bank building, Richmond, Ind., has about completed plans for a brick stone trim church building, for the St. Johns Lutheran Congregation. Estimated cost is $18,000.

Edgewood, W. Va. — Architect F. W. Harris, 419 Schmulbach building, Wheeling, will be ready for bids about February 25 on constructing a reinforced concrete retaining wall, 2,000 feet and six feet high, for the Carmine Convent, case BB Shop Dunham, Wheeling.

Toledo, O. — Architects Wachtel, Lillman & Schreier, 918 Nicholas building, have been selected to prepare plans for a one-story brick synagogue, to be constructed on Scottwood avenue, for the Congregation B'na Shomer, care 229 Winthrop avenue. Cost, $50,000.

Cincinnati, O. — The New Thought Temple Congregation contemplates constructing a brick or stone church on McMicken street and Grandview avenue, to cost $50,000. Architect has not been selected.

Architect E. H. Dornette, 56 Edgewood building, has plans in progress for a one and one-half-story brick church, to be constructed on Thirty-fourth street and Webster avenue, Oakley, for the Oakley Presbyterian Congregation. Cost, $25,000.


Farmington, W. Va. — Architect C. H. Snyder of Fairmont, has been selected to prepare plans for a one-story brick and stone church, to be erected for the First Methodist Congregation. Cost, $10,000.

Greensburg, Pa. — Architects Gran, Goodhue & Ferguson, 15 Beacon street, Boston, Mass., have completed plans for a stone church, to be constructed for the First Presbyterian Congregation. Cost about $200,000.

Urbana, O. — Architect E. H. Rickett, of Columbus, is drawing plans for a one-story brick church addition, to be erected for the First Baptist Congregation. Cost, $10,000.

Wiltoning, Pa. — Architect C. W. Bier, Pittsburgh Life building, Pittsburgh, has plans in progress for a one-story brick church, to be erected on Westinghouse and Clara streets, for the Methodist Episcopal Congregation. Cost $26,000.

Conneaut, O. — Sketches are being submitted for a one-story brick church, to be erected on Harbor street and Lake road, for the Hungarian Congregation. Cost $5,000.

Covington, Ky. — Architect H. McClory, 607 Gerke building, Cincinnati, O, has been selected to prepare plans for a school house and auditorium, to be constructed on Madison avenue, for St. Mary's Cathedral. Cost $500,000.

New Philadelphia, O. — Architects Langdon & Hohly, 1442 Nicholas building, has plans in progress for a two-story brick church addition, to be erected for the First Reformed Congregation.

Ottawa, O. — Architects Langdon & Hohly, of Toledo, have preliminary plans in progress for a two-story brick and stone church, to be erected for the First Presbyterian Congregation. Cost $150,000.

Penn Station, Pa. — Architect J. H. Phillips, of McKees Rocks, has plans in progress for a two-story brick fireproof parochial school building, to be erected for the Roman Catholic Congregation. Cost $14,000.

Sharon, Pa. — The Baptist Congregation contemplates erecting a one-story brick and stone church, to cost $10,000. Architect has not been selected.

Aliquippa, Pa. — Saint Joseph's R. C. Congregation contemplates erecting a one-story brick church on Allegheny avenue and Fourth street, to cost $10,000. Architect will be announced later.

Educational.

Ashtabula, O. — Architect Frank L. Packard, 1212 Hayden building, Columbus, has plans in progress for a brick and concrete high school building, to be constructed for the Board of Education. Cost, $125,000.

Chagrin Falls, O. — The Board of Education will receive bids until March 3, on constructing a two-story brick and stone high school building, on Washington street, to cost $35,000. Plans by Architect W. G. Echles, of New Castle, Pa.
Moorefield, W. Va.—Architects Holcomb & Lafferty of Clarksburg, will be ready for bids about February 20, on erecting a two-story brick school building for the Board of Education.

Strasburg, O.—Architects Howard & Merriam, Columbus, are drawing plans for a two-story brick and concrete high and grade school building, to be constructed for the Board of Education. Cost, $40,000.

Cleveland, O.—Architect H. E. Shinneman, 857 Rose building, has plans in progress for remodeling the Shaw High School in East Cleveland, for the Board of Education.

Merriam, Columbus, are drawing plans for a two-story brick and concrete high school building, to be constructed for the Board of Education. Cost $250,000.

Williamson, W. Va.—Architect J. R. Warne, Charleston, awarded to Baker Brothers, Kermit, W. Va., the contract for erecting a two-story brick college high school building addition, for the Board of Education of the independent district.

Ellen's, W. Va.—The Ing Lamber Company of Charlottesville, Va., is taking separate bids on constructing a two-story brick fireproof high and grade school building, for the Board of Education of Ellen's Independent District. Cost, $75,000. Plans were drawn by Architect Frank L. Packard, of Columbus.

Moorefield, W. Va.—Architects Holcomb & Lafferty, of Clarksburg, have plans in progress for a two-story brick grade school building, to be erected for the Board of Education. Cost, $18,000.

Parkersburg, W. Va.—Architect Frank L. Packard, of Columbus, is drawing plans for a two- or three-story brick, stone and concrete high school building, to be constructed for the Board of Education. Cost $20,000.

Wampum, Pa.—The Board of Education is taking bids on erecting a two-story brick school building, to cost $20,000. Plans by Architect E. P. Workley, Wurtzberg P. O., Ellwood City.

Warwood, W. Va.—Architect George H. Dieringer, of Wheeling, has plans in progress for a two-story brick fireproof central grade school building, to be erected for the Richland District Board of Education. Cost $15,000.

Bridgeport, O.—Architect F. F. Farris, Schultzbach building, Wheeling, has plans under way for a $65,000 high and grade school building, to be built for the Board of Education. The school will also contain manual training, domestic science, laboratory, etc.

St. Clairsville, O.—The Board of Education is to build a two-story brick fireproof grade and high school building, at a cost of $90,000. The building will measure 90x180 feet, and will be constructed from plans prepared by Architect E. F. Farris, Schultzbach building, Wheeling, W. Va.

Ambridge, Pa.—Architects Carlisle & Sharrer, Jenkins Arcade, Pittsburgh, have plans under way for a two-story brick school building, to contain eight rooms, which will be built for the St. Stanislaus Congregation, Merchant street.

McDonald, Pa.—The plans of Architect John H. Phillips, Mckees Rocks, Pittsburgh, for a two-story brick and terra cotta fireproof school building, 68x80 feet, have been approved by the Board of Education, and bids will be taken about February 15.

Manufacturing.

Cleveland, O.—Architect Ernest McGee, Leader building, awarded to the McClone-Marshall Construction Company, Oliver building, Pittsburgh, the contract for constructing a one-story brick, reinforced concrete and steel fireproof manufacturing plant, on Madison avenue and West One Hundred and Sixth street, for the Parish & Bingham Company. Cost $125,000.

Thornton, W. Va.—The Alfred Tomkins Contracting Company, 432 Bailey avenue, Pittsburgh, received the contract for erecting a brick and steel brick plant for the Thornton Fire Brick Company. Cost $80,000.

Lowellville, O.—A. & S. Wilson, 541 Third avenue, Pittsburgh, received the contract for constructing a brick, steel and reinforced concrete power house addition, for the Mahoning & Shenango Railway & Light Company. Cost $100,000.

Society and Club Buildings.

Huntsville, O.—Architect E. H. Kickett, 274 Twelfth avenue, Columbus, is revising plans for a two-story brick and stone lodge building, to be erected for the Knights of Pythias. Cost $6,000.

Columbus, O.—The Board of Commissioners of Franklin, Licking and Muskingum counties will advertise for bids about February 20 to close March 1, on the grading and paving of the National Pike, to cost $500,000.

Erie, Pa.—The Commissioners of Water Works contemplates erecting a two-story brick and steel steam power machine shop, to cost $35,000. Will take bids about March 1.

Centerbury, O.—The Village will advertise for bids about March 1 on constructing a sewer system and disposal plant, to cost $20,000. Plans by Engineer H. L. Middocks, of Newark.

Frazeyburg, O.—Engineer J. C. Swartz, Court House, Newark, has plans nearly completed for a storm sewer system, to be constructed for the Village, at a cost of $11,000.

Navarre, O.—Engineer C. H. Wells, City building, has plans in progress for State street, has plans about completed for a four-story brick and steel fireproof building, to be constructed on Seventh and French streets, for the Loyal Order of Moose. Cost, $90,000.

Steubenville, O.—Architects Peterson & Clark, 500 Market street, awarded to the Guy Johnson Contracting Company, Toronto, O., the contract for erecting a one-story brick and stone lodge building addition on Sixth street, for the Loyal Order of Moos. Cost, $7,500.

Secwickley Heights, Pa.—Architects MacClue & Spank, Keystone building, Pittsburgh, for the construction of a two-story brick and stone fireproof club building addition for the Allegheny Country Club. Cost $15,000.

Cleveland, O.—Architects Hulet Company, 363 Lennox building, have preliminary plans in progress for a three-story brick and reinforced concrete fireproof club building, to be constructed on Lorain avenue, for the Magyar Society. Cost $25,000.

Martins Ferry, O.—Architect W. N. Brown, has plans in progress for a two- or three-story brick and steel lodge building, to be constructed on Fifth street, for the Odd Fellows and Red Men's Association. Cost $25,000.

replacing a two-story brick city administration building and fire station on W. Main street, for the City. Cost, $5,000.

Norwood, O.—Architects Weber, Werner & Atkins of Cincinnati, have plans in progress for a three-story brick and stone fireproof administration building, to be constructed on Main and Elm avenues, for the City. Cost, $25,000.

Bellefontaine, O.—The City will receive bids until February 21 on improvements to the electric plant, to cost $35,000.

Bridgeville, O.—The Borough will receive bids until February 24 on erecting a two-story brick and concrete fireproof municipal hall on Washington avenue, to cost $4,000.

Youngstown, O.—Plans are in progress for a brick, steel, reinforced concrete and terra cotta pumping station and boiler house, to be constructed for the Board of Public Service.

**Hotels.**

Johnstown, Pa.—The Thompson-Starrett Company, Pittsburgh, will be ready for sub bids about February 20, on constructing an eight-story brick and terra cotta fireproof hotel on Main street and Potter's place, for the Fort Stanwix Hotel Company. Plans by Architects Janssen & Abbott, Century building, Pittsburgh.

**Miscellaneous.**

Greenville, Pa.—Architect F. W. Hall of Clyde, O., awarded to John H. Agnew, 4045 Damascus avenue, Northside, Pittsburgh, the contract for constructing a granite and concrete mausoleum for the State Mausoleum Company, to cost $40,000.

Erie, Pa.—Architects Shuts & Morrison, Marine Bank building, have plans in progress for a one-story reinforced concrete fireproof mausoleum, to be constructed on Wesceler avenue for the Erie Mausoleum Company.

Farrell, Pa.—A. W. Phillips received the contract for building a one-story cement block stable for Carrie Williams, to cost $3,000.

**Hospitals.**

Brownsville, Pa.—Architect A. P. Cooper, of Uniontown, will receive estimates until February 23, on constructing a two-story brick and terra cotta hospital on Church street and Fifth avenue, for the trustees of the Brownsville General Hospital. Cost $40,000.

Cincinnati, O.—Architects Tietig & Lee, Lyric Theatre building, will receive estimates until February 16, on constructing a five-story brick hotel addition, on 2131 Auburn avenue, for the Board of Trustees of Christ Hospital. Cost $150,000.

Bluefield, W. Va.—Architects Pedigo & Gary, awarded to M. H. Pedigo, the contract for erecting a two-story brick addition to St. Luke's Hospital, to cost $7,000.

**Theatres.**

Dayton, O.—Architect Gustave A. Nishaus, 25 Callahan building, is taking bids on erecting a one-story brick motion theatre on West Third street, for Julius Leopold, 1424 West Dakota avenue. Cost $12,000.

Dayton, O.—Architects Pretzinger & Masselman, 1126 Reibold building, will receive bids until February 21, on constructing a brick and steel theatre, store and apartment building, on the corner of Fifth and Wayne avenues, for M. J. Schaefer, 740 South Brown street. Cost $40,000.

**Liens Filed for Labor and Material Furnished.**

**ALLEGHENY COUNTY, PA.**

Hahn Brothers vs. Buena Vista Land Company. Claim for $216.70, filed against a three-story brick apartment building in Ventura street, Twenty-sixth ward, Pittsburgh.

NO-LIEN CONTRACTS.

John Morrow & Son vs. Nicola Land Company. Agreement made and filed to do pointing and glazing for Schenley Theatre, Frohes street, for $2,192.81.

Scott A. White vs. Nicola Land Company. Agreement made and filed, to do roofing and waterproofing in Schenley Theatre, for $639.


Landau Brothers vs. Fidelity Title & Trust Company, trustees for Annie F. Laurent and Sarah S. Liggett. Agreement made September 19, 1913, and filed February 5, 1914, to tear down the present building and party wall and erect a new building and party wall at 971 Liberty avenue, Pittsburgh, for $6,044.

L. D. Swearingen vs. Elizabeth Bennett Edson. Agreement made February 13, and filed February 9, 1914, to erect a house on East Drive, Edgeworth, Pa., for $16,955.

**Sub-Contract Notes.**

**Brick Work.**


**Concrete Work.**

Fetzer-Winger Company, Pittsburgh, received contract $15,000 commercial garage, Wilkinsburg. Owner, W. J. Dible, Wilkinsburg.


**Decorating.**

Dewar & Clinton, Pittsburgh, received contract mercantile building remodeling, Pittsburgh. Owner, J. C. Kelly Estate, Pittsburgh.

**Electric Work.**


**Fireproofing.**

Fetzer-Winger Company, Pittsburgh, received contract $15,000 commercial garage, Wilkinsburg. Owner, W. J. Dible, Wilkinsburg.

HEATING.
Seebold & Winston, Erie, received contract $2,600 residence, Erie, Owner, Louise R. DeWitt, Erie.
Anderson-Darragh Company, Pittsburgh, received contract $17,000 mercantile building, Pittsburgh, Owner, Denny estate, Pittsburgh.

MILL WORK.
J. W. Beltz & Sons Company, Wheeling, W. Va., received contract $100,000 office and warehouse building, Wheeling, Owner, The Newalgany Company, Wheeling.
E. M. Dierbold Lumber Company, Pittsburgh, received contract $10,000 moving picture theatre and restaurant, Pittsburgh, Owner, C. B. Goorin, Pittsburgh.
Lyman Felheim, Erie, Pa., received contract $40,000 Orphans Home and Home for Friendless Children, Fairview, Pa. Owner, B'Nai Hebrew Society.

PAINTING.
Julius Gulden, Pittsburgh, received contract $14,000 store building, Pittsburgh, Owner, Laurent Watson, Richard Hartje heirs and Augusta Hartje, Pittsburgh.
L. G. Young, Pittsburgh, received contract $17,000 mercantile building, Pittsburgh, Owner, Denny estate, Pittsburgh.
Caldwell & Semple, Sharon, Pa., received contract $23,000 parish house, Sharon, Owner, St. John's Episcopal Congregation.

PLUMBING.
Buecker Plumbing Company, Pittsburgh, received contract $14,000 store building, Pittsburgh, Owner, Laurent Watson, Richard Hartje heirs and Augusta Hartje, Pittsburgh.
M'Cadden & Craig, Pittsburgh, received contract mercantile building remodeling, Pittsburgh, Owner, J. C. Reilly estate, Pittsburgh.
McKay Heating & Plumbing Company, Erie, received contract $45,000 mercantile building, Erie, Owner, Standard Manufacturing Company, Pittsburgh.

ROOFING.
Warren Company, Erie, received contract $2,300 residence, Erie, Owner, Louise R. DeWitt, Erie.
Gus Krack & Son, Erie, Pa., received contract $40,000 Orphanage and Home for Friendless Children, Fairview, Pa. Owner, B'Nai B'rith Hebrew Society.

SHEET METAL WORK.
Warren Company, Erie, received contract $2,300 residence, Erie, Owner, Louise R. DeWitt, Erie.

STEEL SASH.
Fetzer-Winger Company, Pittsburgh, received contract $25,000 storage building, Pittsburgh, Owner, D. F. Shana.

STEEL AND IRON.
Pittsburgh Iron Works, Pittsburgh, received contract $14,000 store building, Pittsburgh, Owner, Laurent Watson, Richard Hartje heirs and Augusta Hartje, Pittsburgh.

STONE WORK.
W. J. Black, Pittsburgh, received contract $10,000 moving picture theatre and restaurant, Pittsburgh, Owner, C. B. Goorin, Pittsburgh.

NEW BRIDGE ORGANIZATION.
The Concrete Steel Bridge Company, Clarksburg, W. Va., has been incorporated with a capital stock of $25,000 to manufacture material and construct bridges of concrete and steel. The incorporators are Frank D. McInteer, T. W. Homer, J. D. McManaway and others, Clarksburg, W. Va.

CHANGE CORPORATE NAME.
C. J. Patterson, formerly of the General Fireproofing Company, and R. I. Leitch, formerly of the Corrugated Bar Company, have entered into business as The Patterson-Leitch Company, with office and yard at 936 East Sixty-seventh street, Cleveland, O. They will act as sole agents of the Corrugated Bar Company in West Virginia, northern Ohio, and western Pennsylvania, and also carry a complete line of reinforced concrete supplies.

BRIDGE CONSTRUCTION OPEN.
Bids are to be taken until March 6 for constructing the bridge and approaches to cross the Scioto River near Columbus, O., John Peake, Court House, Columbus, O., designed the structure for the Board of County Commissioners. The work will call for 3,700 cubic yards of excavating, 7,000 cubic yards of concrete, 2,530 lineal feet of concrete railing, 40,000 pounds reinforcing steel, expansion plates, cofferdam, sheeting, etc. About $110,000 will cover the work.

MECHANICS' LIEN LAW.
(Continued from Page 7.)
your lien. This gives the attorney a chance to charge something and he isn't worried by the thought that he may forget to issue a Sci. Pa. within the statutory period. I have said that the Act of 1836, together with amendments thereto, was the law until the act of 1901 was approved by the governor. It never has been approved by the legal profession and the courts have not shown any David and Jonathan affection for it. It would not be prudent to enter upon a detailed discussion of the numerous arguments and decisions that have followed the passage of this act, each of whom it is not only entitled to a retainer, but also has a vested right to a contingent fee when he has discovered just what your rights are. This discovery is made after your case is finally disposed of in court. Experience has taught every attorney that there may be "other decisions" handed down in the interim and you can indulge in the pleasures of hope, while you wait, and incidentally lay aside sufficient cash to pay expenses in the event of defeat. It will cite a few of the many cases disposing of certain sections of the act. Section 6 was declared unconstitutional in Lay Construction Company vs. County. It prescribed a new method for securing a claim against public buildings and was an addition to existing laws. Section 25 came under condemnation in Sterling Bronze Company vs. Improvement Association. The court reaffirmed several decisions to the effect that wherein the act undertook to give a personal action on a lien it was unconstitutional.

Section 28, which provided that a subcontractor or material man might issue an attachment execution against the owner or other party indebted to the contractor for labor or material, was declared unconstitutional in Portland Cement Company vs. Allison, because it was special legislation changing the method for collecting a debt.

The 38th section was declared invalid in Taylor Lumber Company vs. Carnegie Institute, because it offended against section 7, article 11 of the Constitution, being special legislation. This section provided that a building might be sold and removed.

Section 13 was declared unconstitutional in Page vs. Carr. This decision was interpreted by some attorneys as knocking out the entire section, the effect of which would have been to make a lien effective only from date of filing. This is the only section stating when the lien shall commence and in respect of this particular matter was copied from the Act of 1836. Personally, I did not so in...
The question of apportioned claims is one that has caused so little discussion and like the questions above mentioned, has been a prolific producer of unseemly remarks.

Section 12 of the Act of 1901 provides that "No apportioned claim shall hereafter be allowed, but separate claims, with the amount due, determined by apportionment, may be filed as herein set forth." In Simpson vs. Rogers, the meaning and effect of this section came before our Supreme Court on appeal from the Superior Court. Mr. Justice Stewart wrote the opinion of the Supreme Court which was handed down October 13, 1913. He asks the question—What is here meant by "apportioned claims?" and answers it as follows—"If this inquiry is confined to the text of the act, we get no satisfactory answer, for the term is not here defined. General legal terminology will not help us, for neither is it there defined. He then quotes the Act of 1831 authorizing the filing of apportioned claims and the reason for the law as recited in the statute, and states the conclusion of the court as follows: "Our conclusion is that Section 3 of the Act of 1901 affords no warrant for the filing of "separate claim, with amount determined by apportionment," except in cases where the buildings are adjoining. It follows that the claim in this case being a separate apportioned claim, and the building sought to be charged with an apportioned amount not being adjoining with the other buildings embraced in the claim, it was filed without warrant of law. In this respect it was incurably defective; and because it was so, the learned court was entirely correct in refusing the amendment offered."

It would only tend to weariness were I to attempt a technical analysis of all the decisions bearing on the several statutes and especially those construing the act of 1901. I have discussed the origin and development of the law, without any effort to treat the subject exhaustively, and solely with a view to bringing before you some points that it was thought might be of interest. My remarks might be extended indefinitely, and because it was so, the learned court was entirely correct in refusing the amendment offered."

As to the general benefit or lack of benefit resulting from mechanics lien laws, opinions differ. Whether, in the end, special laws are beneficial is a debatable question. That the right of lien has promoted building may be admitted; that it has resulted in underbidding by irresponsible parties can not be denied. That underbidding is injurious to the general building trade and in most cases results in substantial loss to owners, contractors and laborers, I have no doubt. If we are to preserve a mechanics lien law it should be expressed in simple language. Instead of providing that the right of lien may be defeated by recording a "no-lien contract," the material man and sub-contractor should be required to notify the owner of his contract with the principal contractor and that the right of lien will be enforced in case of non-payment. This would protect the owner who can withhold payment or pay on order of the contractor, thus preventing loss to anybody.

I am of opinion that if all mechanics lien laws were repealed, the effect would be beneficial, as only contractors of good repute could then bid successfully; prices would be improved, the wage earner would get better pay and would be paid promptly, and the material man's profits would be sure. The certainty of payment would relieve him from adding to the cost to cover possible losses.

But after all, this is not a question to be settled by lawyers. The whole subject is one for your consideration. I can only repeat, that if we are to have a mechanics lien law it should be written in simple words, and the protection and enforcement of rights should not be rendered doubtful or uncertain by minute directions. It should not be so phrased as to encourage litigation or put a premium upon that type of ingenuity which reaches its fullest development in searching for and inventing reasons why one is not entitled to something, or merely the repair of an old one yet uncompleted.

The McClintic-Marshall Construction Company, Pittsburgh, secured the general contract to build the new plant of the Parish & Bingham Company's sheet metal plant at Cleveland, O. This will be a story building, 100x900 feet, brick, steel and reinforced concrete construction, and will cost about $25,000. The building will have cut stone, concrete foundations, concrete floors, steel construction, structural steel frame, steel sash, sheet metal work, composition roofing, face brick, etc.
THE CONSTRUCTION RECORD

ENLARGING CONVENT.

Five additional buildings are to be erected by the Ursuline Academy of the Sacred Heart Congregation, Toledo, each of which will be three stories high and constructed of brick and stone. Plans for the new work are under way by Architect E. A. Fallis, Nasby building, Toledo, and bids will be called about April 15. The buildings will call for structural steel, face brick, tile roofing, skylights and ventilators, marble and tile work, hardwood floors, metal lath and fireproofing, fire escapes, etc. Later on additional buildings will be erected.

STONE COMPANIES MERGE.

Marble Cliff Quarries Company, Columbus, O., is the name of the new company organized by the merging of the Woodruff & Pausch Stone Company, the Marble Cliff Stone Company, and the Casparis Stone Company. The new company has paid in capital amounting to $850,000 and it controls one of the largest stone outputs in the country. The officers are: John W. Kauffman, president; W. D. Crawford, of Steubenville, secretary; Robert Pausch, treasurer and W. H. Hoagland, general manager.

CITY BUILDING FOR NORWOOD.

Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, are working on plans for an administration building, to be built for the City of Norwood, O., which will be a three-story structure, 70x140 feet, brick and stone construction. The building will contain an auditorium, court rooms, hospital, gymnasium, etc., and will cost $300,000. Specifications will call for stone foundations, hollow tile fireproofing, composition roofing, metal sash, tile floors, metal doors, steam heating system, electric lighting fixtures, etc., etc.

LOADING DOCK PLANNED.

Architects Mills, Rhines & Nordhoff, Ohio building, Toledo, O., have about completed plans for a wood, concrete, brick and steel loading dock, to be built at Toledo for the Overland Company. Bids are to be taken at once on the steel concrete form construction for a five-story building, 300x410 feet; a four-story building, 100x410 feet and a two-story building, 100x410 feet. The excavation contract has been awarded to the H. J. Spieler Company, Michigan street, Toledo, while the concrete work has been secured by Speir, Moylan, Lastly Company, Pine street, Toledo.

TOLEDO WORK TO BE AWARDED

It is thought that the contract for building a two and one-half-story brick, steel and concrete building, 210x400 feet, for the Overland Company, Toledo, O., will be awarded this week by Architects Mills, Rhines, Bellman & Nordhoff, 1234 Ohio building, Toledo, O. The work is to be completed by May 15. Specifications for the work will include skylights, hard burned brick, metal lath, reinforced concrete flooring, metal doors, composition roofing, steel metal work, structural steel, etc.

GENERAL NEWS.

C. D. Keyser, 4125 Harrison street, Bellaire, O., who has the general contract to build the hospital for the citizens of Bellaire, O., will take bids on the marble and tile work.

The Pittsburgh Marble Company, Fulton building, Pittsburgh, has been awarded the contract for the marble work to be placed in the new Dilworth School building, Pittsburgh.

The buildings will have reinforced concrete floors, slag and gravel roof, structural steel frames, steel doors, steam heating system, lighting fixtures, etc.
THE CONSTRUCTION RECORD

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THE PLASTERING CONTRACTOR.

By a Material Man.

The plastering contractor is one who makes a living by taking contracts to plaster other people's houses below cost. Some of them make an easier living than others, because they take more contracts. The plastering contractor believes that charity begins at home, and his usually begins at some other fellow's home. If he finds out that some other plastering contractor has put a certain figure on a job, his charitable nature will not let him rest until he has rendered a lower figure. Thus he makes sure that the poor owner will receive a large donation. About all the plastering contractor makes on a job is a deficit.

One plaster contractor does not love the other, and they scorn to get together to "get their's", although they find the material men getting good prices for their goods and the mechanics organized to get high wages for their labor. There may be 500 lathers, plasterers and laborers in a town all belonging to their unions and boosting their wages, but who ever heard of 25 plastering bosses forming an association and sticking together? Nothing doing—it would interfere with their charity.

The business end of plastering is very simple. The plastering contractor seldom stops to inquire where his money is coming from before he takes a contract. He just steps in and cheerfully spreads several tons of nice sticky plaster over an acre or two of lath and trusts to luck for his pay. After he has done his work, all the other trades, such as electricians, steamfitters, plumbers and carpenters, immediately ran a race to see who can make the most holes in it. Then the plastering contractor goes back and patches it all up again just as nice as it was before, of course making no extra charge for this service.

The increasing cost of living does not seem to bother the plastering contractor. It may cost 15 per cent more for labor and materials now than it did five years ago, but he does not raise his price accordingly. The lower he figures, the less he loses. The plastering contractor figures that if he lives at home, carries his office in his hat, and works 10 hours a day on the scaffold, he has no overhead expense except his telephone. It is possible for some plastering contractors allowed themselves fair wages, when they get through with a job they would owe themselves money.

Thus we see why it is that for all the plastering contractor's charity there are no public libraries with his name over the front door, nor memorial church windows dedicated to his memory. His money is all inside, covered up where no one can see it.

The John A. Baun Company, E. La­cock street, Northside, Pittsburgh, has been awarded the contract for the new lighting fixtures to be installed in the Allegheny Trust Company's building, Federal street, Pittsburgh. The company also has the contract for the lighting fixtures in Boggs & Buhl's store building on the Northside, Pittsburgh.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

**Contracts Awarded:**

- January 1, 1914, to date .... $8,180,000
- Corresponding period 1913 .... 20,172,000
- Corresponding period 1912 .... 6,797,000
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EVERY WINDOW

should be Dust-proof, Air-tight and Serviceable. Specify and use the

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ESTIMATES CHEERFULLY FURNISHED.

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for Buildings, Prospecting,
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BOSTWICK TRUSS-LOOP LATH

“Truss-Loop” Standard, weighing full
5 pounds to the square yard, has rigidity,
which prevents sagging when spaced on
16' centers, while “Truss-Loop” Special
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the square yard, is successfully used 20'
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The Bostwick Steel Lath Company, Niles, Ohio.
The Wise Natural Gas Boiler for Steam and Hot Water Heating.

"THERE IS NOTHING BETTER."

The Cripps Down Draft "Smokeless" Boilers for soft coal are Simple—Economical—Efficient.

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Telephone 2628 Court.

We carry a large stock of steel for all purposes.

The J. E. MOSS IRON WORKS
Structural Steel
Ornamental Iron
and Fireproofing Products
Wheeling, W. Va.
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No contract too large.

Manufactured only by Keasby & Mattison Company, Ambler, Pa. Address local office for samples and prices.

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Wirsing & Finney, Oliver Building, Pittsburgh, Pa.

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Lau & Hogan, Youngstown, O.

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EXPANDED METAL.

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FIRE PROOF DOORS AND PARTITIONS.

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Stewart, George B., 6312 Penn Ave., East End, Pittsburgh.

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Lau & Hogan, Youngstown, O.

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Cribbs, John R. & Son, Verona.

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STEEL FRAME CONSTRUCTION.
For All Types of Buildings
Roof Trusses, Girders, Columns.

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ENGINEERS AND CONTRACTORS,
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BRIDGES, BUILDINGS, ROOF TRUSSES, GIRDERS, COLUMNS, BUILDERS' IRON WORK, BEAMS, CHANNELS, ARCELS, ETC., IN STOCK FOR QUICK SHIPMENT.

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When, operated by Margaret B. Owen, World’s Champion Typist, at the unprecedented rate of 125 net words a minute for one hour, it won for the eighth consecutive year, possession of the Thousand Dollar Silver Trophy Cup UNDERWOOD

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Hotel Lenox is modern, fireproof, and beautifully located. It is popular with tourists because of its fair rates, courteous treatment, and complete equipment. The cuisine and service are the best obtainable.

C. A. MINER, Manager

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 rider agents wanted

IN EACH TOWN and district to ride and exhibit a sample Large Model "Ranger" bicycle furnished by us. Our Rider Agents everywhere are paid on one piece of property is less than any one else charges.

We can do it for this price because we make so many property reports that it requires a force of title examiners constantly at this work and nothing else.

Being specialists they make them accurate and quickly.

You need property reports, order one now and be convinced that they are just what you want.

Edward Ball, Resident Mgr. for Western Pa.

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CAPITAL AND SURPLUS $1,500,000

Approved by the Allegheny County Courts.

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No Money Required until you receive and approve your bicycle.

We do not regularly handle second-hand bicycles. We furnish the highest grade second-hand bicycles that it is possible to make at one small profit above factory cost. We furnish the best quality bicycles without a cent deposit in any place and allow TEN DAYS' FREE TRIAL during which time you may return the bicycle if you are not pleased. We furnish the best kind of bicycles without a cent deposit in any place and allow TEN DAYS' FREE TRIAL during which time you may return the bicycle if you are not pleased.

Self-healing Tires

We are making a special factory price to the rider of only $1.00 profit above factory cost. You will save $10 to $25 middlemen's profits by buying direct of us and have the manufacturer's guarantee behind your bicycle. We DO NOT BUY a bicycle or pair of tires from anyone at any price until you receive our catalogues and learn our unheard-of factory prices and marvelous special offers.

YOU WILL BE ASTONISHED when you receive our beautiful catalogues and study our reports on any property for less money fast. Write for full particulars and special offer at once. No Money Required until you receive and approve your bicycle. We do not offer this offer anywhere in the U. S., without a cent deposit in advance, prepay freight, and allow TEN DAYS' FREE TRIAL during which time you may return the bicycle if you are not pleased.

We furnish the best quality bicycles without a cent deposit in any place and allow TEN DAYS' FREE TRIAL during which time you may return the bicycle if you are not pleased.

C. A. MINER, Manager

THERE IS NO MONEY REQUIRED until you receive and approve your bicycle.

The regular retail price of these tires is $4.55 per pair, but for advertising purposes we are making a special factory price to the rider of only $1.00 per pair. All orders shipped same day letter is received. We will ship C.O.D. on approval. You do not need to pay a cent until you examine and find them strictly as represented.

We will allow a cash discount of 10 per cent (thereby making the price $4.55 per pair) if you send FULL CASH WITH ORDER and enclose this advertisement. You can no risk in sending us an order as the tires may be returned at OUR expense if for any reason they are not satisfactory for examination. We are perfectly satisfied that you will find them strictly as represented.

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Factory Prices

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We will ship C.O.D. on approval. You do not need to pay a cent until you examine and find them strictly as represented.

Notice the thick rubber tread "A" and puncture strips "P." They will protect your bicycle from the elements of all kinds at half the regular retail prices.

A Sample Pair

Notteethethick rubber tread "A" and puncture strips "P." They will prevent rim cutting. This tire will outlast any other kind.

A Sample Pair

The regular retail price of these tires is $20.00 per pair, but for advertising purposes we are making a special factory price to the rider of only $4.00 per pair. All orders shipped same day letter is received. We will ship C.O.D. on approval. You do not need to pay a cent until you examine and find them strictly as represented.

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You will not be out one cent.

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We will ship C.O.D. on approval. You do not need to pay a cent until you examine and find them strictly as represented.

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2,200 tons of Wheeling Wall Plaster is being used in the new twelve-story Hotel Windsor and the new twelve-story Hawley Building, being constructed at Wheeling.

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PORTLAND CEMENT
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Can give satisfactory results unless it has the proper weight and thickness. The Whalebone Tie offers better service, owing to its superior quality of material and proper weight, with not a cent extra in cost.

Order from any dealer or direct from us. Cost $2.50 per 1,000, Pittsburgh. Prompt Shipment Guaranteed.

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All tracings received by mail or express returned with prints same day.

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Two Modern Ways of Saving Handling Expense
Used by Lumber and Brick, Manufacturers and Dealers, Building and Paving Contractors.
Write for catalogs and detail information to
MATHEWS GRAVITY CARRIER COMPANY
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The Replaceable Vault Light
The new system of vault lighting, which gives the maximum amount of light, strength and durability and is the only one that provides for the quick, easy and perfect replacement of broken glass.

Manufactured By
Mullen Brothers Co. Fulton Bldg.
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**Floor Surfacing Machine**

**The One That Does Good Work**

**EMPIRE FLOORING COMPANY**
Sole Agents Western Pennsylvania
6133 Jenkins Arcade  
P. & A. Phone 373 Main.

Call and see our line and prices.

B. K. Elliott Company
108 6th Street (Bessemer Bldg.)
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**ROOFS**

PARTITIONS and Suspended Ceilings
FIREPROOF MATERIALS CO.
320 Liberty Avenue  
PHONE, COURT 2156

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**SHEET METAL WORK**

**Cornices, Skylights**

**GENERAL MANUFACTURING COMPANY**
67 Nineteenth St.  
WHEELING, W. VA.

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**STRUCTURAL STEEL**

BEAMS, ANGLES, CHANNELS, PLATES, BARS.
PLAIN, FABRICATED, ERECTED
Prompt Shipment From Stock
Also
Ornamental Iron and Wire Specialties

**LAU & HOGAN**
YOUNGSTOWN, OHIO.
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We Solicit Your Inquiries and Orders.  452 W. Federal st.

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**EVERYTHING IN PAINTS**

**AT CHAPMAN’S**

Whatever your needs—for outside or inside painting, floor finishing, wall paints, stains, varnishes, etc., we can supply you with the best goods for the purpose.

GET OUR FIGURES FOR ANY JOB CONTEMPLATED.

We have a complete line of ready mixed paints of rare quality with which even the amateur can secure first-class results.

**CHAPMAN’S**
1218 MAIN STREET, WHEELING.
HORTICULTURE BUILDING FOR CLEVELAND.

The City of Cleveland will build a one-story marble horticulture building, 52x320 feet, with two wings, each 40x166 feet, at a cost of $100,000. The work will be undertaken sometime during the present year. The roofing will be of steel with skylight construction, fireproof doors, metal lath, ventilators, etc.

WAREHOUSE CONTEMPLATED.

S. C. Watkins & Company, Clarksburg, W. Va., have in contemplation the building of a two or three-story brick or concrete warehouse building, 200x200 feet, at a cost of $100,000. The work will be undertaken sometime during the present year. The roofing will be of structural steel and glass.

plaN FURNITURE WAREHOUSE.

A five-story brick and reinforced concrete store and warehouse 60x125 feet, to be built on E. Fifty-fifth street, Cleveland, for the Scott Brothers Company, from plans which are under way by Architect E. F. Gibbon, 1900 Euclid building, Cleveland. The time for taking bids has not been definitely settled. The work will cost $75,000.

HIGH SCHOOL FOR ELYRIA.

A $130,000 high school building is to be built by the Board of Education, Elyria, O., from plans which are now being prepared by Architect Paul A. Rissman, Elyria. Bids will be taken as soon as the plans and specifications are completed. The latter will call for structural steel, face brick, skylight construction, fireproof doors, metal lath, ventilators, etc.

SELECT ARCHITECT FOR CHURCH.

The First Methodist Episcopal Congregations, Monessen, Pa., has selected Architect J. M. Beall, Monessen, to prepare plans for a two-story brick and stone trim church building about 60x100 feet. The building will contain church auditorium, Sunday school rooms, pastor's study, etc. The building is to be equipped with a steam heating system.

PRELIMINARY PLANS READY.

Architect Carlton Strong, Union Bank building, Pittsburgh, has completed the preliminary plans for the proposed elementary school building on Bedford avenue, for the Board of Education, Pittsburgh. These will be submitted to the board officials for approval. Working drawings will not be completed before May 1. The building will be 130x276 feet, two stories and basement and will be of fireproof construction throughout. The work is to cost $243,000.

WHEELING BANK TO BUILD.

The West Virginia National Bank, Wheeling, W. Va., is having plans made by Architect Charles W. Bates, Board of Trade building, Wheeling, for a seven-story brick fireproof bank and office building, which will measure 50x60 feet. It is probable that the plans will be completed and ready for bidders about March 30. Marble and tile doors and wainscoting, metal lath partitions, steel doors, etc., will be specified. About $100,000 will be spent in the work.

FAMILY HOTEL PLANNED.

A 10-story brick, steel and reinforced concrete family hotel is to be built near E. Forty-second street and Prospect avenue, Cleveland, O., from plans now being prepared by Architect Charles Kimpel, 1116 New England building, Cleveland. The building will measure 50x125 feet and will contain 126 rooms. Separate bids are to be taken on the structural steel work. Other material specified includes ornamental iron railings, metal doors, fire doors, metal sink, kitchen equipment, refrigeration plant, etc. The cost of the work is estimated at $230,000.

PITTSBURGH'S LATEST THEATRE.

Plans for the proposed $300,000 theatre to be constructed on Oliver avenue and Cherry Way, Pittsburgh, for Oliver S. Hershman and others of Pittsburgh, are nearing completion by Architects H. E. Kennedy & Company, Home Trust building, Pittsburgh. The structure will be two stories and balcony, 100x130 feet, and built of brick and terra cotta. Specified material will call for structural steel, ornamental terra cotta, face brick, composition roofing, ornamental plaster, reinforced concrete floors, fireproof steel stairways, tile partitions, skylights, etc.

BIDS ASKED FOR ROSENBAUM BUILDING.

Bids are to close on the 28th inst. for constructing the Rosenbaum department store at Federal street and Liberty avenue, Pittsburgh. The plans for the building were made by Architect Jarvis Hunt, 51 W. Jackson boulevard, Chicago, and call for a 12-story brick and terra cotta building, 136x240 feet. The structural steel contract has been awarded to the American Bridge Company, Pittsburgh. The foundations will be of concrete pier system. Other specifications include reinforced concrete roof and floor construction, semi-porous tile partitions, ornamental terra cotta, hollow tile, ornamental plaster, metal lath, sidewalk and prismatic lights, composition and cement roofing, bronze entrance doors, waterproofing, etc. The estimated cost of the building is $1,000,000.
Retail Lumber Dealers Meet

Last week's convention of the Western Pennsylvania Retail Lumber Dealers' Association, held in the Monongahela House, Pittsburgh, was probably one of the best the organization ever had. The attendance was in excess in former meetings and the interest manifested in the various subjects pertaining to the lumber trade was more noticeable.

J. McF. Carpenter, Pittsburgh, who made an address on the "Mechanic Lien Law" opened up anew a subject which has been a thorn in the side of the contractor and material man for some years. A resolution was presented to have the law repealed entirely, but after a lengthy discussion it was decided to dismiss the subject and after an investigation urge a new system of relief to the Legislature which will embody such features as will give relief.

Four new directors were added to the board, these being J. E. Holbein, Evans City; W. K. Borland, Oil City; E. M. Hill, Pittsburgh and W. T. Geddes, Windber. A later meeting of the board resulted in the re-election of the officials, Frank E. Lillo, Oakdale, president; J. E. Holbein, Evans City, first vice-president; Paul McCracken, Leechburg, second vice-president; A. J. Stewart, Washington, treasurer and H. V. S. Lord, Pittsburgh, secretary.

The annual banquet on Thursday evening at the Monongahela House was presided over by President Lillo. James L. Grimes, Pittsburgh, spoke on "State Forestry and the Lumberman;" Dr. R. F. Bacon, Pittsburgh, on "By-Products of Lumber;" George S. Woods, Chicago, on "The Forest Products Exposition."
USES FOR WASTE LUMBER.*

By Dr. R. F. Bacon,
University of Pittsburgh.

Some of the possible uses of wood from which the oils, etc., have been distilled are wood pulp for paper or for making fiber board. To make paper pulp at a profit presumes certain kinds of wood and a large and expensive plant, but there are many possibilities along the line of boards of various types. The finely-ground wood and saw-dust can be cemented with different classes of binders into slabs which have all the strength and much of the resiliency of wood itself and which can be cut and handled in the same way as wood. One of our men made up some small slabs from saw-dust and a certain binder which had a polish like the finest hard wood. Materials which set into an artificial stone can be added and we get thus into the field of composition flooring and of boards which can be used in place of lathing, but which are practically fireproof. In Germany, where all kinds of wood cost real money, they are beginning to develop in a commercial way many things along these lines and it is only a question of a comparatively short time until many products of this general type will be on the American market. In fact, I expect to see the day when products of this kind are used for table and desk tops, as they can be made in any desired color and given a very high finish.

There is another known method of making wood wastes valuable, which has not been much worked with in this country. This consists in the fusion of wood with an alkali, the product ob-

* Abstract of address made at Retail Lumber Dealers' Association, Pittsburgh.
The Question of Tin and Composition Roofing

Considerable interest has been aroused by the recent communication of "F. G. R." concerning the largely increased number of specifications for composition material for roofing purposes. Some of the tin sheet manufacturers take issue with the correspondent in his claims but agree that owing to the vast increase in building projects there may have been somewhat more composition roofs applied than heretofore and that tin roofs have likewise increased in number.

The following communication is of important interest inasmuch as one statement of "F. G. R." is borne out. The writer claims that "the advent of Bessemer steel and the acid-flux process of tinning has almost ruined the tin roofing business."

The CONSTRUCTION Record

Gentlemen—Referring to the communication from "F. G. R." in your issue of January 24, under the heading "Questions of Tin for Roofing," I have been very fortunate in securing a sample of tin roofing taken from the home of Abraham Lincoln after it had been in service for 60 years. This sample was subjected to careful analysis and inspection and proved to be a very pure old-fashioned iron, practically free from copper and manganese. The copper was .016 per cent and manganese .01 per cent. The weight of the coating was 20 pounds containing .01 per cent lead, and .46 per cent tin.

Not many of us can speak of the events of 60 years ago from actual experience, but we can pass judgment upon the evidence presented by that time. We find tin roofs were universally used 40 to 60 years ago. Not only were they used in large numbers, but they were applied in a good, thorough, workmanlike manner.

That so many of these tin roofs are in perfectly good condition today indicated that the men on the job, the tinniers, were demanding quality for their clients. It further indicated that they knew how to distinguish a good plate from a bad one, and were experienced in applying tin roofing. No doubt, even in those days, some tin roofs may have given way, due to improper care and no attention, but the fact remains that pure iron tin roofs properly applied and properly cared for, have lasted 60 years without signs of failure.

The advent of Bessemer steel and the acid-flux process of tinning has almost ruined the tin roofing business.

Why did these experienced tinniers use this steel plate when the old reliable iron was giving such satisfaction? The only imaginable answer is that they could buy it cheaper, and they did not know from experience how quickly steel would corrode. The result of the constant failure of acid-flux steel plates was soon reflected in the specification of the leading architects. Tin roofing was used on particular jobs only when no other style could be used to advantage.

Some architects still specify tin roofing but it is always with the vain hope that it will give the same long life as the old iron plate.

Most tinniers, in an effort to prolong the tin roofing business, found it necessary to cut their price to meet the competition of other kinds of roofing. Their only chance to have steel tin roofing used was to make it so cheap that it would appeal from a price standpoint only. They were forced to buy the lowest price plate offered by the manufacturers, who, in turn, were compelled to cheapen their process as much as possible. This action has resulted in the production of the cheap, poorly-coated, short-lived, acid-flux steel plates of today. It has brought condemnation and a lack of confidence on the part of the architect, the tinner and the owner.

However, some tinniers and architects have steadfastly demanded and used the palm oil process hand dipped pure iron plates. To them and the manufacturers producing such plates all praise and honor must be given. They have been the means of keeping this industry alive. In practically every case you will find them amply rewarded by the volume of profitable business they are doing. Their customers are pleased and satisfied.

Fortunately or unfortunately, the other grades and styles of roofing which became popular, while possessing many good qualities, never have and never will possess all the combined advantages of a good pure iron tin roofing.

The different brands of tar, felt and paper roofings were very popular for a time, but they are proving absolute failures under many circumstances today.

The eye of the architect and the owner is once more turned longingly toward the durable tin roofing of our forefathers. Great railway systems are discarding entirely the cheaper forms of roofing, and looking for something more reliable.

It seems to be strictly up to the sheet
metal worker to either accept or reject this opportunity of turning the tide toward tin roofing. Good things as a rule do not come easily. It requires hard, persistent effort to accomplish big things in this day and age. The sheet metal worker is the pivot on which this proposition is going to swing—either for or against tin roofing.

Now what will their attitude be? Will they still choose the easiest course and continue to use the lower price material, or will they decide boldly in favor of the pure iron palm oil process plate which has given satisfaction for 60 years or more. Of course, it will mean hard work, consistent salesmanship, and tenacious holding to ideals, but is it not the only course to pursue? Does not the future of the sheet metal worker's business depend upon the quality of tin he uses?

Not only is it important that the tin roofing plate has an iron base, but the coating should be applied by the time-tried hand dipped process. A manufacturer may place a pure iron base plate before the architect in a convincing manner, but when all is said and done, the future of the tin roofing business is in the sheet metal workers' hands.

He can do more to build up this business than any one else. He will be able to place the best plates on practically every job if he gives his customer the benefit of experience and advice.

The property owner has to rely upon the metal workers' intelligence. Will he join in this fight to the finish to prove that “tin roofing can and will come back”?

J. T. Crawford.
Middletown, Ohio.

PINE FLOORS—THEIR INSTALLATION AND CARE.

How many retail lumbermen have read directions for laying hardwood floors? The keynote is the care which should be given the material before and after it reaches the building. Such directions state that the flooring must be stored in a dry place, should be hauled on a clear day, should not be delivered before the building is thoroughly dry. They appear elaborate but are not. They are the essence of common sense boiled down to a practical basis.

Why should not the building trade apply a little common sense to methods of handling pine floors? It is not unusual for pine flooring to be stored in an open shed, to be delivered before the building is dry and stored in a room, the air of which is saturated with moisture, or on the ground with a few boards placed over it to keep out the rain. The excess moisture causes the flooring to swell and subsequent drying causes it to shrink and the result is cracks one-sixteenth to one-fourth inch wide.

Sanitary floors now are considered almost a necessity. An excellent modern floor may be made from standard grades of Southern pine or fir. A 2 1/8-inch face flooring is preferable to a 3 1/4-inch face for the shrinkage in the narrow board is not so great. Edge grain or quarter sawed flooring should be used for top floors. Slash sawed stock can be used but is likely to splinter unless the finish—the filler and varnish—is maintained in a high state of efficiency.

In all varnished and waxed floors the wear is on the finish, not on the wood. When the traffic on a floor breaks through the finish and the wood becomes exposed, the floor will be damaged, not beyond repair, but to an extent that will increase the cost of repairing. Expose wood to light and air and it will darken quickly.

 Rift sawed Southern pine and fir flooring makes excellent top floors and may be used with or without a sub-floor. These floors measure up in every particular to modern ideals. When such flooring is laid over a sub-floor it should be put in after all the other work has been finished. Not only should the trim be installed but the work should be finished before the floors are laid. The workmen should wear felt slippers or work in their stockings, so the surface will not be marred with thousands of nail prints.

After the floor is laid it should be scraped and sanded, given a coat of filler with or without color and finished shellac and varnish or shellac and wax as may be desired.

When the pine floor is the only floor difficulties increase for the floor must be laid before the building is plastered. In such cases it is advisable to lay the floor, scrape or sand it and apply the filler. Then cover the floor with two thicknesses of sized building paper, laying the strips crosswise to each other and securing the paper in place with strips or lath.

The paper should be allowed to remain until all other work has been finished when it may be removed and the last coats given the floor. Plasterers should be cautioned against the careless or needless use of paint. There is no necessity for the plasterers soaking a floor. All the mixing can be done inside the building.

Softwood floors treated in this manner will stand reasonable test and will give satisfaction. Ordinarily a pine top floor is stained with lime and cement, marred by rough usage, shows the prints of thousands of boot heals and would not be attractive in a barn.

That unpalatable, uninviting prospect is the public conception of “softwood” floors. It will remain in the public's mind unless the retail lumbermen and their friends and co-workers, the carpenter and contractor, shall change it. It is worth something to do this work and fortunately the retail dealers are in a position where he may establish his own compensation and collect it every time he sells a pine floor and instructs the buyer how to install and finish it.

WARM-AIR FURNACE MAKERS ORGANIZE.

To advance the interest of the warm-air furnace industry an organization of furnace makers was effected in Cleveland, O., recently, under the name of the National Warm Air Heating & Ventilating Association. A permanent organization was effected by the election of the following officers: President, John D. Green, Detroit Stove Works, Detroit, Mich.; vice-president, F. T. Giblin, Giblin & Company, Utica, N. Y.; treasurer, W. G. Wise, Wise Furnace Company, Akron, O.; executive committee, E. P. Miller, Lenox Furnace Company, Marshalltown, la.; John D. Howard, P. D. Beckwith Estate, Dowagiac, Mich., and E. C. Seelbach, Forest City Foundry & Manufacturing Company, Cleveland. The selection of a permanent secretary was left to the executive committee.

A canvass of those present showed that there were between 30 and 35 furnace manufacturers in attendance and between 55 and 60 in accord with the movement, and in addition a number of manufacturers of furnace accessories. The object of the organization is described as follows: "To promote the proper installation of warm-air heating systems through systematic education in every department of the industry," and the membership is to consist of manufacturers of any component parts of warm-air heating system.
Computations and building information:

John S. Cohen, 2537 Oliver building, is drawing plans for a 2½-story brick and stone building on Smithfield street. Cost, $7,000.

The national fireproofing company, commission building, received the contract for erecting a 7-story brick and terra cotta fireproof building. Cost, $7,000.

Charles C. Cohen, 33 W. Jackson avenue, received the contract for erecting a 12-story brick and terra cotta fireproof department store building. Cost, $1,000,000.

The central home company, Van Norden and Southwick building, received the contract for constructing a three-story brick and terra cotta fireproof store and apartment building. Cost, $7,500.

These verified reports appear in advance of all other trade publications.
Ambridge, Pa.—Architect H. A. Ford, 202 Charles street, is taking bids on erecting a 2 1/2-story brick duplex residence on Maplewood avenue, for John Flajnik, to cost $5,000.


Lakewood, O.—Architect A. C. Wolf, 827 Rose building, Cleveland, has plans in progress for a 2-story hollow tile and stucco residence, to be erected on Lake avenue and E. One Hundred and Tenth street, for Fred Walker, 2035 Fulton road, Cleveland. Cost, $25,000.

Maysville, Ky.—Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, O. awarded to McDowell & Case, the contract for erecting a four-story brick and stone apartment building, for E. T. Kirk, to cost $20,000.

Johnstown, Pa.—Architect J. E. Lucas and J. E. Adams, are taking bids on the erection of a 2-story brick and stone residence, for H. A. Schaffer, to cost $10,000.

Cincinnati, O.—Architect E. B. Sloatemeyer, Lincoln Inn Court building, will take bids on erecting a 2-story pressed brick residence on Harrison avenue for Mrs. Sabina Fath, to cost $6,000.

Architects Weber, Werner & Adkins, 414 Walnut street, have been selected to prepare plans for a 2 1/2-story pressed brick residence, to be erected on Rosehill avenue, Avondale, for Felvel F. Ser- vill, 2247 Colerain avenue. Cost $10,000.

Architects W. W. Franklin & Son, 28 Franklin street, have plans in progress for a 2 1/2-story pressed brick residence and office, to be erected on Dorchester and Josephine streets, for Dr. Charles G. Smith, 224 Dorchester street. Cost, $750.

East Palestine, O.—Webb Metz contemplates erecting two 2 1/2-story frame residences, to cost $2,500 each.

Monessen, Pa.—Architect J. A. Lohman is taking bids on erecting a three-story brick and hollow tile apartment building on Ontario street, for Michael Banno, Montario street. Cost, $4,500.

Blairsville, Pa.—E. M. Graff, First National Bank building, is taking bids on the erection of a 2 1/2-story brick and tile residence, from plans drawn by Architect J. E. Abitz, Vilsack building, Pittsburgh. Cost, $12,000.

Celina, O.—Architect John Boemer of Cassella, is taking bids on the erection of a 2-story brick residence for William Unger, to cost $4,500.

Cincinnati, O.—Architect B. T. Wise- nall, First National Bank building, awarded to W. Z. Greene, 707 First National Bank building, the contract for erecting two 2-story brick St Louis apartment buildings on Twenty-ninth avenue, Oakley, for A. W. Lott, 44 Poole avenue, Covington, Ky. Cost, $4,500 each.

Architect William Stanton Robinson, Purcell avenue, awarded to William Leitman & Broth'er, 205 Clifton avenue, the contract for erecting a 2 1/2-story brick residence on 515 Purcell avenue, for C. N. Fisher, to cost $15,000. Contract for stone masonry let to Casper Gehred, 2829 W. Sixth street.

Cleveland Heights, O.—Architects Dercum & Beer, 220 Avenue building, Cleveland, are taking bids on erecting a one-story residence addition on 300 Fairview road, for A. R. Popp, 3001 Fairview road. Cost, $5,000.

Columbus, O.—Architect H. C. Jones, 10 Deshler building, will receive bids until February 24 on erecting a two-story brick residence on Wilson avenue, for R. M. Baer, Mt. Vernon avenue. Cost, $5,000.

Fremont, O.—Arthur Swank, E. State street, contemplates erecting a brick and frame apartment house on E. State street, from private plans.

Sandusky, O.—Architects W. W. Hodges Company, Schofield building, Cleveland, are taking bids on erecting a 2 1/2-story stucco and hollow tile residence and garage on Columbus avenue, for George A. Boeckling.

Architect H. C. Millott, Bliss building, is taking bids on erecting a two-story frame and stucco residence addition on Columbus avenue, for Leo Wagner, Monroe street. Cost, $13,000.

Toledo, O.—Architect W. G. Theremin, 910 Ohio building, will receive bids until February 25 on erecting a 2-story frame and brick veneered residence on Kenilworth and Fulton streets, for D. T. Richardson, Majestic Theatre. Cost, $7,000.

Washington, Pa.—Architect John W. Vester, Brown building, is taking bids on erecting a 2 1/2-story stucco and metal bath bungalow on Winton street, for T. J. Jeff Duncan, 80 S. Main street. Cost, $10,000.

Cambridge, O.—George D. Nicholson will be ready for bids about March 1 on erecting a 2-story brick terrace, from plans drawn by Architect Frank L. Packard of Columbus. Cost $15,000.

Cleveland, O.—Architect S. H. Weis, 1052 Schofield building, has been selected to prepare plans for a 2-story brick apartment building, to be erected on Asbury and E. One Hundred and Fourteenth street, for Spinack & Farnan, 2765 E. Fifty-first street. Cost, $12,000.

Architect H. E. Shinnin, 857 Rose building, is taking bids on erecting a 2-story brick residence and garage on Shaker Lakes boulevard, Cleveland Heights, for Arthur Jones, 215 St. Clair avenue, N. E.

Columbus, O.—Architect J. A. Jones, Dispatch Annex building, will be ready for bids about February 20, on erecting a second story terrace on Hamilton avenue, for Charles H. Knauderer, Hamilton avenue. Cost, $9,000.

Architect Monroe Heath Blake, 335 W. Eighth avenue, awarded to McCall & McCoy, 24 E. Frambes avenue, the contract for erecting a 2-story frame residence on Wyndotte avenue, Arlington, for Mrs. Margaret Perry Hans, 345 King avenue. Cost, $6,500.

Duquesne, Pa.—W. J. Reybeck, Grant avenue, is taking new bids on erecting a 2 1/2-story brick residence on Second street from private plans drawn by Architect A. E. Miller, 224 Chislet street, Pittsburgh. Cost, $5,000.

East Palestine, O.—R. E. Vogan is taking separate bids on building a 2 1/2-story frame residence, from private plans. Cost, $4,000.

Lakewood, O.—Architects Kregelius & Robinson, Leader News building, Cleveland, are taking bids on erecting a 2 1/2-story stucco and hollow tile residence and garage on Lake avenue for R. Williams, 1011 Rockefeller building, Cleveland. Cost, $20,000.

Mapletown, Pa.—Thomas H. Hudson is taking bids on erecting a 2-story frame residence addition, from plans drawn by Architect H. W. Altman, of Uniontown. Cost, $3,500.

Norwood, O.—Architect Phillip Pfeifer, of Cincinnati, has been selected to prepare plans for a 2 1/2-story brick residence, to be erected on Allison and Sherman avenues, for Mrs. E. Schmeig, 1912 Mills avenue. Cost, $5,000.
Cleveland, O. — Architect J. Milton Ingling, to cost $4,000, from private plans.

Bucyrus, O. — C. D. Bortz contemplates building a 2½-story frame dwelling, to cost $4,000, from private plans.

Architect William Unger, Postoffice building, is preparing plans for a 2½-story pressed brick residence, to be built for Dr. C. A. Lingenfelter, East Charles street, to cost $6,000.

Bellevue, O. — C. G. Urton will build a 2½-story frame dwelling, from private plans, to cost $3,500.

McKeesport, Pa. — John Barlow, 1000 Beech street, is asking bids on the erection of a 2½-story brick veneer residence, to cost $7,500. Private plans.

Architect C. R. Moffit is asking bids on the erection of a two-story brick veneer residence, on Versailles avenue, for C. A. McCaw, South Park avenue. Cost $5,000.

Uniontown, Pa. — Architect H. W. Altman, First National Bank building, has plans under way for a 2½-story brick and shingle residence, to be built on McClelland Road, for C. B. Garland. Cost $6,000.

The same architect has plans for a 2½-story brick and shingle residence, to be constructed on Main street, for C. L. John, 45 East Main street. Cost $5,000. Bids will be taken March 1.

Bids will be taken March 15, for building a 2½-story frame dwelling, on Derrick Road, for A. D. Williams, First National Bank building. Plans by Architect Altman.


Scottsdale, Pa. — Bids are now being taken for the erection of a two-family residence building, on Broadway, for Ambrose Nelly, plans for which were made by Architect John Harmon, First National Bank building, Uniontown. The work will cost $7,000.

Business Buildings.

Cleveland, O. — Architect J. Milton Dyer, 825 Cuyahoga building, is writing specifications for a brick and reinforced concrete fireproof warehouse, to be constructed on 4425 Euclid avenue, for the Standard Manufacturing Company.

Columbus, O. — Architect Otto C. Darst, 1109 Branson building, will receive bids until February 24, on constructing a four-story brick and concrete fireproof warehouse and office building, on Naughton and Neilson streets, for G. W. Bobb Company. Cost $110,000. Also for erecting a two-story brick and concrete stable and garage, on Naughton and Neilson streets, to cost $100,000.

The City National Bank contemplates constructing a nine-story brick, stone and concrete bank, store and office building, on corner of Gay and High streets, to cost $100,000. Architect has not been selected.

Erie, Pa. — Architect Irvin & Withrow, Keystone building, Pittsburgh, are ready for bids on the construction of a two-story brick concrete and terra cotta fireproof mercantile building, on 913 State street, for the United States Hardware & Supply Company. Cost $50,000.

Jefferson, W. Va. — Architect C. C. Compston, Postoffice building, has plans in progress for a two-story brick office building, to be erected on Thompson avenue, near Sixth street, for Joseph Mosetisch, Thompson avenue. Cost $20,000.

Stark Electric building, has completed plans for a two-story brick office building, to be erected for the Royal Baking Company. Cost $30,000.

Wheeler, W. Va. — Architect Charles W. Bates, 310 Board of Trade building, has plans in progress for a seven-story brick fireproof bank and office building, to be constructed on Main and Twelfth streets, for the West Virginia National Bank. Cost $100,000.


Alliance, O. — Architect W. W. Matchett, Stark Electric building, has completed plans for a two-story brick store and apartment building, to be erected for Charles Bieri, to cost $8,000.


Charleroi, Pa. — J. J. Beeren, Fallowfield avenue, contemplates erecting a two-story brick store and apartment building on Fallowfield avenue, to cost $14,000. Architect has not been selected.

Sketches are being submitted for a three-story brick and steel fireproof store building, to be constructed on Mc-
Kean avenue, for S. L. Woodward, 421 31Kean avenue. Cost, $20,000.

Cincinnati, O.—Architect J. F. Sheaffer, 72 Blymer building, will take bids on constructing a seven-story brick and reinforced concrete fireproof space and loft building, on Broadway, near E. Eighth street, for P. A. Henry, 713-15

Sycamore street. Cost, $40,000.

Cleveland, O.—Architect M. E. Wells, 501 American Trust building, has been selected to prepare plans for a three-story brick garage and stable building, to be erected on Eagle avenue, for H. W. Clark, 88 Beaver road. Cost, $30,000.

Architects Moore & Dunford, Chicago, Ill., are revising plans for a three-story brick, steel and reinforced concrete fireproof storage warehouse, to be constructed on Lexington avenue and E. Sixty-sixth street, for the Andrews Fireproof Storage Company.

Dayton, O.—Architects Schenck & Williams, 524 Arcade building, awarded to the A. Bentley & Sons Company, First and Sears streets, the contract for constructing a four-story reinforced concrete and steel fireproof storage building, on E. Third street, for the Lobensberger Estate. Cost, $25,000.

Duquesnes, Pa.—Architect C. R. Moffet, McKee bone, awarded to C. W. Zeiller, the contract for erecting a three-story brick and hollow tile store and apartment building on Superior and River avenues, for Steve Barefoot, Superior street. Cost, $15,000.

Fayette City, Pa.—Architect J. C. Breton of Charleroi, is preparing sketches for a two-story brick and steel store and apartment building, to be erected for R. M. McCune, to cost $15,000.

McKeesport, Pa.—Architect C. E. Moffett, Masonic building, will be ready for bids about February 25 on constructing a three-story brick, steel and terra cotta mercantile building, for M. S. Neiman, 341 Sixth avenue. Cost, $36,000.

Stoutsville, O.—Architect E. S. Matheny, of Crooksville, awarded to Showers & Taylor, Crooksville, the contract for erecting a one-story brick and lime stone bank building for the Farmers & Citizens Bank. Cost, $90,000.

Clarksburg, W. Va.—Architect A. P. Gladden has plans in progress for a four-story brick or concrete wholesale produce house, to be constructed on Baltimore street, for S. C. Watkins & Company. Cost $50,000.

Erie, Pa.—The Pennsylvania Company, Erie & Pittsburgh Division, Pittsburgh, will build an office and freight building, 40x35 feet, plans for which have been made by the company's engi-

nee, Thomas Ridd, 1123 Pennsylvania association, Pittsburgh. The work will cost $50,000.

Martinsburg, W. Va.—The Peoples Trust Company has had plans completed by Architects Hoggson Brothers, 7 East Forty-fourth street, New York city, for a brick office and bank building, to cost $50,000.

McKeebone, Pa.—Architect H. J. Lohman, 502 Fifth avenue, is asking bids on remodeling a store and apartment building, at 511 Fifth avenue, for Peter George, Fifth avenue.

New Kensington, Pa.—Premises plans are under way by Architect J. H. Geisy, for a four-story brick and steel frame office building, 80x100 feet, to cost $50,000, for the Aluminum Company of America.

Oak Hill, O.—Architect F. L. Packard, Hayden building, Columbus, will soon start plans for a one-story brick bank and store building, 35x60 feet, to be built for the Oak Hill Savings Bank Company. Cost $10,000.

Uniontown, Pa.—About April 1 Architect H. W. Altman, First National Bank building, will be ready for bids on constructing a three-story brick storage building 18x80 feet, for E. E. Stricker, 70 South Mt. Vernon street.

Warren, O.—The Western Reserve National Bank contemplates building an eight-story brick, steel and reinforced concrete bank and office building. No architect has been selected.

Religious.

Butler, Pa.—Architect Harry Wimer, 511 N. Monroe street, has plans in progress for a one-story brick and tile church, to be erected on 5th street, for the First Baptist Congregation. Cost $16,000.

Cleveland, O.—Architect Theo. Com- nor, 906 Park building, has plans in progress for a two-story brick church and Sunday school building, to be erected on Hampden avenue and E. One hundred and Fifth street, for the Zion Evangelical Congregation. Cost, $24,000.

Dayton, O.—Architects Dexter & McClure, Canby building, are taking bids on erecting a one-story frame and stucco church on Salem avenue, for the First Unitarian Congregation. Cost, $10,000.

Cassella, O.—Architect John Boemer is taking bids on erecting a one-story brick church for St. Mary's Catholic Congregation, to cost $7,000.

Dayton, O.—Architect Robert C. Godwald, Springfield, has been selected to prepare plans for a one-story brick church and parsonage, to be erected on Kurtz and Bertha streets, North Riverside, for the North Riverside Lutheran Congregation. Cost, $17,000.

Duquesne, Pa.—Architect H. J. Lane, house building, Pittsburgh, has been selected to prepare plans for a one-story brick and stone church addition, to be erected on Grandview avenue for St. Joseph's R. C. Congregation. Cost, $15,000.

Monessen, Pa.—The Presbyterian Congregation, care Rev. H. O. McGinnell, contemplates constructing a twostory brick and stone fireproof church to cost $50,000. Architect has not been selected.

Akron, O.—Architect W. P. Ginnell, Everett building, awarded to C. F. Green, Lincoln street, Kent, the contract for erecting a three-story brick, hollow tile and stone school building on Broadway and State street, for the Sacred Heart Academy, Order of Dominican Sisters. Cost, $25,000.

Dayton, O.—Architect Charles Herby, 1401 E. U. building, has been selected to prepare plans for a 1½-story brick church on St. Clair street, for the Park Presbyterian Congregation. Cost, $30,000.

Monessen, Pa.—Architect J. M. Deal, has been selected to prepare plans for a two-story brick and stone fireproof church, to be constructed for the First Methodist Episcopal Congregation. Cost, $50,000.

Alliance, O.—Architect W. W. Matchett, has new plans in progress for a one-story brick and stone church, to be erected for the United Brethren Congregation.

Celina, O.—Architect J. A. Hasecoester, Richmond, Ind., is ready for bids on erecting a one-story church brick, for St. John's German and English Congregation, to cost $2,000.

Cincinnati, O.—Architect E. H. Dornette, Pickering building, has plans in progress for a 2½-story brick church, to be constructed on Thirty-fourth street and Webster avenue, Oakley, for the Oakley Presbyterian Congregation. Cost $25,000.

Architect John P. Stricker, 225 West Sixth street, will take bids on erecting a church brick, on corner of Ninth and Linn streets, for the Colored Presbyterian Congregation. Cost $10,000.

Uniontown, Pa.—Architect W. H. Altman, First National Bank building, has plans in progress for a two-story brick church addition, to be erected on North Gallatin avenue, for the Lutheran Congregation. Cost $25,000.

Architect John H. Harman, First National Bank building, has plans in progress for a two-story brick school build-
ing, to be erected for St. Joseph’s Roman Catholic Congregation, to cost $12,000. Will be ready for bids about March 1.

Cambridge, O.—W. C. Handsby, Zanesville has been awarded the contract to build the addition to the Presbyterian Congregation church building, at a cost of $25,000.

Duquesne, Pa.—Architect H. J. Lang, House building, Pittsburgh, has plans for the one-story brick and stone church building, for the St. Joseph Slavonic Congregation. Bids on the work will be taken about the 25th inst.

Educational.

Berea, O.—The Board of Education will receive bids until March 2 on constructing a brick and reinforced concrete fireproof high school addition, to cost $50,000. Plans by Architect W. F. Nicklas, 608-1900 Euclid building, Cleveland.

Bowling Green, O.—The Board of Trustees of the Northwestern Ohio Normal School will advertise for new bids for constructing a three-story brick and stone fireproof science building, to cost $100,000. Plans by Architects Howard & Merrill of Columbus.

Copley, O.—Architect Vernon Redding of Mansfield, awarded to Boal & Theobold, Elyria, the contract for erecting a two-story brick school building for the Board of Education of Copley Township Central School District. Cost, $23,000.

Greenfield, O.—The Roche-Brunner Building Company, Johnston building, Cincinnati, are taking sub-bids on constructing a two-story brick and stone fireproof high school building, for E. L. McChin, to cost $200,000.

Alliance, O.—Architect Frank L. Packard, of Columbus, has been selected to prepare plans for a two-story brick and fireproof grade school building, to be constructed for the Board of Education. Cost, $45,000.


Roseville, O.—The Board of Education will receive bids until March 16 on erecting a two-story high school building, from plans drawn by Architect E. S. Matheny of Crooksville. Cost, $25,000.

Steubenville, O.—The Board of Education contemplates erecting a school building on Pleasant Heights, to cost $35,000. Architect has not been selected. Also for erecting a school building on North street, to cost $75,000; an addition to the Grant building on South Fourth street, to cost $35,000, and an addition to the Washington building on Adams street, to cost $35,000.

Sciota, O.—Architects Howard & Merrill of Columbus, have been selected to prepare plans for a two-story brick and concrete high and grade school building, to be erected for the Board of Education. Cost, $39,000.

Waverly, O.—Architects Howard & Merrill of Columbus, have been selected to prepare plans for a two-story brick and concrete high and grade school building, to be erected for the Board of Education, to cost $55,000.

Bowerstown, O.—Architects Howard & Merrill, of Columbus, awarded to W. H. Hope, Canton, the contract for constructing a two-story brick high and grade school building, for the Board of Education. Cost, $20,000.

Ludlow, Pa.—The Board of Education of Hamilton township, will receive bids until March 9, on constructing a two-story brick fireproof high school building, to cost $35,000. Plans by Architect W. G. Eckles, of New Castle.

Alliance, O.—Architect F. L. Packard, Hayden building, Columbus, has plans under way for a two-story and basement brick fireproof school building, to contain 12 rooms, for the Board of Education. The work is to cost $30,000.

Ashland, O.—A $100,000 high school building is to be constructed for the Board of Education, from plans now being made by Architect Vernon Redding, Bird building, Mansfield. The building will contain 12 class rooms, manual training, domestic science departments, etc.

Bluffton, O.—Architects McLaughlin & Hildreth, Lima, O., are working on plans for the science hall, to be constructed at a cost of $25,000, for the Bluffton Mennonite College. The building will measure 33x70 feet, brick and stone construction.

The same architects have plans for a 2½-story brick college building, to be constructed for the Bluffton College, at a cost of $20,000.

Copley, O.—Theobald & Beal, Elyria, O., received the contract to build a two-story school building, for the Board of Education. Cost, $25,000.

LaCarne, O.—Bids will close on March 6 for building a two-story pressed brick school building, for the Board of Education. Plans for the building were made by Architects Huber & Gamble, Spitzer building, Toledo. Cost, $20,000.

Middletown, O.—Caldwell & Iseinger were awarded the contract to build a two-story school building 100x120 feet for the Board of Education. Cost, $60,000.

Sébring, O.—A two-story brick fire-proof school building is to be built at a cost of $20,000. No architect has been selected. William Stevens is president of the board.

Manufacturing.

Cincinnati, O.—The Ford Motor Company has selected a site on Lincoln avenue and C. L. & N. R. R. on which they will construct a five-story pressed brick factory building, from private plans.

Cleveland, O.—Architect E. F. Gibson, 409-1900 Euclid building, has plans in progress for a three-story brick and stone factory building, to be erected on 4170 Lorain avenue, for the G. F. Schaffner Wagon Company. Cost, $30,000.

Mineral City, O.—Engineer Sidney E. Martin will draw plans for a one-story brick and steel fireproof central sewer plant, to be erected for the Federal Clay Products Company. Cost, $30,000.

New Kensington, Pa.—The Lawrence Steel Construction Company, 3301 Penn avenue, Pittsburgh, received the contract for constructing a one-story structural steel and plaster fireproof factory building, at the Pennsylvania Works for the American Sheet & Tin Plate Company, Frick building, Pittsburgh.

Cleveland, O.—Architect R. F. Moon, 1008 Scoville avenue, awarded to the W. F. Hyde Company, Scovill avenue, the contract for constructing a four-story brick factory addition on 966 Woodland avenue, for Robert F. Mackenzie Company. Cost, $60,000.

Oakmont, Pa.—The Suburban Water Company, 443 W. Railroad avenue, will be ready for bids about February 25, on constructing a reinforced concrete and brick filtration plant, to cost $60,000.

Columbus, O.—The Central Avenue Lumber & Supply Company contemplates erecting a one or two-story steel, frame and corrugated iron planing mill addition on Central avenue and B. & O. R. R., from private plans.

Toledo, O.—Architects Mills, Rhines, Bellman & Rollhoff, 1235 Ohio building, awarded to the H. J. Spieker Company, Michigan street, the contract for erecting a 2½-story brick, steel and concrete manufacturing building for the Overland Company.

Marion, O.—The American Malleable Castings Company is taking bids on constructing a one-story brick and steel moulding department addition and of-

Akkron, O.—Walker & Curley, of Pittsburgh, received the contract for constructing a brick and concrete refrigerator仓库 addition, for Armour & Company, of Chicago. Cost $35,000.

Canton, O. — Walker & Curley, Besselmer building, Pittsburgh, received the contract for constructing a three-story brick and concrete refrigerator warehouse addition for Armour & Company, Chicago, to cost $28,000.

Cincinnati, O. — Architect Louis G. Dittor, Provident Bank building, has been selected to prepare plans for a one-story brick and terra cotta dry cleaning plant and store building, to be erected on Clifton avenue and McMillian street, for the Fenton Dry Cleaning Company. Cost $15,000.

Columbus, O. — The Keever Starch Company contemplates erecting a two-story brick factory addition on Parsons avenue and Hocking Valley Railroad. Architect has not been selected.

Uniontown, Pa. — C. S. Francis received contract for constructing a two- or three-story brick and steel fireproof ice cream plant, on South Gallatin avenue, for J. M. Hagan & Sons, South Galatin avenue. Cost $25,000.

Society and Club Buildings.

Columbus, O.—Architect Frank L. Packard, 1212 Hayden building, and G. R. Bassett, Central National Bank building, have plans in progress for a three-story brick, stone and concrete fireproof Elk's home, to be constructed on E. Broad and Fifth streets, for the Board of Trustees of the E. P. O. E. Cost, $130,000. Architects will be ready for bids about April 1.

Sharon, Pa.—The L. O. O. M., No. 292, will soon take bids on erecting a two-story brick and terra cotta lodge building on E. Main and State streets, to cost $26,000. Plans by Architects Frank Lloyd & Stophlet, House building, Pittsburgh.

Toledo, O.—The Central Labor Union contemplates erecting a four-story brick, stone and steel labor temple. Architect has not been selected.

Washington, Pa.—The I. O. O. F. Lodge contemplates erecting a two-story brick store and lodge building, to cost $15,000. Architect has not been selected.

Scottsdale, Pa.—The Eureka Granite, care A. R. Loucks, contemplates building a two-story lodge building. The work will be undertaken in the Spring.

State, County and Municipal.

North Olmstead, O.—Architect William Robert Powell, 1106 Hippodrome building, Cleveland, has completed plans and specifications for a one and two-story brick town hall, to be erected for the Village, to cost $12,000.

Butler, Pa.—The City will advertise for bids about March 1 on constructing a viaduct, 1,600-foot span and 30-foot roadway.

Cleveland, O.—The Cleveland Fireproof Construction Company, Rockefeller building, received the contract for constructing a two-story stucco and hollow tile and steel bath house and pavilion in Edgewater Park, for the City, to cost $110,000. Plans by Architect F. Betz, City Hall.

Ford City, Pa.—Preliminary plans have been completed for a steel and concrete bridge, to be constructed over the Allegheny river, for the Armstrong County Commissioners. Cost, $100,000.

Newburgh Heights, O.—The Brookside Construction Company, 892 W. Twentieth street, Cleveland, received the contract for the paving of Harvard avenue, for the Village, to cost $8,000.

Springfield, O.—Architect Robert C. Gotwald awarded to T. A. Graham the contract for constructing a two-story brick County Infirmary, for the Board of County Commissioners, to cost $88,000.

Akron, O. — Architects Karl I. Best, Columbus, and Harpsite & Bliss, are preparing sketches for a two-story brick auditorium and armory, to be constructed for the city and the Ohio National Armory Board. Cost $100,000.

Greensburg, Pa. — Architect W. G. Wilkins, Westinghouse building, Pittsburgh, is taking bids on erecting a one- and two-story brick armory, for the State Armory Board, to cost $60,000.

Lancaster, O. — The city contemplates constructing a two-story brick armory and memorial building, on southwest corner of Broad and Wheeling streets, to cost about $30,000. Plans by Architect Karl I. Best, of Columbus.

Columbus, O. — Sketches are being prepared for a sewage disposal plant improvement, for the city, to cost $300,000.

Greensburg, Pa. — Architects Kishnel & Elliott, 209 Ninth street, Pittsburgh, have preliminary sketches in progress for a two- and three-story brick fireproof hospital for Insane, to be constructed near Greensburg, for the Westmoreland County Commissioners. Cost $400,000.

Monongahela City, Pa. — Sketches are being submitted for a two-story brick city hall, to be erected for the city, at a cost of $15,000.

Salem, O. — T. W. Cissell, of Wooster, received the contract for constructing a brick and stone fireproof postoffice building, for the United States government, to cost $68,000.

Shaker Heights, O. — The Cleveland Trinidad Paving Company, Cleveland, received the contract for the grading, draining, curbing and paving and laying of sidewalks on Aldersyde Drive, from Ashland road to Parkland Drive, for the village. Cost $42,475.50.

Waynesburg, Pa. — Architect W. G. Wilkins, Westinghouse building, is taking bids on erecting a one- and two-story brick armory, on Washington street and Strawberry alley, for the State Armory Board. Cost $30,000.

Cleveland, O. — Plans are in progress for a one-story marble horticultural building, to be constructed for the city, at a cost of $16,000.

Paulding, O. — The Board of County Commissioners will receive estimates until March 20, on constructing a two-story brick and concrete administration building, at the County Infirmary, to cost $20,000. Plans by Architects Howard & Merriam, of Columbus.

Hotels.

Columbus, O. — Architect Charles F. Inscho, 1209 Brunson building, is drawing plans for remodeling a five-story brick hotel building, on West Spring and Wall streets, for Keukert Brothers, Canton, and Hamilton Brothers, of Bellefontaine. Cost $36,000.

Uniontown, Pa. — George Tittlow contemplates remodeling a three-story brick hotel on Main street, from plans to be drawn by Architect A. P. Cooper. Cost $15,000.

Cincinnati, O.—Engineer W. G. Franz, Union Frst building, has completed plans for altering the Hotel Touraine on Sixth and Elm streets.

Coldwater, O.—Charles Jenkins will select an architect to prepare plans for a two-story brick and hotel building. Same will contain one store room and 14 bed rooms.

Theatres.

Dayton, O.—Architect F. J. Hughes & Company, U. B. Annex, are taking bids on constructing an 11-story reinforced concrete fireproof office and vaudeville theatre building on N. Main
Hospitals.

Cincinnati, O.—Sketches are being submitted for a brick and steel or concrete fireproof addition, to be erected to the Longview Hospital for the Insane, Carthage. Cost, $300,000.

Miscellaneous.

Benwood, W. Va.—New plans are in progress for a reservoir to be constructed for the Benwood & McMechen Consolidated Water Company. Cost, $100,000.

Springfield, O.—Architect C. G. Godmundson, 119 Empire building, Pittsburgh, has plans in progress for an interurban railway extension, to be constructed between E. Jefferson street, from Butler, to East Butler, for the Butler Passenger Railway Company. Cost, $8,000.

Butler, Pa.—Engineer C. G. Godmundson, has plans in progress for an interurban railway extension, to be constructed on E. Jefferson street, from Butler, to East Butler, for the Butler Passenger Railway Company. Cost, $110,000. Road will be 2 1/2 miles long.

Springfield, O.—The Clarke County Memorial Association has selected a site on W. Main and Lowrey streets, for the Reliable Laundry Company. Cost, $110,000. Road will be 2 1/2 miles long.

Belleville, Pa.—Bids on materials for the construction of a death house for the new State building now being built at a cost of $50,000 are to be taken by the Board of Inspectors, C. A. Poole, president, Pittsburgh.

Liens Filed for Labor and Material Furnished.

ALLEGHENY COUNTY, PA.


NO-LIEN CONTRACTS.

C. A. Kiffle Company, a corporation vs. Nicola Land Company. Agreement made February 4 and filed February 13, 1914, to complete the brick masonry, hollow tile partitions, etc., for the theatre building, being erected on Forbes street, Oakland, for $22,126.45.

Gibson Plumbing & Heating Company vs. Federal Toy Pistol Company. Agreement made February 14 and filed February 15, 1914, to do the plumbing and gas fitting, etc., in building being erected at West Homestead, Pa., for $2,299.

Gibson Plumbing & Heating Company vs. Federal Toy Pistol Company. Agreement made February 14 and filed February 16, 1914, to install a low pressure steam heating system, in building at West Homestead, Pa., for $2,428.

Cutthbert Brothers Company, a corporation vs. Joseph H. Marks, doing business as "Surprise store." Agreement made February 14, and filed February 16, 1914, to make alterations to Surprise store, Penn avenue, Pittsburgh, for $10,174.

David McWilliams vs. James G. Consull, Jr. Agreement made February 5, and filed February 14, 1914, to erect a two-story frame dwelling, water reservoir, pipe line, etc., on lot in Campbell's Run road, Robinson township, for $10,577.

Henry Busse & Company vs. W. C. King and Cora M. King. Agreement made February 5, and filed February 10, to complete remodeling of building at 104 Federal street, Northside, for $5,320.


POWER PLANT PLANNED.

The West Virginia Light & Traction Company, Morgantown, W. Va., will build a one-story brick, steel and reinforced concrete power plant 100x150 feet, the cost of which will amount to $300,000. Plans for the building are being made by W. S. Barstow, 50 Pine street, New York City. The power equipment will require water tube boilers, turbo-generators, feed water heaters, pumps, high pressure piping, transmission equipment, etc.

CLUB BUILDING FOR FACTORY CONCERN.

The Cleveland Worsted Mills Company, Cleveland, O., is having plans made for a $300,000 recreation building, to be built on Broadway avenue, Cleveland. These plans are in the hands of Architects George E. Rider & Company, Cleveland, and call for a three-story brick, steel and reinforced concrete structure. The executive board of the company will take action on the proposition shortly.

START SCHOOL PLANS.

Architect Frank L. Packard, Hayden building, Columbus, O., has started plans for a two or three-story brick, stone and concrete high school building, to be built at Parkersburg, W. Va., for the Board of Education. Plans will be ready for bidders about April 1. The structure will have reinforced concrete foundations, reinforced concrete floors, steel frame, fireproof doors, metal bat partitions, marble and tile work, steam heating, lighting, plumbing, etc.

PLANS TO BE APPROVED.

It is likely that the Board of Education, Pittsburgh, will approve the plans of Architect E. M. Stotz for the proposed Schenley High School building, to be erected at Center and Bellefield avenues. The building will be triangular in shape, to contain 158 rooms. It will be three stories high in front with four stories in the rear. Two gymnasia with separate entrances are to be included in the work, together with 26 recreation rooms, four science lecture rooms, seven laboratories, three music rooms, three lecture rooms, six household art lecture rooms, nine industrial lecture rooms, three locker and two study rooms, 12 administrative rooms, four lunch and two rooms for students' activities. A library and hospital department will be arranged. It is not decided whether to build the structure of brick or stone.
CONTRACTING ON A PERCENT-A GE BASIS.

The percentage plan of handling contracts has been adopted recently by a number of prominent contracting firms in Western Canada. This plan is one which in many ways suits some departments of the business much better than does the older "lump sum" method. It is a recognized fact that one of the greatest difficulties and drawbacks of the contracting business is the difficulty of reaching a satisfactory basis of relationship between the contractor and the owner. Under the ordinary method of contracting the interests of the two parties will be readily seen, are often diametrically opposed.

Once the contractor has secured a contract, it is decided to his interests to rush the job to completion as quickly and as cheaply as possible. Quickness is quite essential as it tends to an early completion, an early settlement, the opportunity to use his gear and equipment in connection with other work and the closing up and getting from off his hands the necessity of supervision of the work. But cheapness is still more essential than is despatch in the carrying out of the work. It is here that the interests of the contractor and his employer are opposed. Every dollar that the contractor spends comes directly out of his own pocket. The temptation is always present to curtail expenditures with the probability that the owner's interests will suffer if this is done. Philanthropy and the contracting business are very far apart. The principle that the better the class of work and the materials used the lower the contractor's profits is not a principle that may be said to be conducive to the best results and the highest quality of work.

It is conditions such as are described above which make it possible for the wider adoption of a different system of handling contracts of a general nature. These conditions are responsible for the use of the percentage system, which is a system that lacks many of the drawbacks of the usual method of handling contracts.

When the subject of contracting on a percentage basis is alluded to it is usually associated with some such rate as 10 per cent. This rate might be said, however, to be higher than the average; many large and important jobs are being carried out in the West at the present time at rates ranging from six per cent to 10 per cent, the latter rate being the highest paid and the average being perhaps eight per cent. The fixing of the rate depends entirely, of course, upon conditions under which the contract is to be carried out. It is in this connection that the one opportunity is provided for competition among the contractors, the lowest rate being the bid of the contractor who has the true principles of business in mind. It will readily be seen that there is every incentive for the owner and the contractor to work together, how the contractor, while working for himself, is helping the interests of the owner and how both benefit by his efforts. The better the building and the higher the class of workmanship, the greater the returns to the contractor. Both parties gain by the extra expenditure, a more equitable arrangement than under the older and more widely used system by which the better the building the less the profit of the contractor.

The percentage system is a safer one for the contractor than is the lump sum system. There is little or none of the risk of making a mistake and taking a job at too low a figure. It is none of the responsibility for the total management of the work, which, under the ordinary plan, is the greatest element of risk in connection with the business. His entire risk consists in the possibility that he may figure his rate too low—a risk that is a small one in comparison with the danger in other plans of taking jobs. Should he happen to make this mistake his loss will not be nearly so serious a matter than if the entire responsibility were his.

The percentage plan is one of many advantages to the owner. He has a greater knowledge of operations and a much more direct control of the work. He is able to specify any change or extra outlay without the necessity of dickering with the contractor. He may also effect a considerable saving—if he so desires—by paying the bills in such a manner that he will save his cash discounts. He has a greater knowledge of both the quality and costs of the materials used. At the same time he has the advantage of having the work carried out and supervised by a contractor of experience who can use his knowledge and ability as well as his trade connection to further operations knowing that the better the quality of his work, the greater will be his financial return.

Many comparisons have been made and much discussion has taken place regarding the subject of the best form of contract. The solving of the problem is a difficult one. Each plan has adherents and vigorous ones. To the contractor who feels that his executive ability is such that he will speculate on it and that he must have such an opportunity to realize on it, the ordinary method presents the greatest opportunity. It is often the case that contractors—particularly in Western Canada—will spend thousands of dollars in plant and equipment in order that they will be able to carry on their work at the lowest possible cost and so that they will then be in a position to carry out a job at a lower figure than is generally recognized as the average cost. To those who thus wish to match their organization against the conditions and circumstances in connection with a contract, the lump sum will be the favored
COLUMBUS WORK TO BE LET.

The contract for building a four-story brick and concrete warehouse and office building for the G. W. Polo Company, Columbus, O., will likely be awarded on the 28th inst. This building will be 60x155 feet and will have construction face brick, composition roofing, sidewalk lights, cut stone, metal window frames, structural steel, two freight elevators, rolling steel shutters, etc. Bids on the heating, lighting and plumbing will be taken later. Architect Otto C. Darst, Branson building, Columbus, prepared the plans.

BUILDING OPERATIONS IN NEARBY LOCALITIES LAST YEAR.

The table herewith shows what the value of building operations for various cities in Western Pennsylvania, Ohio and West Virginia, were for last year and the year previous.

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<td></td>
<td>1913</td>
<td>1912</td>
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<tr>
<td>Pittsburgh</td>
<td>3,451</td>
<td>3,381</td>
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<td>Cleveland</td>
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<td>10,671</td>
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<td>Akron, O.</td>
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<td>Erie, Pa.</td>
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<td>1,369</td>
<td>2,586,000</td>
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<tr>
<td>Columbus</td>
<td>3,888</td>
<td>3,577</td>
<td>5,499,500</td>
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<tr>
<td>Meadville, Pa.</td>
<td>857</td>
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<tr>
<td>Canton, O.</td>
<td>554</td>
<td>643</td>
<td>1,006,025</td>
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<tr>
<td>Huntington, W. Va.</td>
<td>841</td>
<td>738</td>
<td>1,592,420</td>
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LAST MONTH'S BUILDING.

Pittsburgh showed a better proportionate gain in building operations during last month than any of the other large cities. Comparing last month with January, 1913, the net increase in Pittsburgh amounted to over $750,000. The total for last month's work in Pittsburgh amounted to 31,172,000. Cleveland had $1,300,000 worth of new work; Chicago, $4,720,000, but these figures were excelled by those in January, 1913. Operations in New York City for January, 1914, were less than those for the same month last year, there being a decline of about nine per cent. Detroit showed a gain of over $600,000; Baltimore, $1,150,000; St. Louis, $240,000; Louisville, $85,000.

TupeLO FOR SIDING.

Some nine years ago a big cypress manufacturing plant in Louisiana decided to try out tupeko for siding and to give it a severe test, so as to learn for its own satisfaction whether or not it would be a good material for siding, before an attempt was made to market it. The lumber was sawed, dried and then surfaced and resawed into bevel siding, it being found that the surface gave a uniformly smooth job. Two houses were built with tupeko used exclusively for siding. One of these was painted in the ordinary way, and the other was left unpainted. From time to time these houses have been subjected to critical and careful examination and it has been found that neither has decayed to the slightest extent. It was further found that the house which was painted took the paint very satisfactorily and the man who worked on it never once felt it come off the surface. This ability of tupeko to take paint smoothly is one of the strong points in connection with the use of this wood for siding, as there is no such thing as common in some of the other woods. This, in connection with the low price and unusual attractive appearance of the siding itself, has resulted in a rapidly widening market for this item, and the mills are turning it out in large quantities.

While a majority of the woods commercially prominent in this country gave satisfactory results when manufactured into trim or moulding, a large number of them are difficult to handle.
so far as actual machine work is concerned. It has been found that tupelo works with unusual smoothness in moulders, matchers or planers and the resulting job, if carefully handled, is as smooth as a sand-papered job on a great many other woods. Furthermore, demonstrations have shown that it takes stain and varnishes in infinite variety and that it is one of the few woods which can be made to closely imitate many of the high-class finishing woods. It has been used with a mahogany stain in finishing rooms which actually contained mahogany and it has been difficult to determine where the tupelo left off and the mahogany began. In the construction of partitions and other alterations it has been used with a mahogany stain and the results have been very satisfactory.

RAPID METHOD OF COLORING DRAWINGS.

Every draftsman has occasion at one time or another to color a drawing or a whiteprint. The use of colored inks is unsatisfactory; cross-hatching in colors obscures the detail and is slow, while water colors have the disadvantage of slowness besides being difficult to apply evenly. A quick and satisfactory method of coloring involves the use of ordinary wax crayons and gasoline. Crayon of the color desired is applied and then rubbed with a piece of cloth, wet with gasoline, until the color is even, and extended to the limits desired. If it overruns the lines, it can be erased with a pencil eraser. Some colors, particularly the yellows, purples, greens and light blues, produce much better results than others. It is probable that the gasoline dissolves the wax from the crayon, leaving the pigment as an impalpable powder, which, when rubbed over the paper, colors it uniformly. The method is applicable with equal success to eggshell and smooth drawing papers and to whiteprints on both paper and cloth.

GENERAL NEWS.

Sub-contracts are being placed for material to be used in the construction of the Minersville district school building, for the Pittsburgh Board of Education. The steam heating system has been awarded to F. E. Goetsch, First National Bank building, Pittsburgh and the terra cotta to the Atlantic Terra Cotta Company, Fulton building, Pittsburgh.

L. F. Andrea & Company, Baltimore, Md., have been awarded the contract to install steam heating systems for several annexes to school buildings for the Board of Education, Johnstown, Pa.

The Huffman-Conklin Company, Columbus, Ohio, received the contract for the plumbing and steam heating system to be installed in the $100,000 science building, to be constructed at Bowling Green, O., for the Board of Trustees of Northwestern Ohio Normal School.

The Ludowici-Celadon Company, Hippodrome building, Cleveland, received the tile roofing contract for the new church building of the St. Agnes Congregation, Cleveland. The sheet metal work was awarded to Reister & Thesmacher, W. Twenty-fifth street, Cleveland, and steam heating to the Becker-Seidel Company, Prospect avenue, Cleveland.

C. H. Smith, Price building, Morgantown, W. Va., has succeeded the C. H. Smith illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plate as illustrated.

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PITTSBURGH, PENN.
Smith Construction Company and will carry on the general contracting business.

The Readon Lumber & Supply Company, Athens, O., will soon complete negotiations whereby it will soon take over the business of both the Carter Supply Company and R. E. Henry, Lancaster, O.—A new company has been organized under the name of the Lancaster Builders’ Supply Company.

**NEW INCORPORATIONS.**

Erie Ventilator & Manufacturing Company, Erie, Pa.; $10,000; manufacture and sale at wholesale, ventilators and hardware specialties. Frank R. Leet, C. E. Carter, Grant J. Smith, all of Erie.


Flexstone Products, Company, Columbus, O., cement products; $75,000. Edw. F. Klock, Charles F. Frasch, F. W. Geist, William E. Gearhardt and F. W. Hussey.

Electrical Maintenance Company, Youngstown, O.; general contracting business; $25,000. Max Hain, Samuel Hain, Rebecca Hain, Mark Gunleather, Ethel Gunleather.

**HARDWOOD PRICES ADVANCING.**

In hardwoods there is a better outlook and indications point to a rise in hardwood prices in the spring on account of shortage of available stocks in shipping conditions. Clear white and red oak floorings have eased off about one dollar. Maple floorings show an advance of about two dollars. Mahogany stocks are small and some are in demand. There are medium stocks in foreign cedar, but the market is quiet. There is no change in the base price of hemlock.

In spruce some houses have advanced the prices from 30 cents to a dollar, but in other instances the prices quoted a month ago still prevail. In West Virginia spruce the market seems to be off about two dollars on the list on all sizes, although some houses are holding out for full list prices.

**STATEMENT OF OWNERSHIP.**

Statement of ownership, management, etc., of the Construction Record, published weekly at Pittsburgh, Pa., required by the act of August 24, 1912.

Editor—S. A. McRoberts, 504 Bessemer building, Pittsburgh, Pa.

Business Manager—C. F. Hall, 504 Bessemer building, Pittsburgh, Pa.


(Signed) S. A. McRoberts, Editor.

Sworn to and subscribed before me the 18th day of February, 1914.

Marie B. Gallagher, Notary Public.

My commission expires February 21.
For Hot Water, Steam Heating and Storage Systems. Will reduce gas bills from 30 to 50 per cent.

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Watt Manufacturing Co. Robinson & Darrah St. N. S. PITTSBURGH,
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Elevator Doors and Wire Goods.
Plans are well under way by Carlisle & Sharrer, Jenkins Arcade building, Pittsburgh, for a series of buildings to be built near Beaver, Pa., for the Beaver County Commissioners. The work will consist of an administration building, 60x80 feet, and will contain 24 store rooms on both floors. Bids on the work will be taken about March 15.

ASHLAND TO HAVE TEMPLE.

The Poage F. & A. M., Ashland, Ky., has in view the building of a brick, stone and concrete fireproof Masonic Temple, on Winchester avenue, near Seventeenth street. The estimated cost of the work is $50,000.

ALMSHOUSE FOR BEAVER.

Plans are well under way by Carlisle & Sharrer, Jenkins Arcade building, Pittsburgh, for the Beaver County Commissioners. The work will consist of an administration building, 40x60 feet, three stories, cottage for men, 41x120 feet, two stories; cottage for women, 41x100 feet, two stories; dining room, kitchen, chapel and hospital, 40x98 feet, two stories, with power plant; laundry and bakery and basement: tubercular building, 30x60 feet, two stories, and pest house, 30x60 feet, two stories. Plans will be completed about March 15.

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CANTON TO BUILD Y. M. C. A.

The Young Men's Christian Association, Canton, O., contemplates building a $200,000 structure as soon as the necessary funds can be raised. It is planned to build either a four or six-story building, 67x300 feet. So far no architect has been selected to prepare plans.

ASHLAND TO HAVE TEMPLE.

The Poage F. & A. M., Ashland, Ky., contemplates building a two-story brick, stone and concrete fireproof Masonic Temple, on Winchester avenue, near Seventeenth street. The estimated cost of the work is $50,000.

ELKS TO BUILD TEMPLE.

Lodge No. 5, B. P. O. E., Cincinnati, O., has in view the building of a brick, steel, and stone fireproof temple, 90x150 feet, on Elm street, North of Ninth. As yet, no architect has been selected to prepare plans. The building will contain lodge rooms, auditorium, sleeping rooms, gymnasium and bowling alleys. A steam heating system will be installed.

OFFICE BUILDING FOR LUMBER CONCERN.

Plans are being made by Architects Richards, McCarty & Buford, Hartman building, Columbus, O., for a four-story and basement and office building, to be built on Grant avenue and Broad street, Columbus, for the W. N. Ritter Lumber Company. The building will measure 60x80 feet, and will cost about $60,000. The first and second floors will be leased for store purposes and the upper floors will be used for the company's interests. Full details for construction work have not been decided upon, but it is thought that plans will be ready for bidders about March 15.

STORE BUILDING FOR CANTON.

Plans for a $65,000 store building, to be built at Fourth and Market streets, for the T. K. Harris Company, 104 South Market street, are being prepared by Architect H. J. Wagener, Eagle Block, Canton. The building will be two stories and basement, 100x140 feet, and will contain 24 store rooms on both floors. Bids on the work will be taken about March 15. Material specifications call for structural steel, face brick, hollow tile, composition roofing, skylights and ventilators, metal lath, tile work, steam heating system, electric light fixtures, etc.

THEATRE FOR MARION.

The B. P. O. E., Marion, O., is having plans prepared for a two-story and basement brick and concrete theatre building, 60x100 feet, which is to be built at a cost of $35,000. The building commit-tee, consisting of J. W. Jacoby and others, will take bids about March 15. The roof and floor construction will be of reinforced concrete, while other specifications will include hard and ornamental plaster, electric lighting system, steam heating system, face brick, etc.

COSTLY CHURCH FOR CINCINNATI.

A $100,000 church building is to be built on Beechwood avenue, Cincinnati, for the Mt. Washington Presbyterian Church. The structure will measure 41x91 feet, and will be built of brick and stone, with an addition 15x22 feet. Plans for the building have been made by Architects Samuel Hannaford & Sons, Hubert Block, Cincinnati, with specifications calling for structural steel, iron fireproof stairs, sheet metal work, face brick, reinforced concrete work, slate and composition roofing, hollow block partitions, hot air heating system, plumbing, electric lighting, interior mill work, cut stone, metal lath, etc.

MAKE REINFORCING MATERIAL.

The Witherow Steel Company, Pittsburgh, which has been organized by William Witherow, Keystone building and others, has secured a site on the Point bridge, where it will manufacture and distribute reinforcing bars of different types. Mr. Witherow, who until lately was connected with the architectural firm of Irvin & Witherow, is president of the company. The line will consist of cold twisted bars, diamond deformed bars, round and square bars and other reinforcing steel products for concrete construction.

FINE HARDWOOD WORK.

Anyone passing the Kaufmann Department Stores building, Fifth avenue and Smithfield street, Pittsburgh, is much impressed with the appearance of many of the windows. John M. Bald, Empire building, Pittsburgh, has just finished a number of the windows facing Smithfield street, in Circassian walnut and is without question one of the finest pieces of hardwood work in the city. Mr. Bald has the contract to fit up all the windows in this store, numbered 16, and when the entire work is completed they will be the best appearing display windows in Greater Pittsburgh.
School Plans Received Approval.

Front Elevation Schenley High School Building.

Rear Elevation Schenley High School Building.

Ground Floor Plan Schenley High School Building.
SCHOOL PLANS RECEIVE APPROVAL.

Much favorable comment has been expressed on the plans made by Architect E. M. Stotz, Pittsburgh, for the proposed Schenley high school building, for the Board of Education, Pittsburgh, which is to be constructed at Bellefield and Center avenues at a cost of $600,000. The building will contain 135 rooms, the frontage to be three stories high and the rear portion four stories. It will accommodate 1,520 pupils. The auditorium will have a seating capacity of 1,200.

From the views herewith shown it will be seen that the building will have a most elaborate appearance, covering an area of 212x286x452 feet, being designed in a triangular shape. The floor plan shown gives a general idea of the various floor construction. Class rooms will be located on both floors facing boulevard with physical and botanical departments on the end of the first floor and students societies and kitchen on the end of the second floor. The study hall will be located in the center of the second floor, directly above the entrance and will measure 48x82 feet. Each of the class rooms on both floors will be 28x30 feet. The departments for typewriting, book-keeping and actual business will each measure 24x45 feet, while two sewing rooms will be 24x30 feet in size. The two end bays will be 32x62 feet each.

Two gymnasia are to be included in the work with separate entrances to each. Four science lecture rooms, seven laboratories, three music rooms, three art lecture rooms, locker rooms, administration rooms, library, hospital, etc., are all to be constructed.

No decision has been reached as to whether the exterior construction will be of brick or stone. Working plans and specifications will be carried through by Architect Stotz, as soon as possible.

RE-ELECT OFFICIALS.

The General Fire Proofing Company, Youngstown, O., held its annual meeting last week and re-elected the directors—M. I. Arms, W. H. Foster, N. P. Arms, Charles H. Booth, J. T. Harrington, A. P. White and Henry Wick. The officers reported a good year, with business increasing in every department and a very large increase in orders for metal furniture. Myron I. Arms was re-elected chairman of the board; W. H. Foster, president; J. T. Harrington and A. P. White, vice-presidents; R. M. Bell, secretary and treasurer; C. Y. Farrell, assistant treasurer and cashier.

A factory building having 200,000 square feet of floor space is now under course of erection at Dayton, O., by the United Brethren Publishing Company, Dayton. The design of the structure was made by Architects F. J. Hughes & Company, Dayton, and calls for a building four stories and basement, 128x237 feet, constructed of reinforced concrete throughout. All contracts for material and construction are being placed by the architects as the work progresses. At the present excavations are being made for the building.

The flat slab type of construction will be followed with the purpose of having additions to stories built at a later date. The first floor will be used as press rooms and will carry a load of 500 pounds to the square foot, thereby eliminating all vibration. The second floor will be utilized as bindery and composing rooms, while the third floor will contain lithographing and engraving departments. On the fourth floor there will be a chapel which will have a seating capacity of 300, kitchen, dining rooms, grocery, etc.

The roof will be used as a photographic gallery and will be constructed entirely of glass. There will be no shipping department as motor trucks will run through all parts of the building. Three large elevators and eight or 10 single floor automatic lifts will be installed. A separate power plant will be enclosed in the building. The owners also have specified a sprinkler system.

RIGHTS OF KEEPING PLANS.

The question came up not long since as to whether the clause in the regular specifications under the heading "General Conditions," where it states that "the plans and specifications are the property of the architect and instruments of service, and as such shall be returned at the completion of the work," would hold good, or whether the plans and specifications were really the property of the owner who has paid for them.

The answer to the above question, based on the decisions of the courts of this country, as well as those of Canada and England, must be that the plans and specifications belong to the owner, unless it was agreed when the architect was employed that they should be retained by the latter, or unless the owner at that time knew of any custom entitling the architect to retain the instruments, and contracted with that custom in view. The architect's right must depend upon the terms of the contract under which he is employed, and not upon a clause in the specifications prepared in pursuance of that contract. The parties might, however, validly agree, during the performance of the work, that the plans and specifications should belong to the architect, though the contract of employment did not originally so provide, if the supplemental agreement is based on a new and valuable consideration.
Quality in Wall Ties

In the building line as well as other lines of business price is the one enemy to be fought to the lowest point. This is done in some cases to a benefit, while in others a saving in the cost of an article is over-balanced many times by defective results by the use of same. It is a proven fact that irrespective to what use an article is put it must come up to the standard of a certain test for the purpose required and when an article can not come up to this proven standard, it is worthless no matter how cheap it is sold.

A brick wall for instance must be composed of material and workmanship, so as to be perfect and permanent. Should a manufacturer of bricks acquire the reputation of supplying defective bricks in any respect, his business would have no chance of success. The same with the manufacturer and dealer of the cement and sand that go to make up a wall. These articles are the large items and quality and price are thoroughly analyzed before placing orders for same and throw it on the market at any old price. Any thickness of material is used and the weight of a thousand ties vary from 25 to 45 pounds.

But how often is the merits of an article considered that plays a prominent part in the construction but a small part as to outlay of money. We know a chain is as strong as its weakest link, also a wall is as strong as its weakest part but how often in ordering wall ties do we consider specifying one of proven quality?

It seems the wall tie proposition of today has resolved itself down to how much scrap can be utilized as wall ties. Manufacturers that formerly gave their scrap away, now turn it into a wall tie and specify those ties with a reputation of fulfilling the purpose for which they were made, with a guarantee to be uniform in thickness and form.

The Allegheny Steel Band Company, Northside, Pittsburgh, in marketing the "Wabash" wall tie has held quality first in every respect and serving the trade with a reliable article as cheap as an inferior scrap wall tie. They are made from heavy galvanized sheets and when the builder or contractor specifies "Wabash," he is assured of a tie of equal weight throughout the box.

New Steel Form For Concrete Work

A plant to manufacture steel forms for concrete work has just been established at Warren, O., by the Heltzel Steel Form & Iron Works. The exclusive output will be the "Heltzel" system of steel sidewalk, curb, and gutter forms, as well as other "Heltzel" products, including steel forms for all classes of concrete construction. J. N. Heltzel, widely known among cement users and concrete contractors as the inventor and patentee of the various forms that bear his name, is the promoter of the new concern. Allied with him as sales manager, is M. C. Boyd, formerly of the Beckwith Machinery Company, Pittsburgh, who has had wide experience among contractors and knows their requirements in the concreting machinery line. C. J. Coffman, is shop superintendent.

The buildings of the new plant are of steel, concrete and brick, occupying a site of three acres, has two rail connections and equipped with machinery of the most approved modern type. The stamping, punching, slitting and forming presses are capable of forming and fabricating sheet steel into any conceivable form, and nothing has been left undone which would add to the efficiency of the plant. Orders have already been booked for the manufacture of steel molds for other companies, including molds for posts and other light shapes, cisterns, etc.

On all but the smallest jobs, every cement man knows that steel forms are superior to the old, undependable wooden forms; and the "Heltzel" forms have many special advantages worthy of careful investigation by all engaged in sidewalk, or street improvement, as well as any other type of work where concrete construction is used. They contain
no bolts, keys, or wedges, and are easily set up and taken down. This is particularly noticeable in the ingenious scheme embodied in the division plates and their connections. In practicability, economy, durability, and simplicity, the "Heltzel" products are of high-grade quality.

The field is broadening every day, and contractors are being educated to the many advantages the steel form has both in economy and in the satisfaction of knowing a more perfect job will be performed.

The company has agents in the principal cities of the country and advise that J. S. Beckwith, 308-10 Park Way, Northside, Pittsburgh, is the appointed representative for western Pennsylvania and eastern Ohio.

ANENT THE TIN ROOFING QUESTION.

Editor Construction Record, Pittsburgh, Pa.

Dear Sir:—Referring to F. G. R.'s letter in a recent issue in which he questions the value of tin for roofing, it can be said that not only better tin plate is made to-day than ever before, but that the average quality of tin plate to-day is far superior to 10 or 15 years ago. We also desire to correct the statement that 75 per cent of roofs are now of composition and prepared roofings instead of being made of tin; rather than a true knowledge of the superiority of good tin plate.

The history of the trade shows that there be any tin roofing trouble it develops as a rule within two to three years. The frequency with which articles appear in trade journals in the effort to injure tin roofing is due to the inferior wearing qualities of good tin plate, rather than to any genuine attempt to injure the trade in favor of composition and prepared roofings.

Very respectfully,

W. U. Fällander.

THE INSPECTOR ON A BUILDING JOB.

"One of the great problems which the contractor has to face," writes Leonard C. Wason, president of the Aberthaw Construction Company, Boston, in a paper before the Boston Society of Civil Engineers, "is that of the inspector who represents the engineer on the work. A thoroughly competent inspector is a great help to the contractor and very beneficial in the results obtained; an incompetent one is exactly the reverse." Mr. Wason points out some of the important qualifications which the ideal inspector must have—an even temper not easily ruffled, a considerate yet firm attitude, always diplomatic and capable of performing his duties acceptably to his employer.

The superintendent for the contractor is necessarily better informed and better trained in construction—an executive who is constantly directing others and is quick to resist, for the good of the service, insubordination or usurpation of the duties for which he is held to strict account by his employer. Trained to be an autocrat, his temperament does not take kindly to being bossed by another man admittedly with less experience.

It is evident that the inspector must not consider it a personal affront when his orders are over-ruled. He will make some mistakes which the engineer will correct—many more which his chief will never hear about, although they make unnecessary expense and may effect his professional reputation. He is put in a trying position, the most frequent cause of friction in which is when he assumes certain duties inherent in other men. His most common mistake is in giving the workmen orders direct. It is only by following his own duties and those alone that satisfactory results are obtained and the expense of the job kept within limits.

LONG AND SHORT SPAN BEAMS.

Where a floor is built around machinery foundations, frequently a long span and a short span beam come close together. Unless provision is made for a joint between them, there is certain to be an unsightly crack, due to the difference of deflection of the two under the same load.

POINATING UP BY PLASTERERS.

The Contracting Plasterers' Association, Cincinnati, has resolved not to take any contracts where "pointing up" is included in the contract price. The plasterers notified the Cincinnati Chapter of the American Institute of Architects, and gave it 60 days to decide on the question. The proposition was turned down by the architects. Officials of the Plasterers' Association stated that heretofore, when the plasterers finished a job and other laboring crafts were employed and destroyed the plastering work, they were asked to come back and repair the job without any extra compensation. It was also stated that the union plasterers are cooperating with the masters. The new order went into effect February 1.
Pittsburgh.

Architect A. B. Snyder, Empire building, is taking bids on erecting eight two-story brick and plaster residences on Phillips and Focusset streets, for Samuel Ritchie, Jenkins Arcade building. Cost, $3,000 each.

Architect Paul W. Irwin, Publication building, has plans in progress for a 2½-story brick residence and garage, to be erected on Salway street and Murray avenue, for Harry Ward, 4 Thirty-second street and Penn avenue. Cost, $15,000.

Architect A. K. Miller, 804 Penn avenue, has plans in progress for a 2½-story brick or brick venereed residence, to be erected on Janey and Hampton streets, for Dr. W. A. Clark, 407 Butler street. Cost, $6,000.

Architect R. H. Trimble, Ferguson building, has complete plans for a 2½-story frame and cement plaster residence, to be erected at Ben Avon, for Frank H. Trimble, 7152 Brighton road, Northside. Cost, $5,000.

Preliminary plans are in progress for a 2½-story brick or tile residence and garage, to be erected at Ben Avon, for Al. Haushold, 410 Federal street, Northside. Cost, $13,000.

James L. Stuart, Oliver building, has been awarded the contract to construct a two-story stone and concrete addition to the Carnegie library, Northside. The building will measure 60x151 feet, and cost $150,000. The Bartley-Kennedy Company, 221 Third avenue, are the heating, ventilating and plumbing engineers.

The Coleman Construction Company, 82 Fulton street, received the contract to make interior alterations to a building at Fifth avenue and Grant street, for Kaskal Solomon, Smithfield and Diamond streets.

The Pittsburgh Bridge & Iron Works was the low bidder to erect a combination garage and storage house for the city of Pittsburgh, to be built on Dallas avenue. The contract will be awarded this week.

Bids will close March 1 for the erection of a store and apartment building and two duplex residences on Grape street, Knoxville, for J. J. Boylan, 14 Carson street. The store and apartment will measure 30x90 feet and each of the residences 24x44 feet.

George F. McDonald, 208 Federal street, contemplates remodeling his store building on Liberty avenue, between Fifth and Sixth streets. The work will consist of a new store front and interior alterations. Store and lighting fixtures will be required.

The contract for building a two-story garage at 6515 Beacon street, for O. M. Reif, Farmers Bank building, will likely be awarded this week. Plans for the building were prepared by Architect M. Nirdlinger, Diamond Bank building.

W. A. Madducks, Fulton building, was the low bidder for remodeling a church building at Penn avenue and Station street, for armory purposes. It is likely that plans will be revised and the work refigures. The design was made by Architects W. G. Wilkins & Company, Westinghouse building.

The contract for building an addition to the garage of the Winton Motor Car Company, Baam and Beatty streets, is to be awarded this week. The building as designed by Architect J. F. Emmerling, 209 Roup street, will measure 40x110 feet, one story high.

The Quinby Construction Company, Peoples Bank building, has private plans for 12 two-story tapestry brick residences, to be built on King avenue and Beverly Place, each to cost $4,000. Bids will be taken at an early date.

W. E. & F. Johnson, 206 Federal street, has private plans for remodeling a store building on Federal street, near Penn, and will take bids on store fixtures, etc.

The Quinby Construction Company, Peoples Bank building, will take bids and award separate contracts for building 12 residences on Quinby Place, each to cost $7,000. The buildings will be constructed of brick, stone, brick vein and cement plaster.

Paul A. Schmitt, Marshall avenue, Northside, is taking bids on erecting a 2½-story brick and shingle double residence on Dunlap avenue, Northside, to cost $5,000. Plans by Architect C. W. Hedgdon, Penn building.

Architect W. E. Snaman, Empire building, awarded to John L. Moore, 112 McAlvy street, Northside, the contract for remodeling a 2½-story frame apartment building on Rodgers avenue, Bellevue, for Charles F. Sarver, Delaware avenue. Cost, $2,000.

The J. & M. Auto Supply Company, 582 Grant boulevard, are taking bids on erecting a one-story brick store building on Grant boulevard, from private plans. Cost, $4,400.

B. Block, 78 Logan street, is taking bids on constructing a three-story brick and terra cotta store and apartment building on 87 Logan street, from plans drawn by Architect W. A. Thomas, Park building. Cost, $30,000.

Architect Frederick Schebler, Lloyd building, will receive bids until March 3 on erecting 18 two-story brick residences on Jancey and Martha streets, for the Vibeck Estate.

Architect T. E. Bilquist, Vandergrift building, awarded to Rose & Fisher, Pennsylvania avenue, Northside, the contract for completing the interior of the Presbyterian Hospital on Sherman and Montgomery avenues, Northside, to cost $60,000.

Architect Frederick Schebler, Lloyd building, will receive bids until March 3 on erecting six two-story brick residences on Agnew street, for A. A & K. V. Kreuer, East End Trust building.

Concise Building Information

Authentic Building News on New Dwellings, Stores and Offices, Churches, Schools, Theatres, Etc.

These verified reports appear in advance of all other trade publications.
Circleville, O. — Architect Charles L. Inscho, Brunson building, Columbus, will be ready for bids about March 2, on erecting a two-story frame residence, for Judge J. N. Abernathy, to cost $4,000.

Cleveland, O. — Architects Page & Corbusier, 307 Lenox building, have preliminary plans in progress for a 2 1/2-story brick residence, to be erected on Shaker Heights, for Edwin D. Gray, 1115 W. Eleventh street. Cost, $15,000.

Architect J. P. McGrath, 1328 Schofield building, will prepare plans for an apartment building, to be erected on Cedar road, for John P. Schultz, 1100 Cedar avenue. Cost, $25,000.

Columbus, O. — Architect J. A. Jones Dispatch Annex building, will be ready for bids about March 3, on erecting a two-story frame residence on Como avenue, for John B. Davis, 45 W. Spring street. Cost, $4,000.

Architects David Richel & Sons. New First National Bank building, are taking bids on erecting a two-story brick double residence on Indiana avenue, for Israel Kramer, 235 E. Lane avenue. Cost, $5,000.

Greensburg, Pa. — Architect George H. Truxall, Brunot building, has completed plans for eight two-story brick double residences, to be erected for the Rughston Land Company. Cost, $3,000 each.

Marion, O. — Architect J. Lewis Ellis Ackerman building, will be ready for bids about March 2, on erecting a two-story frame apartment building on E. State street, for the Misses Katherine O. and M. E. Dee, 245 E. Farming street. Cost, $7,000.

The same architect is taking bids on erecting a two-story brick and frame residence on Franklin street, for C. M. Long, 129 W. Center street. Cost, $5,000.

Frank Esser, Pearl street, will be ready for sub-bids about March 1, on erecting a two-story frame residence on Pearl street, to cost $3,000. Plans by Architect J. J. Sloan.

Architect J. J. Sloan, 120 Jefferson street, will be ready for bids about March 5, on erecting a two-story frame double residence on E. Main street, for Mrs. Scott Harvey, 264 E. Church street. Cost, $4,500.

Beaver Falls, Pa. — Architects Carlisle & Sharrer, Jenkins Arcade building, Pittsburgh, have plans in progress for a 2 1/2-story brick residence, to be erected for Louis R. Ingram, to cost $8,000.

Bucyrus, O. — Architect William Under, F. O. building, is taking bids on the erection of a two-story brick residence on W. Mansfield street, for Hiram Sears, to cost $6,000.

Samuel Fauser, 214 S. Poplar street, contemplates the erection of five two-story frame residences, from private plans. Cost, $3,000 each.

Greenburg, Pa. — Burrell & Snyder, Coulter building, received the contract for erecting a 2 1/2-story brick residence addition for Harry Bovard, 115 Seminary avenue, to cost $12,000. Plans by Architect Paul A. Bartholomew, Coulter building.

Kendall, O. — Architect A. C. Kuball, Lincoln Inn Court, is taking bids on erecting a 2-story brick residence for Samuel D. Peacock, Jr., 201 Vine street, Cincinnati. Cost, $15,000.

Selma, O. — Architect Albert Cameron, 116 Lundy street, has plans in progress for a 2-story brick building for Chas. Rose, to be erected for Frank Weber, to cost $3,000.

Springfield, O. — Architect Robert C. Gotwold, Gotwold building, awarded to Charles Jones, 334 Fair avenue, the contract for erecting a two-story brick residence for Mrs. Gus Lebold, Fairbanks building. Cost, $12,000.

Ashtabula, Ky. — Architects King & Mills will be ready for bids about April 1, on erecting a two-story brick double residence, for J. F. Stewart, to cost $5,000.

The same architect will also be ready for bids April 1 on the erection of a two-story brick residence for J. A. Hopkins, to cost $4,000.

Camden, O. — The Kaufman Architect Company, 310 Rose building, Cleveland, awarded to F. D. Casselman, 231 Dunbar avenue, S. W., the contract for erecting a two-story brick residence and garage on Avenue and Short streets, for Charles C. Upham, Seventh and S. Markets streets. Cost, $12,000.

Cincinnati, O. — Rixinger & Hopkins, 540 Main street, received the contract for erecting a 2 1/2-story brick duplex residence on McGregor avenue and Reading road, for Mrs. C. C. Robinson, 15 Crescent building. Cost, $7,000.

Columbus, O. — Architects Dawson & Holbrook, Outlook building, awarded to Webb & Thomas, 1444 Eastwood avenue, the contract for erecting a two-story brick residence on Gillett street and McAllister avenue, for the Stewart Estate, 407 N. High street. Cost, $8,000.

Delaware, O. — Architect H. L. Brease, is preparing sketches for a two-story frame residence, to be erected for Chas. Rose, to cost $4,000. Also for a two-story frame residence, to cost $4,500.

Raccoon, Pa. — T. L. Woodrow, of Burgestown, received the contract for erecting 26 two-story frame residences, for the W. L. Shinn Coal Company, 408 Diamond Bank building, Pittsburgh. Cost, $1,500 each.

Shelby, O. — Richard Johnson contemplates erecting a 2 1/2-story frame residence on W. Main street, from private plans. Cost, $4,000.

Cincinatti, O. — The Allyn Company, Second National Bank building, has been selected to prepare plans for a 2-story brick residence on East Walnut Hills, for R. Wurzler, East Fourth street. The work will cost $80,000.

The F. H. Gorden Building Company, Union Trust building, has been awarded the contract to build a 2 1/2-story duplex building on Straight and Lima streets for Joseph Hass, 700 State avenue. The work will cost $5,000.

Columbus, O. — Architects Stribling & Liu, 65 North High street, have completed plans for three two-story brick houses on Mt. Vernon avenue and Twenty-second street, for J. B. Powell, 176 North Twentieth street. The work will cost $6,000.

Columbus, O. — H. J. Rickemeyer, 702 Kimball Place, was the low bidder for constructing a 2 1/2-story brick residence on Linwood avenue, for W. J. Carroll, 426 Jefferson avenue.

Delaware, O. — Bids are being taken by ArchitectsSchureman & Schureman, also E. J. Paddock, for remodeling and enlarging a residence for the latter. The work to cost $3,500.

Ashton Conklin is asking bids for separate contracts for remodeling and enlarging a two-story residence, the work to cost $6,500. Bids will close April 1.

Mansfield, O. — Architect Ora Hursh has completed plans and bids are now being taken by Amelia Mauser for building a 2 1/2-story frame residence, to cost $2,500.

The same architect has completed plans for a two-story brick residence on Western avenue, for R. S. Barr, who will take bids at once.

Portsmouth, O. — Architect W. A. DeYoss, Turley building, is drawing preliminary plans for a two-story brick duplex residence, to be erected for Mrs. Charlotte Dellert, to cost $12,000.

The same architect is also drawing plans for a two-story brick duplex apartment, to be erected for Mrs. Bedelia M. Donahue, to cost $5,000. Also for a two-story pressed brick and stucco residence for Charles Grassman, to cost $8,000.

Springfield, O. — Architect Roy F. Gables, 422 Bushnell building, will be ready for bids about March 1, on erecting a two-story frame residence for Edmond S. Ralph, 615 W. Liberty street. Cost $10,000.

Ashland, O. — B. A. Tinley contemplates erecting a 2 1/2-story frame residence on Second street, for Mrs. Mary T. Shanks, to cost $5,000.

THE CONSTRUCTION RECORD
二-story frame residence on Chestnut street, from private plans. Cost, $4,000.

Charleston, W. Va. — Architect A. G. Higgenbotham is about ready for bids on the completion of a 24-story frame residence, for W. G. Harmon, to cost $3,000.

Fayette County, Pa. — The Snowden Coke Company contemplates the erection of 10 or 15 two-story frame miner's double residences and a store building at Lynn Station, to cost $25,000.

Huntington, W. Va. — Architect L. J. Dean, Foster building, is drawing preliminary plans for a two-story brick and hollow tile double residence, to be erected for Dr. Eugene Warn, to cost $4,500.


New Sperry Ferry, W. Va. — Architects Holmboe & Lafferty, Charleston, have plans in progress for a four-story brick and office building addition, to be constructed for Dr. Walter E. Dittmenyer. Cost: $10,000.

Kenton, O. — The Kenton Savings Bank will be ready for bids about March 1 on remodeling a one-story brick bank, from plans drawn by Architect Hirsh, Swetland building, Cleveland. Cost, $12,000.


Marion, O. — J. J. Hinzman, North Main street, contemplates erecting a two-story brick and concrete livery and stable on North Main street, to cost $25,000. Architect has not been selected.


Columbus, O. — Architect Jacob S. Goldsmith, 611 Wyandotte building, awarded to Joseph Danese, 55 West Fifth street, the contract for erecting a two-story brick store and apartment building, on West Goodale street, for Nathan Cohen, 410 Goodale avenue, cost $5,000.

Springfield, O. — Architect Robert C. Gotwald is taking bids on constructing a five-story reinforced concrete and brick fireproof storage building, on Mechanic street and Pennsylvania Railroad, for the Wagner Transfer & Stor­ ehouse Company. Cost: $30,000.


Springfield, O. — Architect Robert C. Gotwald, 52 Gotwald building, will prepare plans for a two-story brick store and manufacturing building, to be erected on West Main street, for the Kelley Wilcox Marble Company.


Vandergrift, Pa. — Architect H. C. Clepper, Park building, Pittsburgh, awarded to J. A. Stewart, the contract for erecting a three-story brick store and apartment building, for M. C. Householder, Pottsville, to cost $10,000.

Portsmouth, O. — Architect W. A. DeVoss, Turkey building, Portsmouth, is preparing preliminary plans for a one-story brick store building, to be erected for the Vanadium Alloys Steel Company. Cost: $8,000.

Marion, O. — Architects Shureman & Shureman, Delaware, are preparing sketches for a four-story brick store building, to be erected on Center and Plain streets, for W. B. Deman, 520 East State street. Cost: $20,000.

Mt. Pleasant, Pa. — Charles Press, Gemmell building, contemplates erecting a two-story brick store and apartment building, on Main street, to cost $25,000. Architect has not been selected.


Ashland, O. — Architect W. D. Smith, Harvey building, Huntington, W. Va., is asking bids on the superstructure of a three-story brick store and loft building, to be built for Walters & Skilling, to cost $10,000. The Hunt-Forbes Construction Company, Ashland, have the substructure contract.

Architects King & Mills will prepare new plans for a two-story store and office building, 30x36 feet, same to be built for M. W. Thomas, at a cost of $5,000.

Lima, O. — T. R. Siemer, Lima, secured the contract to build a four-story brick and stone office and store building for the Eilerman Clothing Company. The building will measure 30x120 feet and will cost $46,000.

Mansfield, O. — Architect Vernon Redding, Bird building, will soon complete plans for a brick and semi-fireproof addition to the business building of the
Bird Estate, the work to cost $25,000.

Norwood, O.—Architect Phillip Pfeiffer, 10 E. McMullen street, Cincinnati, has been selected to prepare plans for a three-story and apartment building 30x60 feet, to be built on Sherman avenue, for Helen B. Kathe, 519 Race street, Cincinnati.

Rankin, Pa.—Architect W. Ward Williams, Magee building, Pittsburgh, has completed revised plans for a three-story brick store and apartment building, 44.50 feet, to be built on Talbot avenue for X. Zimmet. Bids will be taken at once on the work which will cost $10,000.

Jeannette, Pa.—Herman P. Solis, 220 North Second street, contemplates the erection of a two-story brick store and apartment building. Architect has not been selected.

Mansfield, O.—Architect Vernon Redding is preparing preliminary plans for a three-story brick store and apartment building, to be constructed on Fourth and Mulberry streets, for A. Rigby.

Religious.

Cincinnati, O.—Architect Anton Rieg, 2554 Vine street, has been selected to prepare plans for a three-story and stone church on E. One Hundred and Third street and Garfield avenue, for the Bethlehem Evangelical Lutheran Congregation. Cost, $30,000.

Cleveland, O.—Architects Bohnard & Parsons, 703, 1900 Euclid building, are taking bids on constructing a one-story brick church on E. One Hundred and Third street. Architect has not been selected.

Lima, O.—Architect B. F. Mathews Oper House building, has been selected to prepare plans for a two-story brick and stone church, to be constructed on Kibby and Elizabeth streets, for the Grace Methodist Congregation. Cost, $20,000.

Sewickley, Pa.—Architects Ruan & Russell, Magee building, Pittsburgh, are taking bids on erecting a one-story stone church addition, for the First U. P. Congregation, to cost $10,000.

Winmerding, Pa.—Architect C. W. Bier, Pittsburgh Life building, Pittsburgh, is taking bids on constructing a one-story brick church on Westinghouse & Clara streets, for the Methodist Episcopal Congregation. Cost, $30,000.

Ingomar, Pa.—Architect C. W. Hodgdon, Penn building, Pittsburgh, is drawing preliminary plans for a brick and hollow tile church, to be erected for the Franklin M. E. Congregation.

Cincinnati, O.—The Mt. Washington Presbyterian Congregation is taking bids on constructing a one-story brick and stone church on Beechwood avenue, Mt. Washington, to cost $100,000. Plans by Architects Samuel Hannaford & Sons, Hubert Block.

Franklin, Pa.—Architect C. K. Porter Buffalo, N. Y., awarded to G. I. Goerner, Butler, the contract for constructing a brick and stone church on Liberty and Tenth streets, for the Franklin Methodist Congregation. Cost, $80,000.

Pittcairn, Pa.—Architects Vrydag & Wolfe, 357 Fifth avenue, Pittsburgh, have preliminary plans in progress for a one-story brick and stone church, to be erected on Highland and Third streets, for the United Brethren Congregation. Cost, $20,000.

Waynesville, O.—The Waynesville Methodist Congregation contemplates erecting a one-story brick church, to cost $15,000. Architect has not been selected.

Cleveland, O.—Architect William Janssen, O'Brien building, is taking preliminary bids on a one-story brick church building, for the Church of the Immaculate Heart of the Blessed Virgin Mary, which will be built at 6.700 Lansing avenue, at a cost of $15,000. The building will measure 75x143 feet.

Educational.

Burgettstown, Pa.—Architect C. L. Whittaker of Dravosburg, has plans nearly completed for a brick and steel high school building, to be constructed for the Board of Education. Cost, $20,000.

New Kensington, Pa.—Architect Charles J. Rigger, Pittsburgh, will receive bids until March 6 on the chandeliers and lighting fixtures for the new high school building for the Board of Education.

Bowerstown, O.—Architects Howard & Merriam of Columbus, awarded to W. H. Bepe, Canton, the contract for erecting a two-story brick high and grade school building, for the Board of Education, to cost $20,000.

Dover Township, O.—The Board of Education contemplates erecting a two-story brick and grade school building, at cost about $25,000. Architect has not been selected.

Kenmore, O.—The Board of Education is advertising for bids for erecting a two-story brick and reinforced concrete school building, from plans drawn by Architects Fichter & Brooker, of Akron. Cost, $15,000.

Lima, O.—Architect C. F. Owsley, Youngstown, has plans in progress for a brick high school addition, to be constructed for the Board of Education. Cost, $25,000.

Phillipsburg, Pa.—The Board of Education will receive estimates until March 14 on constructing a two-story brick high school building, from plans drawn by Architect Julian Millard, of Altoona.

Berea, O.—Bids will close March 7 for constructing a two-story brick and reinforced concrete building, 48x130 feet, to the high school building. The estimated cost is $30,000. Plans for the work were prepared by Architect W. H. Nicklas, 1900 Euclid building, Cleveland.

Ashley, O.—The Board of Trustees contemplate the erection of a one-story and basement brick school building, to cost $10,000. The Board will select an architect about March 25.

Zanesville, O.—Excavations have been started for a two-story brick, concrete and steel fireproof central high school building, to be constructed on E. Main street, for the Board of Education, by Contractors Dunweller Brothers. Cost, $75,000.

McDonald, Pa.—Architect John M. Phillips, 804 Chartiers avenue, McKees Rocks, will take bids until March 10 for erecting a two-story brick and stone high school building, for the Board of Education. The estimated cost is $30,000. Plans for the work were prepared by Architect W. H. Nicklas, 1900 Euclid building, Cleveland.


Phillipsburg, Pa.—Architect Julian Millard, Altoona, Pa., is asking bids on
the erection of an eight-room addition and auditorium to the public school building at Philipsburg. Separate bids will be taken on general construction, plumbing, heating, ventilating, and electric wiring. Bids will close March 14.

Lakeville, O.—Architect Vernon Redding, of Mansfield, will receive bids until March 21, on erecting a two-story brick school building, for the Board of Education, to cost $15,000.

Manufacturing.

Canton, O.—Contractor E. Elford, Hayden-Chilton Bank building, Columbus, will start work at once on the erect cold storage packing house addition of a two-story brick and concrete building for the Canton Provision Company.


Kenton, O.—The Kenton Ice & Delivery Company will be ready for bids about March 1, on erecting a brick and concrete ice and cold storage plant.

The Kenton Gas Engine Company contemplates erecting a one-story brick and steel foundry. The engineer has not been selected.

Salem, O.—Architect A. Cameron, High street, is preparing sketches for a two-story brick veneered factory office building, to be erected for the Victor Steel Company. Cost, $4,000.

Canton, O.—Lester Kilgore, 208 High street, received the contract for erecting a one-story brick factory addition, on South Cherry street, for the Weber Dental Chair Company. Cost $26,000.

Cincinnati, O.—Architects Baumsch & Dromk, Gerke building, have selected to prepare plans for a 10-story brick and concrete fireproof light manufacturing plant, to be constructed on the corner of Sixth and Syracuse streets, for Val Ettenhofer, Sixth and Syracuse streets. Cost $104,000.

Youngstown, O.—The Bellefontaine Bridge Company, received the contract for constructing a one-story structural steel and corrugated iron factory building, for the Donovan Iron Works.

Corry, Pa.—Preliminary plans are being prepared for a brick and steel fireproof power plant, to be constructed for the Inter-State Electric Company, to cost $300,000.

Society and Club Buildings.

Charleroi, Pa.—Architect J. A. Lohman, Donner and Sixth streets, Monessen, has completed plans for a three-story brick and stone club house, to be erected on McKein avenue, for the Loyal Order of Moose No. 103. Cost $30,000.

Bucyrus, O.—Architects McLaughlin & Hubsten, 14 Central building, Lima, have plans in progress for remodeling a residence for an Elk's home, for the F. O. W. No. 501. Cost $20,000.

Cincinnati, O.—The B. P. O. E. Lodge No. 5 contains constructing a brick, cement and stone fireproof temple on Elm street and stone fireproof temple on Elm has not been selected. Building will contain lodge rooms, auditorium, sleeping rooms, gymnasium and bowling alleys.

Lancro, Pa.—P. S. Slack, has been selected to prepare plans for a two-story brick and steel fireproof lodge building, to be erected on Weldon avenue, for the L. O. O. Moose. Cost $18,000.

State, County and Municipal.

Clarksburg, W. Va.—City Engineer Dudley Britt, Empire building, has plans in progress for a trolley bridge, to be constructed on Fourth street, Glen Elk, for the city. Cost. $75,000. Also for a highway bridge, to be constructed on Sixth street, to cost $35,000.

Woodville, Pa.—Architects A. M. Masters and Frank McC. Crooks, Curry building, Pittsburgh, have plans in progress for a Tuberculosis Hospital, to be constructed at the Allegheny County Home, Woodville, for the Commissioners of Allegheny county. Cost $182,000.

Elyria, O.—Architect H. O. Wurmscher, of Lorain, awarded to Beal & Theobald, the contract for constructing a three-story brick, steel and concrete fireproof infirmary building, for the Board of County Commissioners. Cost $40,000.

Rittman, O.—The Ohio Engineering Company of Lorain, received the contract for the improvement of Main street, for the village, to cost $38,000.

Midland, Pa.—Architect A. F. Link, N. Craig street, Pittsburgh, has plans in progress for a two-story brick and steel municipal building, to be erected for the borough, to cost $13,000.

Patton, Pa.—The borough will receive bids until March 9 on erecting a municipal building on MaGee and Fourth avenues, from private plans.

St. Paris, O.—Brewer, Tonnison & Brewer of Chillicothe, received the contract for the paving of Springfield street for the village, to cost $30,000.

Wilmerding, Pa.—The Borough awarded to A. V. Purnell, 507 Jackson street, Northside, Pittsburgh, the contract for the paving and the curbing of Bridge street, Watkins avenue, Patton street, Middle avenue, Fifth street. Miller street, Maple avenue, Air Brake avenue, from bridge street to a point 177 feet eastwardly. Cost, $37,500.

Hospitals.

Cincinnati, O.—The Ohio Building & Construction Company, 1434 Main street, has been awarded the contract to build a two-story brick and stone trim contagious building for the Board of Hospital Commissioners. The building will measure 40x90 feet.

Du Bois, Pa.—Clyde Hatten received the contract for the foundation work on the $90,000 hospital building to be built for the Sisters of Mercy. Bids on the superstructure will be taken at once. Architects Harington & Howard, Deposit National Bank building.

Cleveland, O.—Architects Walker & Weeks, 1900 Euclid building, have preliminary plans in progress for a brick fireproof hospital addition, to be constructed on Central avenue and E. Twenty-second street, for the Charity hospital. Cost, $300,000.

Springfield, O.—Architects A. W. Stover & Company, 505 Fairbanks building, have plans in progress for a two-story concrete block and reinforced concrete fireproof hospital building, to be constructed for the Home Private hospital, to cost $40,000.

Theatres.

Marion, O.—The B. P. O. E. care J. W. Jacoby, will build a two-story and basement brick and concrete theatre building, 60x100 feet, at a cost of $35,000. Owners will take bids about March 15.

Hotels.

Canton, O.—Architect H. I. Wagener, Tuscarawas and Market streets, has new plans in progress for remodeling a three-story brick, steel and reinforced concrete hotel on Market street, for East Brothers, Market street. Cost, $15,000.

Akron, O.—Architect Vernon Redding, of Mansfield, is drawing preliminary plans for a three-story brick fire-
Columbus, O.—Architect Charles F. Inecho, Brunson building, will have plans ready March 3 for remodeling a store building into a hotel structure, for Renkert Brothers, Canton, O., and Hamilton Brothers, Bellefontaine. The new building will contain offices, billiard room, bowling alleys, etc.

Miscellaneous.

Cleveland, O.—Architect E. F. Gibbons, 1900 Euclid building, is asking bids on the erection of a two-story brick and reinforced concrete laundry building for the Miller Brothers Realty Company, 1530 Brownewall street. No date has been set for closing bids.

Delaware, O.—The Board of County Commissioners will ask bids about March 20 for constructing a 200-foot steel span bridge with a 16-foot roadway, sandstone abutments, wood block flooring.

Lowellville, O.—McClinic-Marshall Steel Construction Company, Pittsburgh, received the steel contract for a bridge, to be built over the Mahoning river. The pier work has been awarded to the McKelvey-Hin Company, 248 Fourth avenue, Pittsburgh.

Sandusky, O.—Walker & Curley, Bessemer building, Pittsburgh, received the contract to build a two-story brick warehouse for Armour & Company. The building will measure 65x80 feet and cost $20,000.

Liens Filed for Labor and Material Furnished.

ALLEGHENY COUNTY, PA.


NO-LIEN CONTRACTS.


Pittsburgh Electric Construction Company vs. Mary D. Loughney. Agreement made February 20, 1914, and filed February 20, 1914, to do electric work in a six-story building at 928 Penn avenue. Cost $337.


Charles G. Hanny & Company vs. Nicola Land Company. Agreement made February 18, 1914, and filed February 18, 1914, to do the brass and steel rail work for the Schenley Theatre, for $8,305.79.

Sub-Contract Notes.

Electric Work.

Regan & Harrell, Charleroi, Pa., received contract $50,000 store and apartment building, Monongahela City. Owner, C. G. Markell, Pittsburgh.

A. W. Fraley, Pittsburgh, received contract $115,000 church and rectory, Millvale. Owner, St. Anthony's R. C. Congregation.

Marble and Tile Work.

Penna Marble & Mosaic Company, Pittsburgh, received contract $115,000 church and rectory, Millvale. Owner, St. Anthony's R. C. Congregation.


Mill Work.

Edw. Dambach, Evans City, received contract for $3,000 club house, Butler, Pa. Owner, Knights of Columbus.

Yoke Brothers, Monongahela, Pa., received contract for $50,000 store and apartment building, Monongahela City. Owner, C. G. Markell, Pittsburgh.

Painting.

W. J. Vansiver, Homestead, Pa., received contract $14,000 store and apartment building, Homestead. Owner, Vincent Aikicwicz, Homestead.

Plastering.

S. B. Tressler, Monongahela, Pa., received contract for $50,000 store and apartment building, Monongahela City. Owner, C. G. Markell, Pittsburgh.

L & E T. Plastering Company, Homestead, Pa., received contract for two residences, Pittsburgh. Owner, Homestead Savings Bank & Trust Company.

Plumbing.

W. N. Sauer, Pittsburgh, received contract $90,000 brewery addition, Pittsburgh. Owner, Independent Brewing Company, Pittsburgh.

John M. Tate, Pittsburgh, received contract for $20,000 residence, Edgeworth. Owner, John Joy Edison, Jr., Pittsburgh.

Regan & Harrell, Charleroi, Pa., received contract for $90,000 store and apartment building, Monongahela City. Owner, C. G. Markell, Pittsburgh.

Moss & Jlakely, Pittsburgh, received contract for $115,000 church and rectory, Millvale. Owner, St. Anthony's R. C. Congregation.

Foofing.

McCreevy Roofing Company, Erie, received contract for $15,000 store and double residence, Erie. Owner, Erie Brewing Company.

Hahn Brothers, Pittsburgh, received contract for $50,000 brewery addition, Pittsburgh. Owner, Independent Brewing Company, Pittsburgh.

Scott A. White, Pittsburgh, received contract for $115,000 church and rectory, Millvale. Owner, St. Anthony's R. C. Congregation.

Tile.

Atlas Maitel & Tile Company, McKeesport, received contract for $14,000 store and apartment building, Homestead. Owner, Vincent Aikicwicz, Homestead.

Heating.

F. E. Geisler, Pittsburgh, received contract for $27,000 church, Wilmerding, Pa. Owner, First U. P. Congregation.

QUICKLIME TO thaw GROUND.

Sometime this winter when the ground is frozen and it becomes necessary to dig down to a broken pipe in the street, it may mean several extra dollars in your pocket if you happen to know that C. P. Chase, an Iowa engineer, described before a recent meeting of the Iowa Engineering Society how he solved the ground-thawing problem by the use of lime. He had a piece of work in West Liberty, Ia., to lay sewer pipe and he found that digging into the frozen ground was eating heavily into profits. So he tried an experiment and made money by it. He spread the lime over the frozen ground, covering the width of the trench to be opened, and then turned the water on it. As the water and lime to soak down in, and in a remarkably short time he had his ground in shape to work.
The idea held by many builders that building can be beautiful or sanitary unimportant part, making or marring the general character of the building. Nothing adds so much to the general good features of any structure when properly done. No other part is more observed or adds more to the general comfort as regards cleanliness, sanitation and resistance to fire than plastering. No building can be beautiful or sanitary unless properly plastered. The operation of plastering comprises, first of all the preparation of the ground work which consists usually of wooden lath, wire lath, perforated steel sheets, hollow bricks or concrete construction. Wood lath is more or less standardized but care should be taken that it is free from knots, bark or other defects and is of uniform dimensions. In putting on lath, it is necessary that they should have a nail to each bearing and on the ends—two nails if a good job is desired. They should also be broken at every eight lath in order to avoid cracks in plastering. For ordinary lime mortar, the laths should be spaced three-eighths inch apart, and for patent or hard plaster not less than one-quarter inch. If placed closer, the mortar will not press through the spaces and its hold will be feeble owing to the absence of a key or clinch, which sustains the remaining coats of mortar. Care should be taken to see that all joists or furring, especially in ceilings, are straight as it means an even distribution of the weight.

The best and most economical way of making mortar is to first slake the lime in a slaking box and then run through a sieve into a ring of sand. The advantages of such a method are easily seen. It guarantees the avoiding cracks and blisters. By the thorough distribution of the lime amongst the sand the finished plaster is harder. Since the hair is not burned and its binding properties destroyed by stacking in the hot caustic mixture, which is the first result of slaking, the final product possesses greater tenacity.

Lime for plastering should be in large hard pieces and contain little dust. When wet with water, it should slake readily into a smooth, fine paste or putty. A most important part of the mortar is the sand which should be free from loam or clay. Pit sand is generally considered the best as it is angular in its grain. River sand is too dead and usually too fine. Sea sand is deficient in sharpness and contains alkaline salts which attract moisture and is therefore unfit for plastering. The hair should be long, free from dirt, grease and salt. Hair from salted hides makes the walls damp. It should be well beaten and carefully mixed through the lime to obtain the best results. Of late years, Manila fibre has been used a great deal and is a first-class substitute for hair.

Making scratch coat and brown mortar is largely one of experience and usage; for though many of the scientific formulas are correct in theory, yet they are impossible in practice as conditions in a building are not conducive to scientific exactness. A short formula for the scratch coat is one barrel of lime, two and one-half barrels of clean, sharp sand and two pallets of wet hair. For browning, one barrel of lime, four and one-half barrels of sand and about three-quarters of a pallet of hair is about the right proportion.

In slaking lime for putty, care should be taken to neither chill with too much water at the beginning nor burn by not adding enough, both being equally detrimental to the material. Putty lime when properly made should be smooth and loses in texture. Sufficient time should be given it to become thoroughly cool before using. The quality of workmanship depends greatly on the quality of the putty lime.

In scratch-coating a close watch should be given it to become thoroughly cool before using. The quality of workmanship depends greatly on the quality of the putty lime.

In scratch-coating a close watch should be kept on the plasterers to see that sufficient pressure is used to force the mortar through the openings between the laths in order that a good key or clinch may be obtained. Some plasterers have a habit of putting the mortar lengthways on the lath instead of across the result being that a good key is not obtained.

The scratching should be thorough for it affords the key for the second coat. The latter should not be applied until the first coat is dry.

Brown coat or browning is the name given to the second coat in three-coat work and is usually about half an inch in thickness. If it goes much over that there is something wrong in the framing, taking for granted that it is a wood lath. In concrete, terra cotta and wire construction, it often runs a little over an inch but anything over an inch means poor or careless construction. All browning should be straight and true with no unevenness or irregularity of surface. Hand floating with water is to be emphasized for the firmness and tenacity of the work is considerably increased.
tions. This was a case where the supervising authority was too lenient rather than too strict in the interpretation of the specifications and yet the same effect was produced in unduly enhancing the cost of building construction. No contractor was in position to bid intelligently upon such construction unless he was aware of the fact that he would be permitted to substitute the cheaper, inferior timbers. Indeed, it is highly probable that the owner paid for longleaf timber and did not get it.

Lumber is one of the most difficult items of merchandise to describe exactly as to quality and yet the manufacturers' grading systems accomplish this very successfully. There is no reason why the quality of every other sort of material to go into a building should not be correctly described by the specifications as well as the manner of its assembly and erection in the structure. It was to have been expected that the conservative professionalism of the architects should lead them to retain in their own hands as long as possible such power and responsibility however unfair in principle and disastrous in practice, but the campaign that has been made upon this matter has aroused a general sentiment among builders, building material supply people and other business interests allied with building. The American Institute of Architects recently proposed 63 articles of a standard specification from which they submit as standardizing and reforming previous practice, but their publication brought forth protest in criticism of the fact that throughout the architect is still retained as the final arbiter, with no appeal to courts from his decision, and with only limited appeal to arbitration.

The National organization of builders has already received the formal endorsement and cooperation of many organizations whose interest in the subject is less direct and vital than that of the lumbermen. Individual lumbermen, and associations of lumbermen, should interest themselves in this matter and throw their influence in favor of giving the building contractor a building contract as specific, definite and businesslike as that upon which the lumbermen make his sales of lumber. No lumber merchant would enter into a contract for the sale of lumber which provided that the judgement of some engineer or architect must be accepted as final on both quality and quantity. It is within one degree as directly harmful to the contractor to whom the lumbermen sell the lumber as it is to subject him to such arbitrary and often capricious control in its fabrication into the completed building.

THE DRAFTSMAN IN THE STRUCTURAL STEEL PLANT.

In a paper read before the Cleveland Engineering Society on "Practical Design of Steel Structures," Joseph R. Poe set forth the importance of co-operation and explained the value of shop conditions to the draftsman. Following are a few examples pertaining to shop conditions, showing how a detail drawing can be made to save time in the shop.

One reason for this reference is that the structural shop usually draws up all details with a square and rule, while the practice in the machine shop is to project the bevel from the machine or surface table.

Methods of dimensioning structural details have a great deal to do with the shop efficiency. In the shop the men labor under conditions very unfavorable to clear and accurate calculating. They have the continuous noise in their ears all the time. They are interrupted in their work frequently. All of which helps to cause mistakes and inaccuracy. Therefore, the clearer the dimensions on the drawing, the less the chance of error; but to get away from the calculating, adding and subtracting, the draftsman must get into close connection with the shop and learn how the shopmen use the dimensions.

The layer out, or template maker, in laying out a structural shape, naturally starts at the end. He puts on his gauge line, then fastens a tape line at the end, the piece is long, and marks off the spacing as the drafting designates. As the spacing is usually given, it is necessary for him to add the dimensions for each space as he comes to it, to the prior one or sums of successive spaces. The sum always designates the next hole or connection. This forces the workman to be summing these figures in his head. In case he does it in his head, there is always the chance of his making a mistake, or forgetting the former sum. In either case he has to start all over again. Many times it is not the workman's fault that he has to go over the work a second time. Outside forces play an important part in it. Interruption and noise often distract his attention.

But, even though the workman does not have to go over this work twice, it is nevertheless done three to four times by different men in the shop. The man who checks the template or the iron before it is punched has to go over the work three to four times. The fitter or assembler will have to do a similar amount of it, and the last the draftsman. Starting in the beginning, the draftsman must have had to do this work in order to enable him to know that his detail dimensions checked with the over-all dimensions. The point overlooked is the fact that the draftsman does not put his computations on the drawing, so that the shopmen can use them without duplicating the draftsman's work. There is no doubt that the method of checking, or laying out each hole or connection from one common point, the end, is better than depending on the correct location of some other less common or nearer point, which will be done in preference to going over and summing up all the necessary dimensions.

Many hours can be lost by machine hands through being forced to figure different dimensions in order to learn how much to machine the work to fit, that is, to add and subtract other figures in a round about way to arrive at the dimension wanted. Apprentices and handy men, who are not thoroughly conversant with detail drawing, are afraid to depend on themselves for the result, in case they do know how to go about it. Therefore they take other men's time by asking them. In case they do not know how to arrive at the correct result, they have to wait and see the foreman. In either case time is lost by men and machines.

This is another instance where the draftsman can be more practical by studying the shop conditions. It is very important for the draftsman to know what dimensions to give the shop as it is to know the manner in which to give plenty of dimensions, but when it comes to the point to be machined, the workman has to get out his pencil and figure back and forth to arrive at the dimensions he wants.

The engineering department might say: It is an easy matter for the shop to figure these dimensions. But that is not the point. The object of the drawing is to convey to the shop what the draftsman wants. Therefore, if the drawing is in such shape that a workman has to figure his dimensions, the drawing is not fulfilling its purpose.

Another point is that the shop man is intended to do the actual work and is paid in that capacity. Therefore if he has to spend time dimensioning the drawing, his time is taken from the work, thereby accomplishing less in a day.

NEW INCORPORATIONS.


Teachout Sash, Door & Glass Company, Columbus; increase capital from $50,000 to $100,000.
THE DIRECT LETTING OF CONTRACTS FOR MECHANICAL EQUIPMENT.

In connection with the resolution of the convention, whereunder it was recommended that architects adopt "the practice of direct letting of contracts for mechanical equipment, such as heating apparatus, plumbing and electrical equipment," it may be of interest to remark the fact that for some years there has been a strong movement on the part of the members of the National Association of Master Plumbers and the National Association of Master Steam and Hot Water Fitters to secure the letting of their contracts by owners and architects, instead of by general contractors. They have petitioned the Institute to take under serious consideration the evils of the general contract system so far as it affects the mechanical equipment of buildings. They presented the matter in the most temperate and reasonable way, maintaining that the system of including plumbing and heating in the general contracts causes an economic waste and works injury to the legitimate interests of all concerned. They mentioned the fact that general contractors, after securing contracts on the basis of bids of competent plumbing and heating contractors, proceed to farm out their work to lower-grade contractors, and, by putting into their own pockets the difference in price between cheap and good work, lower the quality of work, to no advantage except their own.

We are informed that it is already the custom of many offices to let contracts for mechanical equipment separate from the general contracts, and that there seems to be a tendency in this direction on the part of architects in general. Laws have been passed in New York and Pennsylvania requiring the direct letting of plumbing and heating contracts for State and municipal work, and in perhaps a dozen other States legislation along similar lines has already been undertaken. There is a strong feeling in employers' association, aroused by the treatment accorded them by general contractors, and made intense by the lowering of those standards of work to which the best men are committed, and there is a little doubt that they might, if they would adopt union methods, make a concerted effort to ignore general contractors in their bidding. It is evident, however, that the best men in their associations are totally opposed to the adoption of such tactics, and that they prefer to appeal in a legitimate way to the architectural profession. The prominent members of the profession have already, to a large extent, made it a practice to let direct contracts for mechanical equipment—work which is most sure to suffer and most difficult for the architect to protect, where there is a tendency to lower the quality of construction.

ARCHITECTS' FIGHT CODE.

Every architect and builder in the State of Ohio will join with the Ohio Building Code Commissioners in any fight to retain the work already performed by the latter body as a result of a conference held last week at Columbus. Through this meeting, which was in charge of Chairman A. O. Elsner, a member of the Cincinnati architectural firm of Elsner & Anderson, and Secretary Joseph G. Steinkamp, another Cincinnati architect, a future working basis was reached on every portion of the proposed code, which had already been revised by the architects throughout the State.

Although there is little chance of the code being presented at this meeting of the Legislature, the architects will work with the Commissioners to retain that which has already been accomplished and offer the proposed law at the next session to take place in 1915. The Commissioners, according to Secretary Steinkamp, accepted all the changes and recommendations which had been made and the adjournment found both sides working along the same lines on all points excepting the section relating to standard devices which has not yet been submitted to the State Commission.

Secretary Steinkamp stated that the architects know what the proposed building code is going to be. The Commissioners adopted all recommendations and showed a most sincere disposition to bring about harmony. The uncertainty of the past has caused architects to hesitate to work along regular lines, not knowing what might happen to even a newly completed structure with a code calling for different ideas.

MORE COMPLETE PLANS AND SPECIFICATIONS.

One often hears contractors complain that architects' plans and specifications are contradictory, ambiguous, incomplete, and a number of other things. The architect is blamed, even by those of his own profession. To this cause is attributed many of the evils from which the building community suffer. Few persons, however, admitting that some of this is true, ever stop to consider the reason just why such conditions exist. We are inclined to think it very seldom arises from downright professional incompetence. Some of it arises probably,

through negligence, some through accepting work at a fee which makes it unprofitable for the architect to go to the trouble of making proper contract documents. The owners, of course, suffer for this, but it would be a farce to extend to them the least sympathy. They may have sought to get their work done at a low fee, too low for their own good, or for the good of anyone concerned. Most of these alleged defects arise through the undue speed which so many owners seem to insist upon.

Now an estimate of the cost of a building cannot be accurate without accurate quantities. That much must be admitted. Accurate quantities on the other hand cannot be prepared from inaccurate or doubtful plans and specifications. It stands to reason therefore that among the many advantages which the quantity system has over our present practices, the greatest perhaps are the great saving of time, greater accuracy in figuring, and last, but by no means least, the undeniable fact that the drawings and specifications must be complete and entirely free from the before mentioned alleged objections. No competent professional quantity surveyors would risk his reputation and his living, by winking at or overlooking incompleteness and uncertainty such as contractors often have to contend with now, when figuring. With plans, specifications and details as perfect as the human brain can make them, many, if not all the pensive conditions existing now, will disappear. This is a fact which might well be considered by those who are as yet undecided as to the merits of the quantity system and under which absolutely complete plans and specifications are essential. It will be obvious that the raising of the standard of the finished drawings and specifications will discourage the cutting of fees by a certain class of architects.

NEW FORMS OF ROOFING.

The Asbestos Protected Metal Company, Beaver Falls, Pa., now is marketing a new form of prepared roofing known by the name of "Aegisroll." The body or base of this roofing is wool felt impregnated by waterproofings and completely enveloped in a coating of asphalt compound. To the upper surface of this base is attached pure asbestos felt, while the lower surface is protected by a coating of crushed quartz. Both the asbestos and the crushed quartz are embedded in their respective surfaces while the asphalt is hot and, therefore, are permanently attached. This roofing can be furnished in a variety of attractive colors, making possible artistic combinations between roofs and the color treatment of buildings.
GENERAL NEWS

Albert Brown Mills, formerly of Chicago, has become associated with Architect J. M. King, Ashland, Ky., who will operate under the name of King & Mills. The above parties are desirous of having catalogues and prices on ornamental terra cotta.

Architect Richard Irvin, formerly of the firm of Irvin & Witherow, Keystone Bank building, Pittsburgh, is now established at 308 Union Bank building, Pittsburgh, where he will devote his personal attention to the architectural field.

Separate bids on the heating, plumbing and electric wiring for the synod hall and chancery building, to be erected at Craig street and Fifth avenue, Pittsburgh, for the Diocese of Pittsburgh, will be taken by Architect Edward J. Weber, Renshaw building, Pittsburgh.

Architect A. P. Cooper, First National Bank building, Uniontown, Pa., will take separate bids on the electric work for the $110,000 high school building at Monessen, Pa., for the Board of Education.

W. J. Alexander, formerly of New Martinsville, W. Va., now of Parkersburg, W. Va., has been selected city engineer by the City Council of Williamstown, W. Va.

The B. A. Groah Construction Company, Pittsburgh, has moved its offices from the Empire building to 847 W. North avenue, Northside, Pittsburgh.

BUILDING CONDITIONS

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

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<th>Contracts Awarded:</th>
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<td>January 1, 1914, to date</td>
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The designing of first-class apartment houses continues in the experimental stage, and architects and builders are making but little headway at it. The problem of how to design an ideal flat building is one of the hardest with which architects are confronted. If given more leeway they could accomplish better results, but in apartment house construction too many try to save every dollar they can and thus spoil the effect they wish to obtain. To save buying more ground architects are compelled to plan the buildings in such ways that rooms are either strung out one behind the other, or jumbled and cut up into chambers not nearly large enough for comfort. Whole suites are made to face on courts lacking all natural light, which makes them undesirable and hard to rent at paying rates.

Someday somebody will design a really livable apartment house. It will be patterned after so generally that the present ill-planned buildings will not be able to compete with it. Today, regardless of the apartment houses that have been built since, the Bellefield dwellings in Pittsburgh are the best type yet pro-

The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plate, as illustrated.

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vided here. In the newest large apartment building, which was planned after an inspection of such structures in Chicago and New York, there are the same old faults—small rooms, poor room arrangement, long halls and some suites into which the sun's rays can never penetrate. The ideal apartment house seems just as remote from reality as it was years ago, and it is time some architect designed something worth while. That is not impossible, if somebody will only give some good architect a fair chance to display his ingenuity.


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LARGE PLANT FOR CORRY.

The Interstate Electric Company, 115 Broadway, New York City, is to build a four-story brick and steel fireproof power plant 125x200 feet, to cost $200,000, at Corry, Pa. Plans for the structure are being made by H. F. Weber, Corry, with Messrs. Roosevelt & Thompson, 71 Broadway, New York City, consulting engineers. Bids on the structural steel, high pressure piping, water tube boilers, pumps, heaters, etc., will be taken about April 15.

SELECT ARCHITECT FOR INSTITUTE.

The Phillips Bible Institute of Theology, 563 Cassily street, Canton, O., has selected Architect Edmund Herrman, Central-Savings & Trust Building, Canton, to design the proposed $100,000 institute building, which will be a four and five-story structure. The type of construction will be of brick and reinforced concrete. It is planned to use concrete, tar and gravel roofing.

STEEL COMPANY TO ENLARGE.

The Massillon Rolling Mill Company, Massillon, O., has plans made for building an open-hearth steel plant, the building to measure 70x1,000 feet, and to be constructed of steel, brick and reinforced concrete. An office building, 35x60 feet, and a power house, 50x50 feet, will be built. Separate bids are to be taken within a few weeks for the structural steel work. Corrugated iron roofing will be used on the main building. The power house will be constructed of brick and reinforced concrete, while the office building will be of brick. The entire cost of the work is placed at $500,000.

GENERAL ELECTRIC TO BUILD.

A number of new buildings are to be erected at Erie, Pa., by the General Electric Company, plans for which are being made by Architects Harris & Richards, Drexel building, Philadelphia. It is proposed to have the main building 250x750 feet, one story, with an addition 80x450 feet, five stories. The one-story building will be of steel frame, brick and concrete frame. The buildings will have steam heating, sprinkler system, elevators, gas and electric lighting, etc.

CANTON TO HAVE STORE BUILDING.

A two-story brick, steel and hollow tile store building, 110x140 feet, is to be built at Fourth and Market streets, Canton, O., for the T. K. Harris Company, 104 South Market street, at a cost of $65,000. Plans for the building have been completed by Architect H. J. Wagenner, Eagle Block, Canton, who is now taking bids on the general contract. The building will have 24 store rooms. White plastering will be the ceiling and floor. The heating, plumbing and electric work will be separate contracts.

TAKING SUB-BIDS FOR HOSPITAL.

Sub-bids will be taken until the 14th inst. by Architects Harrington & Howard, Deposit National Bank building, Dubois, Pa., for various material which will enter into the construction of a three-story brick fireproof hospital building, 36,765 feet, for the Sisters of Mercy, Dubois. The main building will have two wings of one of which will be 36x60 feet, and the other 40x132 feet, both one-story high. A one-story power house 24x28 feet will also be built. The material specifications include face brick, sheet metal work, tile shingle or slate roofing, metal lath, ornamental iron, fire doors, slate or gravel roofing, marble work, etc. The estimated cost of the work is $50,000.

PLANNING OHIO SCHOOL WORK.

Architect J. F. Sheblessy, Blymer building, Cincinnati, O., has plans under way for a three-story brick and semi-fireproof school building, to be constructed for the Immaculate Conception Congregation, Bellevue, O. The building will measure 80x130 feet, and will contain 20 rooms with an auditorium. The structure will have tile roofing, metal lath partitions, electric lighting, steam heating system, etc, and will cost $60,000.

GAS ENGINE PLANT TO BE BUILT.

The Roberts Gás & Gasoline Engine Company, organized by J. M. Roberts, Ferguson building, Pittsburgh; Leopold Sigwart, Morgantown, W. Va.; Eugene Summerville, Grantsville, W. Va., and others, will build a plant at Star City, near Morgantown, W. Va. Plans for the work are being made by the Schlieper Engineering Company, Ferguson building, Pittsburgh, and include a one-story main building, 80x105 feet; office building, 40x40; blacksmith shop, 20x30 feet, etc. Separate contracts are to be awarded. Steel frame and sash will be required.

LARGE WORK TO BE PLACED.

The Board of Trustees of the State Institute for the Feeble Minded, Polk, Pa., will place contracts about the 11th inst. for constructing six institutional buildings at Polk, the work to cost $220,000. There will be cottages for girls in one group, each to be 40x72 feet, 3½-stories high; administration building, 48x48 feet, 3½-stories high; dining room building, 56x60 feet, three stories and basement; bakery, laundry, etc. The buildings will be constructed of brick and steel and will have reinforced concrete roof and floor construction, hollow tile partitions, granolithic floors, slate roofing, metal weather-strips, face brick, marble and tile work, sheet metal work, steam heating, electric lighting, etc. Plans for the work were made by Architect F. J. Osterling, Commonwealth building, Pittsburgh.
The surfacing of floors, whether they be of wood, marble, mosaic or composition material, does not, offhand, appear to be much of a task but nevertheless it is of much importance to the contractor as well as the owner to have floors finished properly. There are many methods for doing this kind of work. Some of the best work to be seen is the result of using a floor surfacing machine of the Empire Flooring Company, Jenkins Arcade, Pittsburgh.

This type of machine has two rolls, 9½ x 18 inches, covered with sandpaper, driven 600 revolutions per minute. It is propelled 35 feet per minute by the same power that drives the rolls, and at the same ratio of speed, thus insuring regular, smooth, even and rapid work. The machine is reversible and can be operated as readily backward as forward, without changing the speed of the motor. It has a dust collecting device which makes its work clean without damage to goods or furniture.

There is no pushing or pulling required and will surface close to the wall and has a record of polishing and surfacing millions of square feet without a breakdown of parts. Old floors are made like new ones, adding attractiveness to all buildings.

According to the advice of one painter who has had marked success with white enamel, its application is very simple. He says to first be sure you have the proper wood. Some woods take the finish exceptionally well, others just passably well and some, of course, will not do at all. Soft, close-grained wood is best, but hard wood with a close grain can be white-enameled very satisfactorily. Wood with open grain should not be used.

He first gives the woodwork a coat of shellac, which when dry is thoroughly rubbed with coarse sandpaper. He is extremely careful that the entire surface is covered with shellac, as poor shellacing is the cause of white enamel turning yellow. This work is followed by two coats of undercoating especially made for white enamel finish. This preparation is made by many paint manufacturers. Each of these coats when dry is rubbed with fine sand paper. Then follows the application of the white enamel. One coat is all that is necessary, but two are better and should be used.

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The wood does not have to be clear—frequently enabling you to effect a saving for your customer. Take poplar for example. Common poplar will give just as satisfactory results as clear, at a cost nearly 50 per cent less. Blue sap in pine does not have a detrimental effect. These facts hold good with other woods mentioned.
Gypsum Block Can Now Be Used

The market is well stocked with various materials claiming fireproof qualities, many of which have much merit. It is but natural that when a new fireproofing material or fireproof construction system is placed before the building trade that city building inspection authorities should thoroughly look into the merits claimed, but it is unnatural and unwarranted for any building inspector to put a “ban” on any material which has the endorsement of the American Institute of Architects, National Board of Fire Underwriters, American Institute of Consulting Engineers, and other bodies whose technical and practical knowledge far excel that of the politically-appointed building inspector.

No one appears to know of any particular reason why such drastic methods were adopted by Pittsburgh officials in refusing the owners of buildings to use gypsum blocks for non-bearing partitions or for elevator and stairway enclosures. This material has been kept out of the Pittsburgh market for some years past and when a clash came between the owner of a large apartment who was determined to use gypsum blocks for his work and the building inspector, the opportunity was presented to have the matter brought up for a definite decision in the county courts.

As will be remembered Judge Marshall Brown, Pittsburgh, authorized a competent committee appointed to make a fire test of gypsum blocks at the Arsenal Testing Laboratory, Pittsburgh. The complete test as fully reported in the “Construction Record” under date of January 3, 1914, showed perfect results. This test was for non-bearing partition work. Since then a decision has been reached for elevator and stair enclosures.

Following will be found the material constituting the Pittsburgh Building Department’s acceptance of “Pyrobar,” United Gypsum Company’s products, in fireproof and other buildings in the city of Pittsburgh:

Non Bearing Partitions.

Non bearing partitions between divisions of a floor area, plastered on each side with not less than ½-inch thickness of gypsum plaster, to the following heights:

- 12 feet high to be 3-inch hollow blocks and plastered as above
- 12 feet to 15 feet high to be 4-inch hollow blocks and plastered as above
- 15 feet to 20 feet high to be 5-inch hollow blocks and plastered as above
- 20 feet to 25 feet high to be 6-inch hollow blocks and plastered as above
- 25 feet to 30 feet high to be 8-inch hollow blocks and plastered as above

Elevator and Stairway Enclosures.

- 10 feet high to be 4-inch solid or 5-inch standard hollow plastered as above
- 10 to 15 feet high to be 5-inch solid or 6-inch standard hollow plastered as above
- 15 to 20 feet high to be 6-inch solid or 8-inch standard hollow plastered as above

NOTE.—Hollow blocks to conform to specifications as to size given for holes and web thickness for each size of block. This letter is on file in the Building Department and gives the standard dimension of United States Gypsum Company’s “Pyrobar” products as manufactured and catalogued by the company.

Column and Girder Covering.

Above basement floor or where moisture in quantities is absent, fireproofing of steel members may be done with solid “Pyrobar” gypsum tile or blocks, not less than three inches thick, laid log-cabin in fashion in contact with steel, and all hollow spaces thoroughly filled with gypsum mortar. Note.—The above acceptances are granted in letters by the Pittsburgh Building Department, and upon evidence of tests made by the National Board of Fire Underwriters in Chicago, on June 22, 1900, on partitions; and on June 2, 1912, for calculation, and a test made under the directions of the Building Department at the United States Bureau of Standards, Pittsburgh, December 1913. This last test was witnessed by representatives from the building department, the commission to revise the building laws of Pittsburgh, the National Fireproofing Company, and others.

It is interesting to note that “Gypsum” in its various forms, viz., tile or blocks, solid or hollow, monolithic or poured, or as book tile, is approved, and has been used for many years in the city of New York and in New York State for partitions (non-bearing), elevator and stairway enclosures (self-supporting), floor construction (Metropolitan floor system), column covering and plaster board for tenements.

This material has also been recommended for all of the above uses in the proposed revision of the New York City Code (the Joint Committee on City Departments proposed building Code. The committee consisted of members of the following National organizations: New York Chapter American Institute of Architects, Building Trades Employers’ Association, New York and National Board of Fire Underwriters, American Institute of Consulting Engineers, Brooklyn Chapter American Institute of Architects, New York Society of Arch.

REMOVAL OF CONCRETE FORMS.

The committee on reinforced concrete of the Canadian Society of Civil Engineers has submitted to the society a draft of proposed standard specifications for plain and reinforced concrete. These specifications contain a clause entitled "Form Removal," which reads as follows:

The forms shall not be removed until the times named in the following table have elapsed after depositing concrete, not counting periods in which the temperature has been below 35 degrees, Fahrenheit.

Minimum 24-hour day

Part | Minimum
--- | ---
Posts under beams and girders | 20
Floor-slab panels | 10
Wall forms | 2
Column forms | 4
Sides of beams and girders | 4
All other parts | 10
**Differs Concerning Process of Making Roofing Tin.**

Editor Construction Record,

Dear Sir,—Referring again to the discussion on tin roofing that has been carried on recently through several issues of your publication, the correspondent whose letter appears in your last issue, writing from Middletown, O., falls into a very common error in his opinion that durable tinplate can only be made by using an iron base. How about the hundreds of thousands of boxes of high grade roofing tin made on a soft pure Siemens-Martin open-hearth blackplate base, supplied to this country through the very active period of importations commencing with the early 70's? That steel base roofing tin went on buildings in all parts of this country and has given and continues to give satisfactory results in service. If pure steel—that is to say open-hearth steel with a low percentage of impurities, such as is being made at various points and sold under the name of iron—is used, and if the plates are coated properly, durable roofing tin should result; but the writer thinks that the attempt to sell such material as “iron” in order to get the benefit of a popular prejudice in favor of iron, does an injustice to good steel, well made, for a particular purpose.

High grade, durable roofing tin was made prior to the early 70's, on iron base plates. When, later on, methods of steel making were perfected, open-hearth steel was found to be better in many respects for making durable tin, and it was generally adopted by the leading Welsh works. Still later, when the industry was started in this country, Bessemer steel and cheap grades of open-hearth were used to a large extent, but this did not affect the quality so much as the general lowering in all the standards of manufacture in sharp competition among the new American works.

Tinplate making is a tedious, intricate series of operations, and many of the new American makers may have lacked the necessary experience to make really durable roofing tin. Fortunately, those days are past, and it is a fact that the best roofing tin made in this country to-day has never been surpassed.

American ingenuity has invented many labor-saving devices and cost-reducing operations which have made it possible to turn out large quantities of very cheap tin of a quality suitable for ordinary manufacturing purposes, and in this way the range of quality for tin plate has been greatly widened; that is to say, the difference between the cheapest and the best tin plate to-day is much greater than in former years.

Some sheet-metal workers recalling the good results they secured in the early days of their trade, by using cheap roofing tin, and overlooking the fact that the cheap quality nowadays is very much lower than in former years, have used these cheap plates on competitive work; and when such roofs have failed they have thrown discredit on tin roofing in general.

Metal roofs, however, made from high grade roofing tin readily obtainable to-day, combine so many advantages that it is bound to continue as a popular form of roofing for first-class, permanent buildings. Tin roofs are light, clean, neat in appearance. They can be applied to any surface from flat to vertical, and if damaged can be easily and quickly repaired at small expense and in any kind of weather. They afford protection against fire, lightning, and all attacks of the weather, and are extremely durable, usually lasting as long as the building stands. Cases are on record of tin roofs 90 years old, but those roofs that are still in good condition after 30 to 40 years’ service—roof made of steel-base tin plate—are more interesting and significant as showing that durable tin can be made on either iron base or on steel base, provided the right kind of steel is used.

Let me repeat that durable roofing tin depends not upon one or two important factors such as the base plate or the weight of coating, but upon careful attention to all the details of tin plate manufacture. Iron as a base is not a panacea, nor is an extra heavy coating. You must have plates that are made well all through, if you want the remarkable durability that has always been an attribute of roofs of high-grade tin.

Very truly yours,

H. A. Taylor.


**FACTS ON COST OF ESTIMATING.**

The cost of estimating to the general contractor and his sub-contractors collectively, according to statistics compiled upon data collected by the committee of the American Institute of Architects from a great number of contractors in all of the trades, is slightly over one per cent of the amount of the estimate. There is a wide variation between the costs of estimating as stated by the various contractors. Some have kept careful cost data and others have not. The result given is obtained by fixing the average cost in each trade expressed as a percentage of the value of the work under the trade and reducing the average to a percentage of the cost of the building work. To illustrate: There is an average of nine bidders on structural steel. The average cost of estimating structural steel is one-sixth of one per cent of the amount of the estimate. Therefore, the total cost of estimating the structural steel for one building is nine times one-sixth per cent or 1 1/2 per cent of the value of the steel. The structural steel item averages about 10 per cent of the cost of the building, and the cost of estimating the steel expressed as a percentage of the cost of the building would therefore be 10 per cent of 1 1/2 per cent, or 0.15 per cent. A similar extension is made for each trade and the result column totaled. Generous allowances are then made for the submission of estimates by the same sub-contractors to a number of the general contractors building. To illustrate: There is an average of 10 bids taken on each building and each contractor receives an average of seven sub-bids in each trade. Re-estimating is frequently resorted to, but no consideration has been given to this further source of waste in computing the net results.

The general contractor usually estimates the mason work and rough carpentry, and occasionally the plastering and the erection of structural steel. But even if the general contractor is eliminated, the situation does not change, for the same duplication of the work of estimating then occurs in the trades usually handled by him.

The cost to the contractor of all estimates is charged to “overhead” and must eventually be distributed pro rata over the cost of work actually incurred and executed. Under the law of averages each contractor secures one of every 10 jobs on which he submits tenders. The accuracy of this reasoning is verified by the statements secured from various contractors. It therefore becomes evident that each owner pays the cost of estimating 10 jobs of the same value as his own, in nine of which he...
has not the slightest interest.

In other words, 10 per cent of the amounts of all estimates represents estimating cost under the ineffective methods now employed. Conversely, it is evident that by doing away with the duplication of the work of estimating and allowing 3 per cent of the cost of the work for the preparation of complete bills of quantities and estimating data and the cost to the bidders of pricing such bills, we may certainly effect a reduction of 7 per cent in the cost of building generally. This reduction, expressed in dollars, reaches the appalling figure of $84,000,000 for the United States for the year 1912, and this figure is safely conservative. This loss is suffered on the one item of estimating. The committee submits that an equal, if not greater, amount is lost to the owner annually as the result of illegitimate profits accruing to the contractor through inordinate extras, substitutions and evasions made possible by basing the contract on loose and deficient drawings and specifications. A further loss results from accumulated interest charges on payments improperly withheld both from the general contractor and from the sub-contractor.

All losses must ultimately be absorbed by the business and offset by the profits. The losses above enumerated are therefore charged against the building. The effects of this super-cost are accumulative, and the increase is paid year after year until the accumulated aggregate loss passes into figures outside the sphere of human comprehension.

Reflecting upon these conditions your committee reaches the conclusion that the duplication of work in estimating should be done away with by adopting the system of estimating on bills of quantities prepared and issued with the drawings and specifications, and that the bill of quantities be made the basis of the contract. The committee believes that the owner should pay the cost of preparing the bills of quantities and that he should assume responsibility for their accuracy.

In connection with the expression of these beliefs, the committee briefly answers the objections which are usually raised against them. The owner's objection to being asked to pay the quantity surveyor's fee is completely satisfied by the statements on the actual money wasted resulting from the present method. By making this further direct payment the owner actually saves a very considerable amount and is assured of receiving full value for money spent. The objection to the owner's assuming responsibility for the bill of quantities is met by submitting that a bill of quantities prepared by a competent surveyor in free and unrestricted co-operation with the architect can only result in the production of a complete bill and of drawings and specifications closely approaching perfection. All questions as to the true intent and meaning of the drawings and specifications will arise before bids are taken instead of after the contract is let, as is now the case. Furthermore, business life will depend entirely upon the accuracy with which he does his work and with which his bills co-ordinate with the drawings and specifications in the construction of the work. It will be incumbent upon the quantity surveyor to see to it that not only his bills, but also the drawings and specifications, are clear and complete before issue. We believe that the quantity surveyor in this country must be an organization composed of experts in each trade. This will overcome the objection that much valuable time would be lost in preparing the bills.

NEW TYPE OF CONCRETE FORM

A new type of concrete form, made of both wood and steel has been recently put on the market by the American Concrete Form Company, Marbridge building, New York City. This new system of form construction is adapted to all kinds of concrete work, plain and reinforced.

This type of form is 92 per cent wood, is framed in a panel, supported on steel rafters, and held in place by clamps. Contractors on the new subway work in New York City have been using these forms for some time.

In erecting the forms the rafters are lined up by means of two by four-inch lumber in which holes have been drilled, corresponding with the proper spacing of the rafters. This spacing has previously been determined, and is dependent upon the future height of the lift of wet concrete in the forms. The holes in the lumber are drilled at the factory so as to insure trueness and accuracy of the spaces. After the rafters have been erected on these longitudinal stringers and tied together with tension bolts, the reinforcing is placed in the form. As these forms. They are cheap, because the major part is made of lumber; they are light, for the same reason; the panels can be stripped as soon as the concrete has set sufficiently to carry the pressures over on the rafters: the reinforcement is accessible during erection, and only a sufficient number of panels are needed to hold the concrete five hours in walls and from 12 to 24 hours in slabs and arches. It is stated that the cost of a form is only one-half per cent per square foot.

Robert E. Dexter and William F. McClure, Dayton, O, have formed a partnership and will carry on a general architectural business in the Canby building, Dayton, under the name of Dexter & McClure.
PITTSBURGH.

Architect A. R. Douglas, 311 Penn avenue, Wilkinsburg, awarded to Philip Rogers, 158 Montric street, the contract for erecting a three-story brick store and apartment on 2028 Fifth avenue, for John Heneghan, 2028 Fifth avenue. Cost $4,000.

Architect T. H. Scott, 1410 Machenews, will revise plans for a one-story brick and terra cotta fireproof moving picture theatre, to be constructed on West North avenue, Northside, for L. L. Banks, Park building. Cost $35,000.

Architect W. A. Thomas, Park building, will revise plans for a three-story apartment building, to be erected on Overhill and Linton streets, for Samuel Krauss, 1814 Linton street. Cost $7,000. Former bids were rejected.

Architect Paul W. Irwin, Publication building, has completed plans for a 2-story red tapestry brick residence, to be erected on Solway and Murray avenue, for Harry Ward, Thirty-second street and Penn avenue, to cost $18,000. Mr. Ward is taking bids.

Architect Irwin, Publication building, has completed preliminary plans for a 2½-story stone and shingle residence, to be erected on Amberwood street, for Charles S. T. Banker, care American Bank Company. Cost $6,000.

Architect Irwin has plans in progress for a 2½-story frame residence, to be erected at Tulsa, Oklahoma, for Neil S. Jackson, Tulsa, Okla. Cost $10,000.

Architect Irwin, Publication building, is about ready for bids on the erection of a 2½-story brick residence, to be erected at Corry, for John M. Ainters, care Ajax Foundry Company, Corry. Cost $13,000.

Architect Paul Irwin has plans in progress for a two-story stone and frame summer cottage, to be erected at Toronto, Ontario, Canada, for a party whose name is withheld. Cost $5,000.

Architects Vrydaugh & Wolfe, 347 Fifth avenue, will take bids on erecting a two-story stone chapel on Breading avenue, Ben Avon, for the Ben Avon Methodist Episcopal Congregation. Cost $25,000.

Architect Thomas Pringle, Mellon Bank building, will take bids for plans of the construction of a three-story brick and cement plater residence and garage, on Devon Road, for C. M. Johnston, Oliver building. Cost $15,000.

Architect J. H. Phillips, Charlemagne avenue, McKees Rocks, is drawing plans for a two-story brick fireproof and grade school building, to be constructed for the Board of Education, McKees Rocks. Cost, $50,000.

The A. & S. Wilson Company, 541 Third avenue, received the contract for remodeling a four-story brick mercantile building on 20 Wood street, for Joseph Woodwell Company, 201 Wood street. Cost, $4,000.

Architect W. A. Thomas, Park building, awarded to Philip Rogers, 157 Montric street, the contract for erecting a one-story brick store building addition on Amanda and Southern avenues, for W. H. Biltz, Amanda and Southern avenues. Cost, $3,000.

The Pittsburgh Construction Company, Diamond Bank building, received the contract for the steel erection for the brick and steel fireproof freight station and office building to be constructed on Federal street and Church avenue, Northside, for the Pennsylvania Railroad Company, Western Pennsylvania Division. Cost, $500,000. Contract for foundations let to John F. Casey, Oliver building, and structural steel contract let to the McClintic-Marshall Construction Company, Oliver building.

Edward Goldbach, 330 Spring street, St. Clair borough, received the contract for erecting a 2½-story brick convent on St. Clair avenue, for St. Henry's R. C. Congregation. Cost $7,000.


The Trustees of the East Liberty Academy contemplates constructing a three-story brick fireproof preparatory school for boys, to cost $75,000. Exact location will be announced later and architect will be selected by May 1. Building will contain about 10 class rooms, one or two laboratories, gymnasium and assembly room.

Preliminary plans are being prepared for a two-story brick factory building, to be constructed on Adams avenue, Northside, for the United Oil Company, Northside, to cost $25,000. Details not decided.

W. E. Hammett, 710 Wood street, Wilkinsburg, contemplates erecting a 2½-story brick veneered apartment building, on 307 Rebecca avenue, Wilkinsburg, to cost $5,000.

Architect W. Ward Williams, Magee building, will take bids on erecting a one-story brick store addition, on 402 Wylie avenue, for Cecil Rubin, 402 Wylie avenue. Cost: $2,000.

Brown Brothers, 1310 Potomac avenue, Dormont, received the contract for erecting a two-story brick residence on Baltimore avenue, Beechview, for John W. Wilbraham, Beechview. Cost $4,200.


The Trustees of the East Liberty Academy contemplates constructing a three-story brick fireproof preparatory school for boys, to cost $75,000. Exact location will be announced later and architect will be selected by May 1. Building will contain about 10 class rooms, one or two laboratories, gymnasium and assembly room.

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Architect A. K. Miller, 234 Chislet avenue, has plans in progress for a 2½-story brick or veneered residence, to be erected on Rankin and Hampton streets, for Dr. W. A. Clark, 407 Butler street. Cost: $6,000.

Architects Walter S. Cohen, 2537 Oliver building, has plans in progress for a 2½-story red brick veneered residence, to be erected on Winchfield avenue, for Robert Lewis, 14 Smithfield street. Cost: $3,000.

Apartments and Dwellings.

Canton, O.—Frank Berdel, Erwin block, was awarded the contract for building two two-story frame residences for James Hayes and C. Kniger, 333 Arlington avenue. Cost, $3,000 each.
Baird, Bangor building, will receive bids until March 10 on erecting a three-story brick apartment building on Cedar avenue, for J. C. McCrane, 915 James avenue, N. W. Cost, $30,000.

Architect Willard Hirsh, 1302 Swandnd building, has been selected to prepare plans for a three-story brick apartment building, to be constructed on Wade Park avenue, for the Tucker Realty Company, 93 Leader building. Cost, $14,000.

Columbus, O.—Architects Bryan & Latham, 429 Columbus Savings & Trust building, are taking bids on building a ½-story frame cottage on Linden avenue, for Fred H. Nelson, 424 S. Champion avenue. Cost $8,000.

The same architects are also taking bids on the erection of six two-story brick residences, for J. M. Lorenz, 506 Central National Bank building, to cost $5,000 each.

Plans are being drawn for a two-story stucco and hollow tile residence, to be erected on Seventeenth avenue for H. St. John Chubb, Brown Hall, Ohio State University. Cost, $7,000.

Dayton, O.—Architects Schenck & Williams, 591 Arcade building, have plans in progress for a two-story brick residence, to be erected on the Cincinnati Pike, Oakwood, for John V. Lytle. 254 Arcade building. Cost, $6,000.

Huntington, W. Va.—Architect V. T. Ritter, Ritter building, is taking bids on erecting a three-story stone and shingle residence for Dr. L. B. Guthrie, to cost $20,000.

Magnetic Springs, O.—Dr. Jesse Conrad contemplates erecting a two-story brick residence, to cost $5,000. Architect has not been selected.

Toledo, O.—Architect W. B. Hunt, Spitzer building, has plans in progress for a 2½-story frame residence, to be erected for George M. Squires, 469 Woodland avenue. Cost, $5,000.

Canton, O.—Architect E. R. Herrman, Central Savings & Trust building, has plans in progress for a 2½-story frame residence, to be erected for H. Stewart, to cost $3,000.

The same architect also has plans in progress for a two-story brick and hollow tile residence, to be erected on Berlin road, for Orville Clain, 1217 Louisville avenue, N. W. Cost, $8,000.

Columbus, O.—Architect Charles L. Inscho, 1209 Brunson building, is ready for bids on erecting a two-story stucco, brick and metal lath residence and garage in the Indiana district, for N. D. Levin, 1814 N. High street.

Clymer, Pa.—Dr. J. S. Miller contemplates erecting a 2½-story brick residence on Main street, from private plans. Cost, $3,000.

Dayton, O.—Architect C. I. Williams, Davies building, awarded to the F. A. Requaark Company, Sears & Monument avenues, the contract for carpentry for a four-story brick and reinforced concrete apartment building annex, to be constructed on Liberty street and Mami river for Thomas P. Galdiss, First and Stratford avenues. Cost, $50,000.

Indiana, Pa.—Miss Mable S. Evans, 1046 Grant street, will receive bids until March 12, on erecting a brick veneered residence on Church and Fifth avenues, to cost $4,500. Plans by Architect G. W. Elgin, Marshall building. William O. Moorhead, 809 Church street, is taking bids on erecting a 2½-story brick residence on School street, from plans drawn by Architect G. W. Elgin, Marshall building. Cost, $3,000.

Mansfield, O.—Architect Vernon Redding, will be ready for bids about March 15, on erecting a 2½-story pressed brick residence, stable and garage for Harry A. Black, to cost $15,000.

Martins Ferry, O.—Architect Ross B. Hector, Henderson building, awarded to J. B. Gordon, the contract for erecting a two-story frame residence on Center street, near Fifth street, for Dr. Charles P. Nussery. Cost, $6,000.


Northwood, O.—Architect Phillip Pfeiffer, 10 E. McMillan street, Cincinnati, has plans in progress for a 2½-story brick duplex residence, to be erected on Allison and Sherman avenues, for Mrs. E. Schmeilg, 1912 Mills avenue. Cost, $5,000.

Forksburg, W. Va.—Plans are being prepared for a two-story brick apartment building, to be erected for A. W. Alexander.

Toledo, O.—Architect A. Liebold, 513 Jefferson street, awarded to Julius Comte, 600 Oswald street, the contract for erecting a two-story frame and brick frame residence and bakery on 142-25 Starr avenue, East Toledo, for Louis Willinger, 311 Willard avenue. Cost, $9,000.

Toledo, O.—Architect M. M. Iophlet, Nashy building, has plans in progress for a 2½-story frame residence, to be erected on Scio Woodward avenue, for Franklin C. Vischer, 932 Fernwood avenue. Cost $5,000.

Blainsville, Pa.—Architect E. M. Lockard, of Indiana, is revising plans for a 2½-story brick and shingle residence, to be erected on Spring street, for J. W. McNulty, Walnut street. Cost $3,000.

Cincinnati, O.—Architect Phillip Pfeiffer, 10 E. McMillan street, has plans in progress for a two-story brick residence, to be erected on Liberty street for Otto E. Koch, Ruth avenue. Cost $4,000.

Clymer, Pa.—Architects Madigan & Company, of Indiana, have plans in progress for a 2½-story brick residence, to be erected for the Clymer Brick & Fire Clay Company. Cost $10,000.

Columbus, O.—Architect J. U. Griffin, Columbus Savings & Trust building, is taking bids on erecting a frame residence, for George H. Kaiman, North High street and Mill Road. Cost $4,000.

Indiana, Pa.—Dr. C. R. Simpson contemplates erecting a 2½-story brick and hollow tile residence, to cost $10,000.

Logan, O.—Contractor L. C. Kraig is taking bids on the erection of a two-story brick residence and garage, for H. E. White, to cost $9000.

Marion, O.—Architect Wilbur T. Mills, Columbus, will be ready for bids about March 10, on remodeling a two-story frame residence, for the Rev. Joseph Denning.

Massillon, O.—Architect E. B. Herrman, Central Savings and Trust building, Canton, has plans in progress for a 2½-story frame residence, to be erected for Ralph K. Sarver, to cost $4000.

Middletown, O.—Architect C. E. Oederen, 212 Jacoby building, has preliminary plans in progress for a three-story brick apartment building, to be erected on East Third street and Big Four Railroad, for Dr. B. Bandy, Main street. Cost $6000.

Toledo, O.—Architects Wachter, Bedman & Schreiber, 908 Nicholas building, are drawing preliminary plans for a 2½-story frame and brick residence, to be erected on Collingwood avenue, for George D. Palmer, St. Clair street. Cost $10,000.

Washington Court House, O.—Earl McLean, Fayette street, contemplates erecting a two-story pressed brick residence, on Rawings street, to cost $15,000. Will select architect about March 20.


Wheeling, W. Va.—Architect George
H. Dieringer, 106 North Haron street, awarded to J. L. Robinson, Woodlawn, the contract for erecting a frame and stucco residence, on Lennox Place, for Dr. John W. Spillman, Woodsdale. Cost $4,500.

Plans are being revised for a 1½-story tile and stucco bungalow, to be erected on Hawthorn court, for C. W. Henry, to cost $5,000.

Beaver Falls, Pa.—Architects Boyd & Stewart, Century building, Pittsburgh, are ready for bids on the erection of a two-story brick residence and garage, for J. J. Buser of Freedom, to cost $5,000.

Cincinnati, O.—Architects Stewart & Stewart, 509 Belle block, are taking bids on erecting a 2½-story brick duplex apartment building on Grasell avenue, Westwood, for W. Gold. Cost, $6,500.

Greenfield, O.—Plans are in progress for a residence to be erected for N. C. Oxley, Fifth street, to cost $4,000.

Middletown, O.—Architect George W. Barkman, Reilly building, Hamilton, has plans in progress for a two-story brick residence, to be erected for Thomas Harvey, at a cost of $8,000.

Parkersburg, W. Va.—Architect D. W. Daly, 121 Lynn street, will be ready for bids about March 10 on erecting a two-story brick residence for J. McMertans, to cost $3,500.

Silverton, O.—Architect H. M. Baker, Foxstobbies building, Cincinnati, awarded to Andy Huber, 508 Silver street, the contract for brick masonry for a 2½-story brick veneered residence on Montgomery and Alpine avenues, for A. A. Sprague, Alpine avenue. Cost $10,000.

Wheeling, W. Va.—Architect I. W. Vester, Mutual Bank building, has plans in progress for a bungalow addition, to be erected for George Blackford, Schmidbach building. Cost, $7,000.


Clearfield, Pa.—Architect Ashley-Rishel Company, have completed plans for a 2½-story brick residence, to be erected for D. W. Speck, North Main street. Cost $5,000.

Homestead, Pa.—Architect Howard C. Frank, 1100 House building, Pittsburgh, will be ready for bids about March 9, on the erection of a two-story brick veneered residence, for Stephen Jale, to cost $3,500.

Leechburg, Pa.—R. A. Cunningham, Second street, is taking bids on erecting a 2½-story brick and hollow tile residence, on Second street, from plans drawn by Architect J. D. Ludwig. Cost $6,000.

Martins Ferry, O.—Architect Ross B. Heaton, Henderson building, will be ready for bids about March 9, on erecting a 2½-story brick veneered residence on North Fourth street, for Dr. Richard H. Wilson. Cost $7,000.

Toledo, O.—Architects Landdon & Hobly, Nicholas building, have plans in progress for a 2½-story frame and brick residence, to be erected on River Road, for Chris Meyers. Cost $8,000.

Youngstown, O.—Architect D. A. Reamer, Tipipodrome building, Cleveland, is taking bids on erecting a two-story brick residence for the Rev. R. L. Campbell, to cost $10,000.

**Business Buildings.**

Akron, O.—Architect Frederick Baird, 504 Bangor building, Cleveland, will be ready for bids about March 10 on constructing a three-story brick, steel and reinforced concrete warehouse, for the Summit Wholesale Grocery Company, to cost $25,000.

Claiburns, W. Va.—Architect S. W. Ford, has plans in progress for a two-story brick and steel laundry, to be erected for the Empire Laundry Company, to cost $15,000.

Columbus, O.—Architect Frank L. Packard, 122 Hayden building, is drawing preliminary plans for altering an office and bank building on Long and High streets, for the Depositors Realty Company. Cost, $60,000.

Erie, Pa.—Architects J. W. Yard & Son awarded to Frank Webber, the contract for remodeling a three-story brick store building on Eleventh and State streets, for Osborne & Norman. Cost, $5,000.

Cambridge, O.—Architect Frank L. Packard, of Columbus, awarded to Handsby & Sons, Zanesville, the contract for constructing a three-story brick store and apartment building, for George D. Nicholson.

Cleveland, O.—Architect A. F. Janowitz, 322 Permanent building, has been selected to prepare plans for a two-story brick store and apartment building, to be constructed on St. Clair avenue and East One Hundred and Ninth street, for N. Moe, 213 East Forty-fifth street. Cost $35,000.

Architect H. J. Kidd, 372 East One Hundred and Twenty-third street, has completed plans for a two-story brick store and apartment building, to be erected on 12500 St. Clair avenue, for Frank J. Busser, 12521 St. Clair avenue. Cost $50,000.

Charleston, W. Va.—Architect H. R. Warne, Capital street, will receive bids until March 9, on constructing a three-story brick, granite and terra cotta fireproof office building, for the United Fuel Gas Company. Cost $50,000.

Delaware, O.—Architect Frank L. Packard, of Columbus, awarded to Wellington Long, the contract for erecting a two-story brick office building, on Sandusky street, for the Delaware Gas Company. Cost $10,000.

Greens Station, Pa.—The Henderson Coal Company, Commonwealth building, Pittsburgh, contemplates erecting 50 two-story frame residences and general store, from private plans.

Grove City, Pa.—Architect W. F. Struthers, Publication building, Pittsburgh, has plans about completed for a two-story brick store and apartment building, to be erected for the Grove City Improvement Company. Cost $12,000. General contract was let to Ross Atwell.

Homer City, Pa.—The Traders' Supply Company contemplates constructing a 2½-story brick store building, from private plans, to cost $25,000. The Van-Elm Ding Corp., of Ridgway, are the general contractors.

Martinsburg, W. Va.—Architect C. E. Kent, 712 North Queen street, has preliminary plans in progress for a five-story brick store addition, to be erected on Queen street, for W. O. Nicklas & Company. Cost $8,000.

Middletown, O.—Architect C. E. Ogden, 312 Jacob building, awarded to Caldwell & Iseminger, the contract for constructing a one-story brick publishing building, on Canal street, for the Middleport Journal. Contract for brick masonry let to E. L. Fresh.


Architect F. F. Farris, Schmulbach building, will be ready for bids about March 10, on constructing a seven-story brick and concrete fireproof warehouse building, on Twentieth and Main streets, for Edward Wagner Company. Cost $50,000.

The same architect has plans in progress for a three-story brick and steel fireproof packing house, to be erected for Schenck & Sons Company, at a cost of $20,000. Will be ready for separate bids about March 15.

Wheeling, W. Va.—R. J. Byrum & Sons, German Bank building, received the contract for altering a two-story telephone exchange building on Chaplin.
street, for the Central District Telephone Company.

Charleston, W. Va.—George Goetz, Rankin, W. Va., will be ready for bids about March 28 on erecting a two and three-story brick store and apartment building on Main street, to cost $8,000. Architect J. W. Waltz, Wyaremboro, Pa., is drawing the plans.

East Pittsburgh, Pa.—Architect J. M. McCollum, Berger building, Pittsburgh, is drawing preliminary plans for a brick store addition, to be erected on Braddock avenue, for the East Pittsburgh Savings & Trust Company, 653 Braddock avenue. Cost, $4,000.

Erie, Pa.—Architect Richard Irving, Union Bank building, Pittsburgh, has preliminary plans in progress for a 10-story red brick and reinforced concrete fireproof office building, to be constructed on Twelfth and State streets for Henry Mayer. Cost $250,000. Mayer Brothers Construction Company, State and Fifth streets, are the general contractors.

Parkersburg, W. Va.—The Parkersburg National Bank is taking bids on constructing a one-story marble front bank building on Market street, to cost $50,000. Plans by Architects Denison & Hirons, 425 Fifth avenue, New York City.

Cleveland, O.—Architects Morrow & Cross, 734 Garfield building, have selected to prepare plans for a two-story brick and reinforced concrete fireproof office and club building, to be constructed on Superior avenue and E. One Hundred and Twenty-third street, for the Cleveland Railway Company. Cost, $30,000.


Dayton, O.—Engineer Frank Hill Smith, Reibold building, will be ready for sub bids about March 10, on erecting a five-story reinforced concrete fireproof warehouse addition on Webster and Idlewild avenues, for the Dayton Buggy Company.

Homer City, Pa.—Architect Jack Klingensmith of Indiana, is about ready for bids on erecting a two-story brick store and hall building, for Harris & Harris, to cost $7,000.

Martinsburg, W. Va.—The Berkley Buggy Company contemplates erecting a two-story brick warehouse on Queen street, from private plans. Cost about $8,000.

Newark, O.—Architects Maetzel, Tresselt & Bassett, Columbus, are drawing plans for a two-story brick and concrete storage house, to be constructed on First and Canal streets, for the Franklin Brewing Company.

Toledo, O.—Architect M. M. Stoppel, 608 Nasky building, has completed plans for a two-story brick and terra cotta bank building, to be constructed on corner of Superior and Adams streets, for the Dime Savings Bank Company. Cost, $50,000.

Troy, O.—The Troy Telephone Company is taking bids on erecting a two-story brick and steel telephone exchange building on N. Market street, to cost $35,000. Plans by Architect William H. Ross, of Indianapolis, Ind.

Wheeling, W. Va.—Architect F. E. Paris, 419 Schmidt building, is preparing sketches for a store building addition, to be erected on Twelfth and Market streets, for George Stifel Company, 110 Main street.

Architect Charles Bates, Board of Trade building, has plans nearly completed for a four-story brick and tile fireproof store and warehouse building, to be constructed on 1018-20 Market street, for T. A. Hoge & Company, 1068 Market street. Cost, $100,000.

Burgettstown, Pa.—Architects Crooks & McMasters, Carry building, Pittsburgh, are taking sub-bids on erecting a two-story brick store, office and apartment building, for George E. Thomassy, to cost $17,000.

Cleveland, O.—The Moore Engineering Company, 403 New England building, are taking bids on erecting a brick and reinforced concrete fireproof office building, on 1246 West Seventieth street, for the Tropical Oil Company, Cost $10,000.


Cleveland, O.—Architect A. C. Wolf, 267 Rose building will be ready for bids about March 10 on erecting a one-story brick store building on Central avenue near E. Ninth street, for H. H. Hackman, 1540 W. Third street. Cost, $12,000.

Architect E. H. Goldfein, 225 Reserve Trust building, is taking separate bids on erecting a two-story brick store and apartment building on E. Seventy-ninth street, for Benjamin Schwartz, 2830 E. Seventy-ninth street. Cost, $12,000.

Columbus, O.—Architect Otto C. Darst, Brunson building, awarded to R. H. Evans Company, Columbus Savings & Trust building, the contract for constructing a four-story brick and concrete fireproof warehouse and office building on Nashol & Neilson streets, for the G. W. Bobb Company. Cost, $100,000. Also for two-story brick and concrete stable and garage, to cost $10,000.

New Kensington, Pa.—Architect W. J. Laughlin, 312 First National Bank building, will receive bids until March 14 on erecting a two-story brick store and apartment building on Fifth avenue, for Sam Ventura of Arnold. Cost, $6,000.

Religious.

Charleston, W. Va.—Architect H. R. Warner, Capital street, is taking bids on constructing a 1½-story marble or Bedford stone church on Washington and Dickinson streets, for the First South M. E. Congregation. Cost, $75,000.

Columbus, O.—Architect H. C. Jones, 12 DeShayer building, is revising plans for a one-story brick church, to be erected on Tompkins and Madison streets, for the Church of Jesus Christ of Latter Day Saints. Cost, $6,000.

Dayton, O.—Architect Charles Herby, 1402 U. B. building, will be ready for bids about March 15, on erecting a 1½-story brick church on St. Clair street, for the Park Presbyterian Congregation. Cost, $30,000.

Bellevue, O.—Architect J. F. Sheblessy, 72 Plymouth building, Cincinnati, has plans in progress for a three-story brick school building, to be constructed for the Immaculate Conception Congregation. Cost, $80,000.

Cincinnati, O.—Architect Anton Reig, 2854 Vine street, is preparing sketches for a two-story brick and stone school building, to be constructed on Calhoun street, for St. George's R. C. Congregation, to cost $50,000.

Architect John P. Striker, 625 W. Fifth street, is ready for bids on erecting a 1½-story church on corner of Ninth and Lima streets, for the Colored Presbyterian Congregation. Cost, $10,000.

Cleveland, O.—Architect Teho Conover, 908 Park building, has plans in progress for a two-story brick church and Sunday school rooms, to be erected on Hampden avenue and E. One Hundred and Fifth street, for the Zion Evangelical Congregation. Cost, $34,000.

North East, Pa.—Architect Frank Salchow awarded to U. G. Newton, the contract for erecting a brick veneered parsonage, for St. Paul's Lutheran Congregation. Contract for masonry let to C. M. Schultz, Clinton street.

Hamilton, O.—The Catholic Board of Education contemplates installing a
central heating plant in basement of the Catholic High School, to heat the high school, parochial residence and new gymnasium and club buildings.

Hubbard, O. — Architect Kling & Zenk, of Youngstown, are taking bids on erecting a brick hollow tile and terra cotta parochial school building, for St. Patrick's Congregation, to cost $15,000.

Clearfield, Pa.—Architect Ashley Rishel will be ready for bids about March 1, on erecting a one-story brick church addition on Third street, for the Lutheran Congregation, to cost $3,500.

Cincinnati, O. — Architect Henry J. Schlicks of Chicago, III, has been selected to prepare plans for a one-story brick church, to be constructed on Back Creek road for St. Mark's R. C. Congregation. Cost, $100,000.

Chillicothe, O. — Architect John Schweitzer has preliminary plans in progress for a one-story brick church, to be erected on Church and Mill streets, for the High Street United Brethren Congregation. Cost, $10,000.

Columbus, O. — Architects Stribbling & Lumm, Denig building, will be ready for bids about March 10 on erecting a one-story church on E. Main street, for the M. E. Congregation. Cost, $7,500.

Creston, O. — Architect Edwin E. Fruit of Columbus, will be ready for bids about March 10 on erecting a one-story brick church for the Presbyterian Congregation, to cost $7,500.

Youngstown, O. — Architects Stanley & Scheible, 1301 Wick building, are taking bids on constructing a one-story temple on Ehm street, for the Redei Sholem Congregation, to cost $30,000.

Wimerding, Pa.—Architect C. W. Bier, Pittsburgh Life building, Pittsburgh, will receive bids until March 16 on erecting a one-story brick church on Westinghouse and Clara streets, for the Methodist Episcopal Congregation. Cost, $30,000.

Youngstown, O. — Architects Stanley & Scheible, 1301 Wick building, are taking bids on constructing a one-story temple on Ehm street, for the Redei Sholem Congregation. Cost, $25,000.

Educational.

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<th>Location</th>
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<tr>
<td>Leomin Furnace, Pa.</td>
<td>Architect John H. Harmon, of Uniontown, awarded to Abraham &amp; Matthews, of Uniontown, for the Board of Directors of North Union Township School District. Cost, $100,000.</td>
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<td>Massfield, O.</td>
<td>Architect Vernon Redding. Bird building is drawing preliminary plans for remodeling a school building on Prospect street, for the Board of Education. Cost, $100,000.</td>
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<tr>
<td>Youngstown, O.</td>
<td>The Board of Education will receive bids until March 16, on constructing a two-story brick fireproof school annex, to cost $30,000. Plans by Architects Kling &amp; Zenk. 115 West Federal street.</td>
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<tr>
<td>Youngstown, O.</td>
<td>Architects Kling &amp; Zenk, 115 West Federal street, will receive estimates until March 16 on constructing a two-story brick fireproof school building, for the Board of Education, to cost $25,000.</td>
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<td>Cleveland, O.</td>
<td>Architect C. W. Hopkins. Rose building has preliminary plans in progress for a two-story brick fireproof gymnasium, to be constructed on the college campus, for the Western Reserve University. Cost, $100,000.</td>
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<td>Architects Weber, Werther &amp; Adkins, of Cincinnati, O., awarded to J. J. Crosson, the contract for masonry and excavating for a three-story brick and stone fireproof high school building, to be erected for the Board of Education of Bethel township. Cost, $15,000.</td>
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Manufacturing.

Cleveland, O. — Architects George S. Rider & Company, 512 Century building, are taking bids on erecting a one-story brick and steel factory for the Peters Machine Manufacturing Company.

Sandusky, O. — Architects A. C. Bishop, Sandusky, awarded to C. M. Doerzbach & Brothers, the contract for erecting a one-story stucco and hollow tile ice
storage building for the Consumers Ice Company, to cost $8,500.

Parkersburg, W. Va.—The United States Roofing Tile Company contemplates constructing a one and two-story brick factory addition, from private plans.

Greenville, Pa.—The structural Tube & Steel works will construct a structural steel and corrugated iron manufacturing plant, to cost $75,000. Engineer has not been selected.

Massillon, O.—Plans are in progress for a three-and-four-story brick building, to be constructed on Columbia Heights, for the Massillon Rolling Mill Company. Cost $500,000.

Springfield, O.—Architect William E. Rott, 1045 Merchants Bank building, Indianapolis, Ind., will be ready for bids March 9, on erecting a three-story reinforced concrete factory addition, on Lagonda avenue, for the Robbins & Myers Company.

Charleston, W. Va.—Plans are in progress for four-story dry kilns to be constructed for the Valley Brick Company.

Nelsonville, O.—Plans are in progress for a two-story power house, to be constructed near Nelsonville, for the Hocking Power Company.

Toledo, O.—Architects Mills, Rhines, Bellman & Nordhoff, 1234 Ohio building, awarded to Gettin & Kopitke Company. Cherry street, the contract for constructing a two-story reinforced concrete fireproof factory on Michigan street, for the Urshel Bates Valve Bag Company. Cost $60,000.

Altoona, Pa.—Architect W. O. Fudenberg, Hutchinson building, awarded to the Altoona Concrete Construction Supply Company, the contract for constructing a four-story brick Trainmen's Home, on Eighth avenue and Eleventh street, for the United Lodge No. 174, Brotherhood of Railroad Trainmen. Cost $300,000.

Good Hope, O.—The Junior Order of United American Mechanics are receiving sketches for a store and lodge building.

Massillon, O.—Architect Karl E. Wilhelm, Albright building, has plans in progress for a three-story brick and hollow tile temple addition, to be constructed for the Masonic Temple Association. Cost $15,000.

New Brighton, Pa.—Architects Boyd & Stewart, Century building, Pittsburgh, have completed plans for a three- and six-story brick building, to be erected for the Y. M. C. A., to cost $30,000.

Martinsburg, W. Va.—Architect C. L. Harding, Washington, D. C., will draw plans for a grand stand and fair buildings, to be erected for the Fair Association, care C. N. Thatcher, treasurer.

Portsmouth, O.—The B. P. O. Elks, No. 154, have purchased a site on Gay and Eighth streets, on which they will construct a two-story brick and stone lodge building, to cost $40,000. Architect has not been selected.

McComb, O.—Architect George Homm, of Findlay, is preparing preliminary plans for a two-story brick municipal building and lodge rooms, to be erected for the village.

Dayton, O.—Architects Richards Mccarty & Balfourd of Columbus, have plans in progress for a two-story brick and terra cotta fireproof cottage, to be constructed at the State Hospital for the Ohio Board of Administration. Cost $75,000.

Toledo, O.—Architects Marriott, Allen & Hall, of Columbus, are drawing plans for a one-story brick and concrete laundry building, to be erected on Detroit avenue for the Ohio Board of Administration. Cost $20,000.

Butler, Pa.—Architect E. B. Lee, Peoples Bank building, Pittsburgh, is drawing preliminary plans for a two-story brick fireproof vaudeville theatre to be erected on Main street, for the Lyric Company. Cost $30,000.

Corsichio, O.—Fred Jacobs received the contract for erecting a 2½-story brick fireproof theatre, on Main street, for E. O. Selby, to cost $20,000.

Bellefontaine, O.—Architects Sugare & Eskey, Lawrence Block, are preparing sketches for a brick theatre building, to be constructed on W. Columbus avenue for Gus Steig, to cost $40,000.

Lima, O.—The Board of Commissioners of the Lima State Hospital for Insane, will receive estimates until March 24 on constructing a two-story brick and concrete nurses building, from plans drawn by Architect Frank L. Packard of Columbus.

Berkley Springs, W. Va.—Architects Mack & Koontz, Negrul building, Hagers-town, Md., have been selected to prepare plans for a four-story hollow tile fireproof hotel building to be constructed for Alexander McNeil, to cost $100,000.
Liens Filed for Labor and Material Furnished.

Allegheny County, Pa.


NO-LIEN CONTRACTS.

William Fox vs. William J. Barton. Agreement made and filed February 25, 1914, to furnish all material and labor necessary for brick, hollow tile and cut stone work for a row of eight houses, to be erected on Sixteenth & Middle streets, Sharpsburg, for $4,159.00.

Samuel McKnight Hardware Company vs. Nicola Land Company. Agreement made February 16, 1914, to provide all finishing hardware for theatre building, to be constructed on Forbes street, Oakland. Cost, $700.

George H. Soffel Company vs. Nicola Land Company. Agreement made February 16 and filed February 26, 1914, to complete plumbing, gas fitting and sewers in theatre building, to be constructed on Forbes street, Oakland. Cost, $4,995.00.

Marshall Brothers Company vs. Pressed Steel Car Company. Agreement made February 11 and filed February 20, 1914, to perform all work covering the construction of the direct connected electric freight elevator at McKees Rocks Works, for $320.00.


PAINT FOR WET OR DAMP PLACES.

The main difficulty with paint used in damp locations consists in the poor adhesion of the paint to the surface to which it is applied. It is not so much a question of paint as of adhesion. If the material to which the paint is to be applied is not perfectly dry there is bound to be trouble, the paint either will not stick, or it will soon deteriorate. If possible, therefore, get such parts dry. It often occurs that the dampness comes from the season in which the painting is done. In this case it is far better to wait until the dry season sets in. Very little damage will be done to a building by standing without paint for a few weeks. Perhaps none, while at the same time great good will be accomplished in withholding the paint, which would certainly go wrong.

The paint for a naturally damp situation, as in the vicinity of a body of water, a river, lake, etc., can be made by using a harder body than for other places, where the air is dry and mild, a composition paint, such as most paint makers now prepare, is recommended, and in which enter some zinc oxide, white lead, earth pigment, and some inert substance, like floated silica. Then some spirits of turpentine with the oil, as tending to produce a harder paint than oil alone will give. Also not too much dryers, notwithstanding that the paint is to meet damp conditions.

In the foregoing the writer had in mind the painting of wood only. Paint for metal in damp places will call for little different from that demanded by wood, only the first coat and the preparation of the raw surface will be different, as metal, meaning here iron or steel, is likely to rust under paint unless carefully prepared beforehand. First, the surface must be made perfectly clean, with wire brushes, after which a priming coat or red lead paint may be given. For priming iron this is the best paint known. Upon this priming coat may be placed the usual paints, or about what has been indicated for wood in damp situations.

For walls, brick, stone or concrete, in damp place, there will be necessary the water-proofing of the surface, and, if possible, the prevention of the drawing up of moisture from the earth. This is not easy to do. Some use coal tar to coat the surface for a distance above the earth, but no paint will do well on tar. If a foundation could be built upon loose stone, instead of mortared stone-work, the drawing of dampness by the wall would be next to none at all.

There are what is known as damp-resisting paints, but such would be out of the question with ordinary painting of buildings. A carefully prepared ordinary house paint is about the best we can get for damp or dry places. There is no paint that can be recommended as proof against dampness. Sooner or later the paint will yield to the silent but powerful influence of H, O, but as stated, with care a paint may be given that will last the maximum of time, provided that the work and conditions are right.

Another trouble with paints subject to dampness is mildew, which is caused by a fungous growth, the result showing in blotches of greyish-black, greatly disfiguring the surface, and in time causing the paint to fail. There is no preventative, and the only care is washing it off, only to see it reappear in time. Mildew occurs not only in damp situations, but wherever the sun does not get at the paint, as on the north side of a building, and under porches. It occurs in its most aggravated form where certain pigments are used, ochre being particularly liable to mildew, and in fact most of the earth pigments will.

The paint for damp situations would do better if mixed carefully, strained carefully, and applied evenly and thin, brushing it out well. Allow each coat to dry perfectly before giving the next coat. Poor coats would be better than three and three much better than two. The linseed oil should be raw and of the very best quality. As previously stated, a certain proportion of turpentine, depending upon the amount of dampness present, should be used. A hard, non-porous paint is what is required for the painting of surfaces subject to dampness.

NEW BRICK PLANT READY.

The Banfield Clay Company, of Irondale, O., placed its new plant in full operation this week. The company's product will include mill brick, wire-cut paving brick, re-pressed paving brick, building block, fireproofing and flue lining.
CONTRACTION AND EXPANSION IN A REINFORCED CONCRETE BUILDING

In order to determine the effect of temperature upon a new building recently constructed in Cambridge, Mass., the Aberthaw Construction Company has had made by Professor Howard, of the Massachusetts Institute of Technology, some very carefully standardized measurements of a five-story reinforced concrete factory, designed by Monks & Johnson, Boston.

The building is about 381 x 61 feet, the floors being of the mushroom or flat slab type. The outside is embellished with a tapestry brick veneer on corner bays, and also on curtain walls below the windows above the first floor.

The first measurement, made on a sunny morning, November 7, 1913, showed a temperature on the ground in front of the building of about 70 degrees, Fahrenheit, while that on the roof where the upper measurements were made, was about 57 degrees, Fahrenheit, being in the shade of the parapet wall. Points for measurement were established at the corners of the building by round headed brass screws set into lead expansion shields and well anchored into the concrete wall. Intermediate points, established by stakes driven into the ground at approximately 100 feet apart, were on the same level as the two end points and exactly in line with them.

Measurements were made three times to obtain averages, and the temperature taken by three standardized thermometers, one at each end and one at mid-length. After making all corrections to the steel tape used, the length was found to be 382.529 feet at a mean temperature of 69.8 degrees, Fahrenheit.

The measurements in the upper part of the building, made from the roof, were located about three feet above the roof level and were set in the same way as those in the bays. Three separate measurements were made here also, the final length being found to be 379.437 feet at 56.9 degrees, Fahrenheit.

February 12, 1914, on a cold day following several cold days, three measurements at the base have an average of 382.522 feet at an average of 74.7 degrees Fahrenheit. Three measurements on the roof gave a mean length of 379.377 feet at a mean temperature of 62.2 degrees, Fahrenheit.

These measurements seem to indicate that the upper part of the building contracted .06 foot in a range of 50.7 degrees, Fahrenheit; the base line contracted .007 foot in a range of 52.4 degrees, Fahrenheit.

It is intended to repeat these measurements on a hot day in the summer to further verify the figures already determined.

In addition to direct measurements, vertical lines were established between the bottom and top of the building. The top point at the west end of the building, was found on February 12 to have moved east .02 foot. The top at the other end of the building was found to have moved west .06 foot. Three intermediate points all moved west in amounts varying from .01 to .04 foot. This bears out the generally accepted idea that a building contracts more at the top than at the bottom in cold weather, and correspondingly expands more at the top than at the bottom in hot weather.

COST OF CONCRETE CONSTRUCTION.

Investigations by the Aberthaw Construction Company, of Boston, in connection with the cost of the component parts of the average reinforced concrete building, show that a decided reduction has taken place since last July. While it is not possible to put a definite figure upon the reduction in cost, yet some of the parts of the building lend themselves to this treatment, and an estimate can be made for other items.

In addition to the direct saving in material, is the saving which cannot be definitely fixed, due to the ease of securing materials promptly, thus avoiding delays and the incidental heavy overhead. Another factor arises from the ability of the contractor at the present time to put some of his picked men into the organization, thus getting better results than if he were pressed for men to finish work under way. In addition, the average contractor can now give more direct personal attention than at times when business is abundant. The three items just mentioned have been estimated by Mr. Wason, president of the Aberthaw Construction Company, at about three per cent on the total cost of the building. If we add to this, possibly 4½ or 5 per cent, represented by a reduction in the cost of materials, this makes a total saving of approximately 7½ per cent, as compared with last summer, and with conditions which may prevail again before many months are passed.

CLEVELAND INTERESTS COMBINE.

Application has been made by the Cuyahoga Builders' Supply Company, Cleveland, O., for permission to increase its capital stock from $100,000 to $250,000. It is understood that plans have been perfected to merge the retail business of the Stowe-Fuller Company with the Cuyahoga Builders' Supply Company.

FACTORY BUILDING AT NORWOOD, .O.

Plans for a three-story brick and reinforced concrete factory building, 132 x 160 feet, for the Boss Washing Machine Company, Harris avenue, Norwood, O., are being made by Architect E. H. Dorneke, Pickering building, Cincinnati. Material specifications will call for composition roofing, metal lath, private electric plant, metal window frames, etc. The work will cost $100,000.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

CONTRACTS AWARDED:

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
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<tbody>
<tr>
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<td>1913</td>
<td>$25,127,000</td>
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<td>$1,447,000</td>
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Permits were taken out for 412 frame buildings, costing $406,600; 44 brick buildings, costing $127,200, and alterations and additions to 405 buildings, costing $254,210.

The former company is a large producer of fire brick and was organized by Charles B. Stowe and Joel H. Fuller, who are still active heads of the concern. The Cuyahoga Builders' Supply Company was formed three years ago by William A. Fay, and later purchased the retail business of the Cleveland & Pittsburgh Coal Company. It has offices at 600 Schofield building, Cleveland.

CLEVELAND BUILDING RECORD.

Although building operations in Cleveland have been practically at a standstill during the last two weeks on account of severe winter weather, February reached a total in permits issued of 581, representing improvements to cost $1,358,000. This is the largest February in the history of the building department and added to January's total makes the total for the new year $2,496,630, or nearly three-quarters of a million more than during the corresponding two months of 1913.

Permits were taken out for 132 frame buildings, costing $406,600; 41 brick buildings, costing $127,200, and alterations and additions to 405 buildings, costing $254,210.

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ALUMINUM COMPANY TO BUILD.

The Massillon Aluminum Manufacturing Company, Massillon, O., organized by Frank Snyder and Joseph Miller, contemplate building a two-story brick building, 42x240 feet, for the manufacture of aluminum articles. No architect has been selected to prepare the designs, but the building will have tar and gravel roofing, metal sash, electric lighting, steam heating, etc. About $50,000 will be spent on the work.

CHANGE IN CLEVELAND FIRM.

Announcement is made of a change in the firm of Skeel Brothers Company, Cleveland, O., by the retirement of F. A. Skeel, who has decided to continue in business in his own name. This firm has been in existence for over 30 years and is one of the best known in the city.

Mr. Skeel has engaged offices in the Cleveland Builders' Exchange, and the business of the company will be operated by the remaining partners, J. C. Skeel and L. A. Skeel.

URGING SLATE SALES.

A decided innovation in slate selling is being made by the E. J. Johnson Slate Company, New York city. For the first time the virtue of roofing slate is being directly urged upon architects through brochures, pointing out the advantages of using nature's own product in protecting buildings of all kinds. Incidentally it brings out the virtue of slate flooring, which has attained popularity in fine buildings where the artistic floor patterns of old world cathedrals are sought. In a separate booklet the subject of slate blackboards is very carefully expounded, which should interest architects, having school or studio work to do.

LARGE OFFICE BUILDING FOR ERIE.

The Mayer Brothers Construction Company, Erie, Pa., will have the general contract to build a 10-story brick and reinforced concrete office building, 80x150 feet, which will be erected at Twelfth and State streets, Erie, Pa., for Mr. Henry Mayer, Erie. Plans for the structure are being made by Architect Richard Irwin, Union Bank building, Pittsburgh. Specifications will call for composition roofing, red face brick, metal lath partitions, marble and tile work, patent store fronts, low pressure steam heating system, electric lighting, etc. The total cost of the work is $250,000.

GENERAL NEWS.

G. W. Elgin, formerly of the Indiana Lumber & Supply Company, Indiana, Pa., has opened up an office in the Marshall building, Indiana, and will carry on an architectural business. Mr. Elgin desires catalogues and prices on various building materials.

Architect H. A. DeVoss, Turley building, Portsmouth, O., will shortly remove to the First National Bank building, that city.

A. W. Stover & Company, Fairbanks building, Springfield, O., have opened architectural offices.

The partnership heretofore known as Frank, Lloyd & Stopplett, architects, 1100 House building, Pittsburgh, has been dissolved. Practice will be continued by Howard C. Frank, senior member of the firm, in his own name and in association with Thomas Lloyd and J. H. Stopplett.

A High-Grade Pump at a Moderate Cost.

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on application

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PITTSBURGH, PENN.
Swimming Pool, South Park Commission, Chicago. This huge concrete tank was waterproofed with thorough success against heavy constant water pressure by the use of Ceresit.

It Requires no Expert Labor to Mix

CERESIT

THE PERFECT WATERPROOFING COMPOUND FOR CONCRETE, STUCCO, OR CEMENT MORTAR.

The success of Ceresit as a waterproofing doesn't depend upon the ability of the man who mixes it.

Ceresit is a milky white paste of about the consistency of slightly melted butter. It is readily dissolved in the gauging water used for mixing the concrete, stucco, or mortar.

Your man who mixes the concrete, stucco, or mortar can easily attend to putting in the proper proportions of Ceresit. You need neither expert help nor extra help.

Ceresit is a perfectly reliable, permanent and harmless waterproofing. Our "Book of Evidence" tells why. Write for your copy.

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We Make All Kinds of Veneered Doors Interior Trim Oak, Beech and Ash Flooring. Exterior Mill Work Our Stock Is Large Giving Prompt Service

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For All Types of Buildings
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AUTOMATIC ELEVATORS.
Mathew Gravity Carrier Co., Ellwood City, Pa.

BANK AND OFFICE FIXTURES.
Mathew Gravity Carrier Co., Ellwood City, Pa.

BLUE PRINT PAPER.
B. K. Elliott, Bessemer Building, Pittsburgh.

BLUE PRINTING.
B. K. Elliott, Pittsburgh, Pa.

BRICK CONTRACTORS.
Shingledocker, T. E., 567 Russew Ave., Braddock.
Stiunig, George M., Woodville Ave., Nineteenth Ward, Pittsburgh.
Wilson, Louis, 504 Corey Ave., Braddock.

BRICK JOINT RAKES.
George Grundy, 905 Gerrett St., Pittsburgh.

BUILDERS' SUPPLIES.

BUILDING CONTRACTORS.

CEMENT COATING.

CONCRETE FOUNDATIONS.
Garber-Eder Co., Wabash Bldg., Pittsburgh.

CONCRETE SIDEWAYS.
Fryer, Thos. R., 11th and Broadway, West Park Shores Rocks, Pa.

COMPOSITION FLOORS.

CONTRACTORS' PUMPS.
Kempire Flooring Co., Jenkins Arcade, Pittsburgh.

CORNICE WORK.
Limbach, Frank, 1724 Lowrie St., Northside, Pittsburgh.
W. H. Knodell, 510 Weiser St, Northside, Pittsburgh.

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Rangier Mfg. Co., East Liverpool, O.

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EXPANDED METAL.

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FIREPROOF DOORS AND PARTITIONS.

FURNACES, STOVES AND RANGES.

HABITATION DOORS.
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IRON ROOFING AND SIDING.

JOINT RANGERS.
Lau & Hogan, Youngstown, O.

LIGHT IRON Furring.
J. C. Baxendell, Mt. Oliver, Pittsburgh, Pa.

LIME.

LUMBER (RETAIL).
Cribbs, John R., Son, Verona.
Cook & Sons, Fayette and Bidwell Sts., Northside.

MILL WORK.
H. C. Benis, Bradford, Pa.

MANTLE AND TILES.

METAL DOORS.
Lau & Hogan, Youngstown, O.

METAL LATH.
Bostwick Steel Lath Co., Niles, Ohio.

MACHINE SPEEDS.

MACHINE WORK.

PARK MILL WORK.
H. C. Benis, Bradford, Pa.

PARK MILL WORK.
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PARK MILL WORK.
H. C. Benis, Bradford, Pa.

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### MORTAR COLORS

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<th>Company</th>
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### NON-STAINING CEMENT

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### ORNAMENTAL IRON WORK

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<tr>
<td>Keasby &amp; Mattison Co.</td>
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### ROOFING—ASBESTOS SHINGLE

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### SOUTH HILLS HARDWARE CO., West Liberty, Pittsburgh

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### WHEELING WALL PLASTER CO., Wheeling, W Va.

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### ROOFING MATERIALS

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<tr>
<td>Hahn Brothers, Pittsburgh</td>
<td>Hill Top Roofing Co.</td>
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### REINFORCING MATERIAL

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### PLASTERING

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### PLASTER BOARD

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### PRIVATE WATER SYSTEMS

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<tr>
<td>Downie Water Co., Jenkins Arcade, Pittsburgh</td>
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### RAGGLE BLOCK

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### REINFORCING MATERIAL

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<tr>
<td>Fireproof Materials Co., 320 Liberty St., Pittsburgh</td>
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### ROOFERS (GRAVEL, SLATE AND TILE)

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### SANDING AND GRAVEL

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### SEWER PIPE

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### SHEET METAL WORK

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### SHEETING—ASBESTOS

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### SIDEWALK LIGHTS

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<tr>
<td>Albert Ginn, J. Co., 201 E. Reliance St., North St., Pittsburgh</td>
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### SKYLIGHTS AND VENTILATORS

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### STONE DEALERS AND CONTRACTORS

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<tr>
<td>Chalvis, D. W. &amp; Sons, Sawickler</td>
<td>Wheeling Wall Plaster Co.</td>
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### TILE (DECORATIVE)

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<td>Lau &amp; Hogan, Youngstown, O.</td>
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### TIN (AND SLATE)

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<td>Blank Herman, 5352 Corl St., E. E., Pittsburgh</td>
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### TRUSS WORK

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<td>Davis, John &amp; Co., McKees Rocks, Pa.</td>
<td>Lau &amp; Hogan, Youngstown, O.</td>
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### STRUCTURAL STEEL WORK

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<td>Abbott, Eli, Builders Exchange, Pittsburgh</td>
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### TRENCH WORK

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### WATERPROOFING

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### WIRE FABRICS

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<td>Fireproof Materials Co., 3226-30 Penn Ave., Pittsburgh</td>
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<tr>
<td>Hanny, Chas. G., 866 North Ave., N. S., Pittsburgh</td>
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Yards—Braddock Avenue and Thomas Street; Enterprise Street and P. R. R.; Twenty-sixth and Railroad Streets; Island Avenue and C. & P. R. R.

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BUFFALO, N. Y.

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Phone Court 2196  Pittsburgh, Pa.

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FOR BRICKLAYERS
TWO IN ONE

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BY MAIL 30 CENTS
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PITTSBURGH, PA.

Watt Manufacturing Co. Robinson & Darragh St.
Ornamental Iron,
Stairs and Railings,
Sidewalk Lights,
Elevator Doors and Wire Goods.

N. S. PITTSBURGH,
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Vol. 51. March 14, 1914. No. 7

POWER HOUSE IN PROSPECT.

The Hooking Power Company, National Bank building, Cincinatti, O., is to build a one-story brick and steel power house near Nelsonville, O., from private plans. The building will measure 106x122 feet. Bids on the work will be taken about April 1. Considerable power machinery will be required.

YOUNGSTOWN TEMPLE PLANNED.

The Rodei Sholem Congregation Youngstown, O., has had plans made by Architects Stanley & Scheibel, Wick building, Youngstown, O., for a one-story and basement temple, 80x120 feet, which will be constructed at a cost of $75,000. Bids on the general contract are now being taken. Separate bids will be taken on the heating, plumbing, electrical work, etc.

COLUMBUS WORK READY FOR BIDS.

Architects Dawson & Holbrook, Outlock building, Columbus, O., will be ready for bids next week on building a one and three-story brick, terra cotta and concrete building, 70x80 feet and 70x110 feet, which will be used for stores and theatre. The building will be erected for H. L. Chapman, 601 Wyandotte building, Columbus. Specifications will call for structural steel, iron and concrete stairways, composition roofing, low pressure steam heating system, electric lighting, concrete foundations, metal lath and hollow tile partitions, pressed brick, terra cotta, hard and ornamental plaster, tile and terrazzo work, fire doors, etc. The work will cost $100,000.

FACTORY WORK OPEN.

Work is soon to start on the new factory buildings for the Guernsey Earthware Company, Cambridge, O. W. O. Handshy & Son, Zanesville, O., have the general contract to build the plant, which will consist of a main building 200x208 feet, with two additional buildings 60x60 feet each. The plumbing, roofing, steam heating, electric lighting, etc, are still to be awarded.

BANK BUILDING CONTEMPLATED.

The Springfield Building & Loan Association, Springfield, O., contemplates the building of a one-story stone, brick and steel bank structure, 37x50 feet. No architect has been selected to prepare the plans. The building is to have tile floors, patent plaster, metal lath, marble counters and fixtures, plaster and stone columns for front of building, etc.

SCHOOL BUILDING FOR BRIDGEPORT.

A two-story brick fireproof school building is to be constructed for the Board of Education, Bridgeport, O., from plans now under way by Architect F. F. Farris, Schmulbach building, Wheeling, W. Va. The building will contain, beside the usual class rooms, manual training and domestic science departments, laboratory, etc. The building will have structural steel, concrete foundations, hollow tile, etc.

ASK BIDS FOR MARKET HOUSE.

Bids will likely be requested early next week on the proposed construction of a $300,000 market house for the City of Pittsburgh, plans for which have been completed by Architects Rutan & Russell, Magee building, Pittsburgh. The work will consist of four one-story units, two buildings on each side of Diamond street, measuring 70x130 feet and connected with a steel and concrete bridge 50 feet long and 20 feet wide, over Market street. The heating, electric lighting and plumbing will be separate contracts.

SKETCHING LOFT BUILDING.

The Methodist Book Concern, First National Bank building, Cincinatti, O., is having sketches made by Architects Samuel Hannaford & Sons, Hubert block, Cincinnati, for a nine-story loft building, 114x190 feet, to cost $500,000. While only preliminary plans have thus far been made, it is proposed to use hollow tile, composition roofing, metal lath, electric elevators, structural steel, face brick, steam heating system, etc.

MAKING SCHOOL PLANS.

A $60,000 grade and high school building is to be built at St. Clairsville, O., for the Board of Education, which will contain 12 rooms, manual training department and auditorium. The building will be 90x180 feet, two stories high. Plans for the work will be finished by Architect F. F. Farris, Schmulbach building, Wheeling, W. Va., about April 15. The building will call for structural steel, face brick, marble and tile work, metal lath partitions, electric lighting, steel heating, plumbing, etc.

SUB-BIDS FOR SHOE FACTORY.

Charles P. Kirschner, Athens, O., who has the general contract to build a three-story brick and concrete shoe factory at Logan, O., for the Riley Specialty Shoe Company, Columbus, O., will soon ask sub-bids on material for the work. The structure will measure 45x145 feet and will have concrete foundations, reinforced concrete roof and floor slab construction, metal lath, yellow pine trimming, hard plaster, electric lighting, steam heating, composition roofing, etc.

START PLANS FOR BANK BUILDING.

Plans for a 10-story brick, steel and fireproof bank and office structure have been started by Architects F. F. Farris and Edward B. Franzheim, Schmulbach building, Wheeling, W. Va. The building will be constructed for the Security Trust Company and will cost $150,000. Reinforced concrete floors and roof slab construction will be used. Other required material will consist of ornamental terra cotta, hollow tile, metal lath, marble and tile work, bank fixtures, metal sash and doors, etc.
Although glass-making has been a prominent industry since the days of the ancients, it is remarkable how little is known of its history. It is probable that Egypt was one of the great glassmaking centers of very early times, since many conditions existed there which were favorable to the development of the craft. However, none of the specimens found show the industry in a rudimentary condition, but as a well-developed art. This would evidently lead to the inference that glass making was not native to Egypt but was a prominent industry there. In the neighborhood of Mt. Carmel in Syria, fragments and lumps of glass are still being dug up. This district was a glass making center in Roman times, and it is probable that the Romans inherited and perfected glass in flat pieces, such as might have been found in the ruins of Roman houses both in England and Italy. These show that sheet glass was known to the Romans.

Glass was used for more purposes and in one sense more extensively by the Romans than by ourselves today. Glass in flat pieces, such as might have been found in the ruins of Roman houses both in England and Italy. These show that sheet glass was known to the Romans.
When the window openings were large, as in public buildings, the pieces of glass were fixed in pierced slabs of marble, or in frames of wood or bronze.

The Roman glass-blowers were masters of all ordinary methods of manipulation and decoration. Their craftsmanship produced ware as beautiful as any since produced at Murano—the queen of glass centers. Their decorative cutting took the form of simple incised lines and bands of shallow oval or hexagonal hollows.

Although glass making declined with the fall of the Roman empire, it was still practiced in Byzantium, Alexandria, and in Venice, which were part of the plunder of Constantinople when taken by the crusaders in 1204. It is all greenish, very thick with many bubbles, and has been cut with the wheel.

The Saracenic invasion of Syria and Egypt in the fourteenth century did not destroy the industry, but under the Saracens the art of enamelling glass was perfected.

As to Venice, that great center of glass industry of medieval and more recent times, it is not known whether the Venetians learned the art of glass making from the Romans in the fifth century or from the Greeks at Constantinople, such as alum and sand, which enter into the composition of glass, was forbidden.

In 1291 the glass workers were transferred to Murano, an island in the Venetian lagoon, one mile north of Venice. From this time on the manufacturing of glass continued to grow in importance. Glass vessels were made in large quantities, as well as glass for windows. Besides these, the factories at Murano had for a long time almost a monopoly of two other branches of the art, the making of beads and of mirrors.

The efforts of other countries in the seventeenth and eighteenth centuries to improve glass had an injurious effect on the Murano glass. The fall of the Venetian Republic in the eighteenth century was accompanied by interruption of trade and decline in manufacturing. So glass making at Murano was at low ebb.

About the middle of the nineteenth century, several of the ancient processes were revived and modern Venetian art materials, such as alum and sand, which enter into the composition of glass, was forbidden.

...
The name "Bent Murano" has to positively change the former condition of legislation compelling equipment. Since the present century started there has been a showing of the lack of ventilation in industrial establishments on the health of the workers. The showing has been productive of legislation compelling equipment to positively change the former condition. The use of fans has shown a continued growth in capacity, and yet to those who are familiar with the uses to which fans can be advantageously put, it would seem that only a start has been made. It is clear that in some of the uses for fans already suggested little sheet metal work is required, but when it is reported that 130 tons have been used in one railroad terminal, 40 tons in one public building and an amount equally impressive in a hospital building some indication is given that there is opportunity for a display of both business talent and shop craft, for the work brings its own problems and play is afforded for small engineering ability in solving the problems encountered.

**HOSPITAL PLANS NEARLY READY.**

Architects Peterson, & Clark, 520 Market street, Steubenville, O., will soon complete the plans for a $100,000 hospital building, to be built for the Ohio Valley Hospital Association. The building will be 55x153 feet, three stories and 52x84 feet, four stories, brick, steel and reinforced concrete construction. Foundations for the building have been completed.

**GROWING USE OF FANS AND SHEET METAL DUCTS.**

Since the present century started there has been an appreciation of the value of ventilation that has made the production of fans a large industry, and the consumption of sheet metal for the ducts used in connection with them mount up in tonnage to surpass that in all-established industries. The use of fans has grown correspondingly with the higher efficiency, lower cost of operation and the more compact forms that have become popular. An important influence on the growth of this industry has been the result of investigation showing the effect of dust, vapors, etc., to say nothing of the lack of ventilation in industrial establishments on the health of the workers. The showing has been productive of legislation compelling equipment to positively change the former condition.

Glass is the result of this reviwal. In this century Muranese glass workers migrated to various parts of Europe, establishing and developing glass making wherever they settled. Their influence on the industry cannot be overstated.

Because of the importance of Murano as a glass center and its influence on the industry, and also because of the beauty and excellence of the glass which it produced, the name "Bent Murano" has been chosen by the McCann-Shaw Manufacturing Company, Columbus, O., which is now placing on the market for the first time "Bent Murano" art glass. The illustrations shown will serve to portray some of the designs made possible by this new glass.

At the exhibit of the Ohio Hardware Men's Convention held recently at Toledo, the McCann-Shaw Manufacturing Company, of Columbus, O., placed before the public this revelation in clear art glass—Bent Murano.

The glass is bent, as the name implies, and is used in strips and squares, glazed in lead and metal glazing. The grade of glass used is plate, crystal plate and double strength window glass, and the bend obtained in their process, makes possible a very high polish, even on the A. D. S. glass.

The glass is not moulded but bent. Their process consists in heating and bending the flat glass in a form under a plunger, and beveling and repolishing the glass. The effect obtained is entirely new and approaches the old English Crown glass, a process of glass-making long forgotten. As much as a one-inch bend can be obtained in a two and five-eights strip of glass.

Utility and decorative beauty are the combined features of this new glass. The light refracting qualities of prismatic bevels are well known, but the bend in the glass distributes and spreads the rays of light over a greater surface. Thus altogether, the bend and bevels increase the amount of light. Again, the convex surfaces being on the outside give an obscure vision into the room, but admits of a clear vision out.

The bent glass used together with flat glass, makes the design, executed in the bent glass, stand out in bold relief. The designs obtainable are all straight lines and conventional, but richness, massiveness and tone qualities are obtained to a surprising degree.

Art glass has taken a prominent place as a decorative element in furniture designs. Along this line the possibilities of Bent Murano are limitless. Its richness and brilliancy and pleasing effect make it unsurpassed for interior decoration.

Lines are defined in curved surface, giving contour and soft lights and shadows. Masses are expressed by rectangles having curved and beveled surfaces, the bevel etching the curves and breaking any monotony by the play of prismatic lights. By arrangement of flat surfaces the prevailing design is exalted in bold relief.
The new work designed by Architect F. J. Osterling, Commonwealth building, Pittsburgh, for the State Institution for Feeble Minded, Pork, Pa., will call for two groups of three cottages each, connected by corridors to the central building, comprising the administration, 48x48 feet, 3½ stories high; dining room building, 50x60 feet, three stories; bakery and addition to laundry. Each group of the cottages will be 40x72 feet, 2½ stories high.

The exterior brick work will be of No. 1 red pressed brick, dark cherry color. The mantels in all of the day rooms, are to be faced with gray vitrified pressed brick. The main dining room is to be wainscoted to a height of five feet, with enameled brick and the interior wall facings of kitchen, serving red tile roofing. The cottages will have slate roofs, each piece of slate to be 10x20 inches in size.

Other lines included in the specifications call for reinforced concrete fireproofing, sheet metal work, carpenter work, plastering, cement floors, marble and tile work, etc. On the addition to the laundry building, metal ceilings will be required.

Separate contracts will be placed for the electric wiring. Two 10 K. W. transformers will be used for the cottages; one 15 K. W. transformer for the administration and dining room building and a 3 K. W. transformer for the laundry addition. Conduit systems will be used throughout the buildings.

The plumbing, heating and ventilating work will all be awarded in separate contracts.

WET AND DRY CONCRETE.

Dry concrete is not stronger than wet concrete. Hundreds, perhaps thousands, of experiments have conclusively proven this idea to be wrong. The results of these experiments have been published over the names of responsible and well-known authorities, so there is no reason to keep the old idea running. Dry concrete obtains a certain degree of strength in a shorter time than it takes wet concrete to obtain the same strength. This enables forms to be removed sooner with dry than with wet concrete. Wet concrete and dry concrete placed in the same day are of practically equal strength at the end of 30 days, but at the end of the first four or five days the dry concrete is the stronger. After 30 days the wet-mixed concrete gains rapidly in strength as compared with the dry-mixed concrete; the latter picking up in strength if wet with a hose or otherwise drenched with water.

Concrete requires water in order to set and harden properly, so the necessary water must be supplied during this mixing period. Three months after mixing the wet concrete is much stronger than the dry concrete, and it always retains this advantage; but as the years go by and the dry concrete has an opportunity to absorb moisture and the wet concrete gradually loses excess moisture the difference becomes small. For quick strength use as little water as will make good concrete. For permanent strength and low cost in mixing and depositing use wet concrete. Wet concrete is much more uniform in strength than dry concrete and plenty of water is required to harden concrete. In summer a certain excess of water must be used to supply the loss caused by evaporation and the absorption of water by the sand and stone. In winter a much smaller amount of water should be used in order to obtain quick setting and thus avoid danger of freezing.
Pittsburgh.

Plans are in progress for four brick residences, to be erected on Lorenz avenue, Elliott, for Frank Reisner, Lorenz avenue.

Architect W. E. Snaman, Empire building, is drawing new plans for a 2½-story brick veneered residence, to be erected on Andover Terrace, Schenley Heights, for L. H. Smith, 222 Oliver avenue. Cost, $6,000.

Architect H. E. Kennedy, Home Trust building, has plans nearly completed for a 2½-story brick and stone parsonage, to be erected on Addell & Ridwell streets Northside, for the Trinity M. E. Congregation. Cost $20,000.

D. T. Riffe, Keenan building, received the contract for erecting a one-story brick mercantile building on Grant boulevard for the Presto Welding & Brazing Company. Cost $10,000.

Architect T. H. Scott, 1410 Machesney building, will be ready for bids about March 18 on constructing a brick and terra cotta fireproof building on W. North avenue, Northside, for L. L. Banks, Park building. Cost $35,000.

Architect S. R. Rosseau, 131 Allegheny avenue, awarded to Harry Gibson 174 Sheridan avenue, the contract for erecting a two-story brick and shingle cottage in Crafton, for Mrs Emil Loos, Kiege and Lawton streets, Crafton. Cost $6,000.

Architect M. Jacobs, 413 Fourth avenue, awarded to Joseph Bergman & Son 2601 Wylie avenue, the contract for constructing a three-story brick and stone store and loft building on 514-16-20 Wylie avenue, for E. & George Gelder 104 Smithfield street. Cost $35,000.

E. T. Lippert, 608 Lincoln avenue, Millvale, is taking bids on erecting five two-story brick residences on William street, Millvale, to cost $4,000 each. Plans by Architect C. W. Hodgdon, 810 Pem building.

D. T. Riffe, Keenan building, received the contract for erecting a one-story brick mercantile building on Grant boulevard, for the Presto Welding & Brazing Company. Cost $10,000.

Architect Jarvis Hunt, 53 West Jackson boulevard, Chicago, is taking new bids on constructing a 12-story brick and terra cotta fireproof department store building on Sixth street and Liberty avenue, for the Rosenbaum Company. Cost $1,000,000.

Architect Adam Wickerham, McClure street, Homestead, is taking bids on constructing a brick of reinforced concrete building for the Lawson Manufacturing Company, Homestead. Cost $80,000.

Architect S. A. Hall, 343 McKee Place, is taking bids on erecting a one-story frame church addition, on Four Mile Run and Boundary street, for the St. Joachim's Roman Catholic Congregation.

Architect R. M. Trimble, Ferguson building, has been selected to prepare plans for a two-story brick fireproof school building, to be constructed on Dickson avenue, Ben Aron, for the Board of Education. Cost $60,000.

Samuel E. Winters, 44 Wyoming street, received the contract for erecting a three-story brick apartment building, on Alice street, Knoxville, for A. Rabe, Brownsville Road and Hobart street, Mt. Oliver. Cost $9,000.

Mrs Luella Schmidt, of Altoona, contemplates erecting a 2½-story brick double duplex residence, on Dinwiddie street. Cost $12,000.

Architects Cosgrove & Custer, Farmers Bank building, have completed plans for a one-story brick and concrete commercial garage, to be erected on Stude ave., near Northumberland street, for Frank A. Minnemeyer, Farmers Bank building. Cost $30,000.

Architect Marshall Maneese, 7201 Kedron avenue, has awarded the following contracts for erecting a two-story brick apartment building, on Hamilton avenue, for John Dickson, 605 North Murtland avenue. General contract to George F. McKee, Alger street, brick work to Semple, Crawford & Gibson, 609 Beauty street, and stone masonry to Frank Jordano, 1702 Rutherford avenue. Cost $6,000.

Architect Thomas Hannah, Keenan building, has completed preliminary plans for a frame convent and church addition, to be erected at Castle Shannon, for St. Ann's Roman Catholic Congregation. Cost $20,000.

The Allegheny County Commissioners have awarded to the American Bridge Company, Frick building, the contract for superstructure, and to A. F. Abel, Wood and Water streets, the contract for substructure for a road bridge over Charters creek, near Duff Station.

C. A. Baldwin, 214 Maripoe avenue, Northside, received the contract for erecting a one-story brick store building on Grant boulevard, for J. & M. Auto Supply Company. Cost $1,000.

Fihl & Miller, Wabash building, received the contract for remodeling Engine House No. 31, on Winterburn avenue, Northside, to cost $3,000; remodeling a two-story brick patrol station on Forbes and Bogan streets; remodeling Police Station No. 1 on Cherry Way and Strawberry Alley, to cost $3,000, for the city.

The Curtis Home for Women and Children, 2541 Breckenridge avenue, contemplates erecting a two- or three-story brick fireproof home, to cost $25,000. Architect has not been selected. Building will accommodate about 50 people.

Architect R. M. Trimble, Ferguson building, will take bids on remodeling a two-story frame restaurant on 312 Oliver avenue, for the Misses Allen and Young, 312 Oliver avenue. Cost $3,500.

Architect Charles Bickel, May building, awarded to Moore & Ruesch, Keystone Avenue, Belleview, the contract for erecting a 2½-story frame double residence, on Rodgers and Bayes avenues, Belleview, for Mrs. Ada K. Chester, Belleview. Cost $8,000.

Architect H. D. Gilchrist, Frick building, has plans for remodeling a building on Roup street and Penn avenue, for the Kirk Estate, care Mrs. E. K. Bovaird,
Pacific avenue. The work will cost $12,000.

The Central Building Company, Vandergrift building, has been awarded the contract to build a 2½-story brick and single residence on Kelton avenue, Dormont, for P. J. O'Connor, 2409 Fifth avenue. No sub-contracts have been awarded.

Architect W. A. Thomas, Park building, has plans under way for two brick residences on Central street, for W. E. Trencelon, 352 Meyran avenue, to cost $7,000.

Work will be started as soon as the weather permits on the erection of a three-story brick and concrete manufacturing plant for the Pittsburgh Tinware Manufacturing Company, Edwall street, Northside. The National Fireproofing Company, Fulton building, has the general contract.

This close on the 18th inst. for constructing an armory building for the State Armory Board. The building will be erected at Penn avenue and Station street. Revised plans have been completed by W. G. Wilkins Company, Westinghouse building.

George L. Bennett, 7426 Race street, has been awarded the contract to build three brick residences on Worth street for Margaret Stevenson, 7054 Commerce boulevard.

**Apartments and Dwellings.**

**Akron, O.** — Architects Densan & Beer, 220 Avenue building, Cleveland, awarded to C. L. Briggs, 35 Charlotte street, the contract for erecting a 2½-story single residence and garage, on Mayfield avenue, for Cramell Morgan. Cost $15,000.


Central, O. — Charles Hegelkeiser, Rich and High streets, received the contract for erecting a two-story brick residence, on South Fourth street, for Emil Metzmaier, 1382 South Fourth street. Cost $4,000.

Cincinnati, O. — Architects Howell & Thomas, 151 East Broad street, Columbus, will be ready for bids about March 20, on erecting a two-story brick residence for D. G. Gayle.

Dayton, O. — Plans have been completed for a two-story brick residence, to be erected on the Park Hill lot, Oakwood, for Edward J. Moundstephen, 805 United Brethren building. Cost $5,000.

Granville, O. — Architects Scheenke & Williams, 591 Arcade building, Dayton, have plans in progress for a two-story frame and stucco country residence, to be erected for E. A. Deeds, care National Cash Register Company. Cost $10,000.

Newark, O. — M. H. Baker, 107 Hudson avenue, is taking bids on erecting a two-story brick Colonial residence, from plans drawn by Architects Howell & Thomas, 151 East Broad street, Columbus. Cost $6,000.

Rochester, Pa. — Architect F. E. Mathews, Leaf building, is taking bids on erecting a two-story brick residence on Washington and Rhode Island avenues, for Frank Woodruff. Cost $12,000.

Zanesville, O. — Architects Howell & Thomas, of Columbus, have plans in progress for a two-story brick residence to be erected for Fred Dodd.


Beaver Falls, Pa. — Architect J. A. Snyder awarded to W. C. Keesley, College Hill, the contract for erecting a ½-story brick bungalow, on College Hill, for Mrs. O. E. Filley, 919 Seventh avenue. Cost $3,000.

Architects Carlisle & Sharrer, of Pittsburgh, have plans nearly completed for a 2½-story brick residence, to be erected for Louis R. Ingram, at a cost of $8,000.


Oberlin, O. — Harley Lucas, Oberlin College, is ready for bids on the erection of a two-story frame residence, on Forrest street, from private plans. Cost $4,500.

Stoneboro, Pa. — Architect C. A. Maherry awarded to the Stoneboro Planning Mill Company the contract for erecting a ½-story brick, frame and shingle bungalow, for Theodore N. House, to cost $4,800.

Altoona, Pa. — Architect D. G. Padlock awarded to D. Combs & Son, 204 Eighth avenue, the contract for erecting a three-story brick and stone apartment building, for T. C. Canty, to cost $18,000.


Bryan, O. — Andrew Moore, South Main street, contemplates erecting a 2½-story frame residence on South Main street, from private plans. Cost $4,000.


Columbus, O. — Architect H. C. Jones, Dealers building, awarded to Petzinger & Schleppi, Livingston avenue, the contract for erecting a two-story brick residence on Granville street, for John L. Jones, Outlook building. Cost $4,500.

Donora, Pa. — The Marston-Gass Company received the contract for erecting a 2½-story frame superintendent’s residence, on Meldon avenue, for the American Steel & Wire Company. Cost $4,000.

Mt. Vernon, O. — Dawn Wineland, care Curis hospital, contemplates erecting a two-story brick or frame residence, on East Vine street, to cost $4,500. Architect has not been selected.

Newark, O. — William E. Miller, 23 West Main street, contemplates erecting a two-story brick garage and apartment building, on Third street, from private plans.

Oberlin, O. — C. G. Rodgers, Oberlin College, will be ready for bids about March 20, on the erection of a two-story frame residence on Forrest street, to cost $4,500.

Akron, O. — Architect N. A. Manz, 243 Spencer street, awarded to Schweikert & Brothers, the contract for erecting a two-story frame and stucco residence and garage, on 750 West Market street, for J. A. Berger, Russell avenue. Cost $5,500.

Cincinnati, O. — Architect Max Kau, 2241 Stratford avenue, has plans in progress for a 2½-story brick and stucco residence, to be erected on Eden avenue, for Dr. Bertha Daugh, 2244 Vaughn street. Cost $4,000.

Architect C. H. Fasse, 2529 Hemlock street, has plans in progress for ten ½-story frame cottages to be erected on Markbreit avenue, Hyde Park, for J. J. Lehman, 3859 Oakley avenue. Cost $30,000.

The Landi Building Company, 1812 Vine street, contemplates erecting 40 brick residences on Clifton Heights, to cost $84,000 each. Architect has not been selected.
Columbus, O. — Architect E. H. Bickett, 274 Twelfth avenue, has plans nearly completed for a two-story brick double residence, to be erected on Tompkins and Summit streets, for A. E. Park, 1284 Neil avenue. Cost $4,500.

Architects Bryan & Latham, Columbus Savings & Trust building, have completed plans, for a two-story brick terrace, to be erected on Belvedere and Florby avenues, for W. A. Jackson, 311 Chamber of Commerce building. Cost $15,000.

The same architects are also taking bids on erecting a two-story brick residence on Schiller street, for Valentine Miller, 209 North High street. Cost $4,500.

Coraopolis, Pa. — H. A. Knopp, 1208 Vance street, contemplates erecting two brick veneered and stucco residences, from private plans. Cost $5,000 each.

Dayton, O. — Architects Vance & Company, 52 Louis building, awarded to J. P. Vance, Louis building, the contract for erecting a two-story brick veneered and stone residence, on Superior avenue, for George M. Schmidt, Pine street. Cost $9,500.

East Liverpool, O. — Architect C. H. Mertz, First National Bank building, awarded to Finley Brothers, Chester, the contract for erecting a two-story frame residence on Vine street, for Charles R. Thomas, to cost $6,000.

Findlay, O. — Architects Ferguson & Son have plans in progress for a 2½-story frame and brick veneered residence to be erected on W. Lima street, for O. N. Henninger. Cost, $5,600.

Lorain, O. — Architect R. O. Warmser has plans in progress for a two-story frame residence, to be erected for William Taylor, to cost $5,000.

Magnetic Springs, O. — Architects David Beibel & Sons, New First National Bank building, Columbus, are about ready for bids on erecting a two-story brick residence for Dr. Jesse Conrad, to cost $6,000.

Mt. Vernon, O. — Architects R. C. & W. S. Anderson will be ready for bids about March 25 on the erection of a 1½-story frame bungalow on E. Gambier street, for Clyde Brentlinger, 203 Beinyon street. Cost, $3,000.


Youngstown, O. — Phillip Wick will take bids on erecting a two-story frame residence and garage on Tod avenue from plans drawn by Architects Meade & Hamilton, Garfield building, Cleveland.

Beaver Falls, P. — Architects Boyd & Stewart, Century building, Pittsburgh, will receive bids until March 16, on erecting a two-story brick residence and garage, for J. J. Buser, of Freedom. Cost $5,500.


Cincinnati, O. — Architect G. W. Drach, Union Trust building, awarded to W. & A. Renter, 52 Pickering building, the contract for erecting a ½-story pressed brick residence and garage on Roschill avenue, Avondale, for Albert Luckman, 816 West Sixth street. Cost $25,000.

Architect C. H. Fasse, 2529 Hemlock street, has plans in progress for a 2½-story brick duplex apartment building, to be erected on 850 Oakley avenue, for H. J. Lehman, 3880 Oakley avenue. Cost $5,500.

Columbus, O. — Architect E. H. Bickett, 274 Twelfth avenue, will be ready for bids about March 18, on erecting a two-story brick terrace on Tompkins and Summit streets, for A. E. Park, 1284 Neil avenue. Cost $15,000.

Frank C. Morgan, 501 Carpenter street, is taking bids on erecting a 2½-story frame duplex residence from plans drawn by Architects Bryan & Latham, 429 Columbus Savings and Trust building. Cost $4,000.

Middletown, O. — Architects Stewart & Son, of Bowling Green, have plans in progress for a 2½-story frame and brick residence, to be erected for Prof. N. O. Wilson. Cost $7,000.

Mt. Vernon, O. — Architect Frank L. Packard of Columbus, is ready for bids on erecting a three-story brick apartment building on Chestnut street, for Dr. E. C. Lammore, 19 N. Main street. Cost, $10,000.

Portsmouth, O. — Architects Richards, McCarty & Balford, of Columbus, are preparing sketches for a two-story brick residence, to be erected for C. L. Spencer, to cost $8,000.

Zanesville, O. — Architect Henry Meyer is taking bids on erecting a 2½-story brick residence for W. H. Hardesty, to cost $4,000.

Leechburg, Pa. — R. A. Cunningham contemplates the building of a 12-room residence, plans for which are now under way by Architect J. D. Ludwick. The building will be of brick construction, hardware finish and modern in every way.
Burgettstown, Pa.—Phillipponi Brothers, Baldwin street, Bridgeville, will receive bids until March 21 on erecting a two-story frame and brick store and apartment building from plans drawn by Architect C. E. Smith, of Oakdale.

Cincinnati, O.—Architects Robertson & Fabnestock, 801 Carne building, awarded to the M. Marcus Building Company, 223 Reading Road, the contract for erecting a two-story frame and brick store and loft building on Sixth street, for the Dickson Estate. Cost $15,000.

Cleveland, O.—Architect E. E. Gibbons, 408-410 Euclid building, is taking bids on constructing a five-story brick and reinforced concrete fireproof store and warehouse on E. Fifty-fifth street for the Scott Brothers Company. Cost, $75,000.

DuBois, Pa.—Architects Harrington & Howard, Deposit Bank building, have plans in progress for a bank building addition, to be erected on Main street, for the Deposit National Bank. Cost $20,000.

Pegate, W. Va.—Architect A. B. Mahood of Bluefield, awarded to Phipps & Smoot, Elkhart, the contract for constructing a four-story reinforced concrete fireproof warehouse, for the Page Coal & Coke Company, to cost $40,000.

Rocky River, O.—Architect William Hirsch, 1332 Sweetland building, Cleveland has plans in progress for a one-story brick bank building addition, to be erected for the Rocky River Savings & Banking Company.

Columbus, O.—Architect Otto C. Darst, Brunson building, awarded to R. H. Evans & Company, the contract for erecting a two-story brick and concrete stable and garage on Naughten & Neilson streets, for the G. W. Bobb Company. Cost, $10,000.

Elyria, O.—Architect J. E. Smith, Brown and Second streets, will select an architect about March 20 to prepare plans for a three-story brick and stone fireproof store building to be constructed on East Broad street. Cost $15,000.

Punxsutawney, Pa.—Architect L. S. Shilling has plans in progress for a two-story brick store and apartment building, to be erected for Tony Anerie, to cost $3,500.

Arthold, O.—Grype & Berhe contemplate erecting a two-story brick store and office building on Defiance and Holland streets. Architect has not been selected.

Cambridge, O.—Contractors W. C. Handsby & Son, Zanesville, are taking bids on erecting a two-story brick store and apartment building for George Nicholson, to cost $25,000.

East Liverpool, O.—Architect C. M. Metsch, First National Bank building, has plans nearly completed for a one-story brick store building, to be erected on Pennsylvania and First streets, for Thomas H. Fisher. Cost, $8,000.

Cleveland, O.—Architect E. E. Gibbons, 1900 Euclid building, is preparing sketches for a brick and reinforced concrete and steel fireproof garage and sales room, to be constructed on Carnegie avenue, for H. J. Latimer, 5700 Euclid avenue. Cost, $125,000.

Coldwater, O.—Architect Andrew De Curtins, Opera House building, Lima, has been selected to prepare plans for a two-story brick store and hotel building, to be erected for Charles Jenkins.


Marion, O.—Architect J. J. Slaton has been selected to prepare plans for a two-story brick and concrete fireproof stable, to be erected on N. Main street, for J. J. Hitzman. Cost, $25,000.

Newark, O.—Architect Vernon Redding of Mansfield, has been selected to prepare plans for remodeling a two and three-story brick store building on 142 South Park Place, for George Speague, E. Main street.

Architect E. B. Patton, 28 Pearl street, has plans nearly completed for a two-story brick tale and reinforced concrete building, to be erected on Pomeroy avenue, for August Maier, 133 Elmwood avenue.

Sharon, Pa.—Architects Clepper & Owen have plans in progress for a one and two-story brick, steel and reinforced concrete garage building to be constructed for the Sharon Commercial Arcade Company. Cost $25,000.


Stoutsville, O.—Shovers & Taylor of Crooksville, received the contract for erecting a one-story limestone and brick bank building for the Farmers & Citizens Bank, to cost $8,000.

Religious.

Osgood, O.—Architect W. L. Jaekle, 1300 United Brethren building, Dayton, is about ready for bids on erecting a two-story brick parochial residence, for the Rev. B. Franzer, to cost $5,000.

Amherst, O.—Architect H. O. Wurzel, of Lorain, has plans in progress for a one-story brick and steel fireproof gymnasium, to be erected for the Congregational Congregation.

Archbold, O.—Architect Abe Bonger, of Berne, Ind., has been selected to prepare plans for a one-story brick and stone church, to be erected for the German Reformed Congregation. Cost $20,000.

Cambridge, O.—Contractors W. C. Handsby & Sons, of Zanesville, are taking sub-bids on the erection of a one-story brick church addition, for the Presbyterian Congregation, to cost $15,000.

Piqua, O.—Architects F. E. Hughes & Company, Dayton, will be ready for bids about March 16, on erecting a two and three-story brick and terra cotta parochial residence on North street & Broadway, for St. Mary's R. C. Congregation. Cost, $30,000.

Akron, O.—Architects Fichter & Brooker, Second National Bank building, are taking bids on the erection of a one-story frame church for the Polish Catholic Congregation, to cost $10,000.

Waterville, O.—Architect F. E. Walker of Toledo, has been selected to prepare plans for a one-story brick church, to be erected for the Waterville M. E. Congregation. Cost, $10,000.

Columbus, O.—Architect E. H. Kickeit, 274 Twelfth avenue, has completed plans for a one-story brick and stone church, to be rebuilt on Linden Heights, for the First Methodist Episcopal Congregation, to cost $12,000.

Penn Station, Pa. — Architect J. H. Phillips, of McKees Rocks, has completed plans for a two-story brick fireproof parochial school, to be erected for the Roman Catholic Congregation, to cost $14,000.

Tarentum, Pa.—Architect Isaac F. Cutshall awarded to J. L. Waltenbaugh, the contract for erecting a 1/2-story brick, stone or terra cotta church, on East Eighth avenue, for the English Lutheran Congregation. Cost $15,000.

Uniontown, Pa.—Architect J. H. Harmon, First National Bank building, has plans in progress for a two-story brick school building, to be erected on South M. Vernon street, for St. Joseph's Roman Catholic Congregation. Cost $12,000.

Educational.

Berea, O.—Architect W. H. Nicklas Cleveland, awarded to Fred Wolf, Elyria, the contract for constructing a two-story brick and reinforced concrete fireproof...
high school building addition, for the Board of Education. Cost, $80,000.

Dayton, O.—Architect Charles Herby 1402 C. B. building, has plans nearly completed for a two-story brick school building addition, to be erected for the Board of Education of Special District No. 8. Cost, $150,000.

Parkersburg, W. Va.—Architect Frank L. Packard, 1212 Hayden building, Columbus, O., has plans in progress for a two-story brick, stone and concrete high school building, to be constructed for the Board of Education. Cost, $250,000.

Atlanta, O.—Architect J. Howard Merriman, Washington Court House, is taking bids on erecting a two-story brick, high and grade school building, for the Board of Education of Perry township. Cost, $25,000.

Elvira, O.—Architect Paul A. Rissman has completed plans for a two-story brick fireproof high school building, to be constructed for the Board of Education. Cost, $180,000.

Forsy, O.—Architect C. I. Williams Dayton, is ready for bids on the erection of a one-story brick and reinforced concrete high school building for the Board of Education of Bethel township, to cost: $15,000.

Meadville, Pa.—Architects Bliha & DeCoursey, Richard, Chestnut street Philadelphia, have plans in progress for a two-story stone school building, to be erected for the Board of Education Cost $35,000.

Midland, Pa.—Architects E. F. Mathews Rochester, will be ready for bids about March 25 on erecting a two-story brick and steel grade school building, for the Board of Education.

Rittman, O.—The National Engineering Company of Cleveland, have completed plans for a two-story brick fireproof school building, to be erected for the Board of Education. Cost, $25,000.

Chagrin Falls, O.—Architect W. G. Eckles, of New Castle, Pa., awarded to Anderson & Filey, New Castle, the contract for constructing a two-story brick and stone high school building, on Washington street, for the Board of Education.

Cincinnati, O.—Architects Stegner, Hughes & Alves, 528 Walnut street, awarded to Rood Brothers, 284 Stanton avenue, the contract for excavating, concrete and masonry, and to the Evans-Shepherd Company, N. W. 35th street, the contract for fireproof warehouse, for the University of Cincinnati Cost $70,000.

Concord Township, Pa. — Architect: E. H. Rickett, Columbus, has been selected to prepare plans for a two-story brick township grade and high school building, to be erected for the Board of Education.

Columbus, O. — Architects D. Ricehe & Son, New First National Bank building, have completed plans for a two-story brick and concrete school building, to be constructed on Stader avenue, for the Board of Education. Cost $300,000. Contract for foundations has been let to Patrick Shanahan, 857 Pennsylvania avenue.

Cuyahoga County, O. — The National Engineering Company, 504 Marshall building, Cleveland, has been selected to prepare plans for a two-story brick fireproof school building, to be erected in Middleburg township, for the Board of Education. Cost $100,000.

Van Port, Pa. — Architect: Charles H. Mathews, of Beaver, has plans in progress for a two-story brick and steel grade school building, to be erected in Boro township, for the Board of Education. Cost $18,000.

Akron, O.—Architects Spahr & Bliss, Nantucket building, have plans in progress for a two-story brick and reinforced concrete school building, to be constructed for the Board of Education. Building will contain domestic science rooms, manual training and gymnasium and will probably include a kindergarten. Cost, $75,000.

Middleburg Township, O.—The National Engineering Company, 304 Marshall building, Cleveland, has been selected to prepare plans for a one-story brick school building, to be erected for the Board of Education. Cost, $80,000.

Springfield, O.—Architect Robert C. Gourald has preliminary plans in progress for a two-story brick college school building, to be constructed for the Trustees of Wittenberg College. Cost $40,000.

Chagrin Falls, O. — Architect W. G. Eckles, New Castle, Pa., awarded to Anderson & Filey, New Castle, the contract for constructing a two-story brick and stone high school building, on Washington street, for the Board of Education.

Cincinnati, O. — Architects Stegner, Hughes & Alves, 528 Walnut street, awarded to Rood Brothers, 284 Stanton avenue, the contract for excavating, concrete and masonry, and to the Evans-Shepherd Company, N. W. 35th street, the contract for fireproof warehouse, for the University of Cincinnati Cost $70,000.

Concord Township, Pa. — Architect: E. H. Rickett, Columbus, has been selected to prepare plans for a two-story brick township grade and high school building, to be erected for the Board of Education.

Columbus, O. — Architects D. Ricehe & Son, New First National Bank building, have completed plans for a two-story brick and concrete school building, to be constructed on Stader avenue, for the Board of Education. Cost $300,000. Contract for foundations has been let to Patrick Shanahan, 857 Pennsylvania avenue.

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Elk’s home, to be constructed on East Perry street, for the B. P. O. Elk’s Lodge No. 94. Cost $35,000.

Alliance, O.—Architect F. E. Mathews of Rochester, Pa., has completed plans for a two-story brick lodge building, to be constructed for the B. P. O. E., to cost $30,000.

Elyria, O.—Architect R. S. Silsbee, Masonic Temple building, awarded to Fred Wolf, the contract for erecting a two-story brick and reinforced concrete fireproof club house addition for the Elk’s Club Company, to cost $25,000.

Newark, O.—The Newark Lodge B. P. O. E. No. 391, will soon select an architect to prepare plans for a three- or four-story brick store and lodge building, to be constructed on Main street.

Findlay, O.—Architects McLaughlin & Hulskien, of Lima, have been selected to prepare plans for a two-story brick Elks Home, to be constructed on Hardin & Main streets, for the B. P. O. E. Findlay Lodge. Cost $50,000.

Mt. Vernon, O.—The Kokosing Aerie No. 760 Fraternal Order of Eagles contemplates remodeling a two-story brick building, to cost $40,000. Architect has not been selected.

Cleveland, O.—Architects Meade & Hamilton, 1902 Garfield building, have plans in progress for a two-story store and hollow tile club house, to be erected on South Woodland Road, Cleveland Heights for the Shaker Country Club.

Huntsville, O.—Architect E. H. Ricketts, 27 Twelfth avenue, Columbus, will prepare plans for a two-story brick and stone store and lodge building, to be erected for the Knights of Pythias. Cost $6,500.

Osceola Mills, Pa.—The Masonic Order contemplates constructing a three-story brick store, office and lodge building, to cost $25,000. Architect has not been selected and details not decided.

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State, County and Municipal.

Bridgeville, Pa.—Architect August Rehman, Essen street, awarded to Colussy Brothers, Baldwin street, the contract for erecting a two-story brick and concrete fireproof municipal building on Washington avenue, for the Borough, to cost $6,500.

Columbus, O.—Architects Marriott, Allen & Hall, Hayden-Clinton Bank building, have plans in progress for a two and three-story brick, terra cotta and concrete cottage, to be constructed at the Feeble Minded Institute for the Ohio Board of Administration. Cost $75,000.

Greensburg, Pa.—Architect W. G. Wilkins, Westinghouse building, Pittsburgh will receive bids until March 18 on erecting a one and two-story brick armory for the State Armory Board, to cost $30,000.

Oil City, Pa.—Architect W. G. Wilkins, Westinghouse building, Pittsburgh, has been selected to prepare plans for a one and two-story brick and stone armory, to be erected on Second and State streets, for the State Armory Board. Cost $36,000.

Waynesburg, Pa.—Architect W. G. Wilkins, Westinghouse building, Pittsburgh, will receive bids until March 18 on erecting a one and two-story brick armory, to be erected on Washington street and Strawberry alley, for the State Armory Board. Cost $30,000.

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Miscellaneous.

Martinsburg, W. Va.—Architect C. L. Harding, Washington, D. C., has plans in progress for a frame grandstand and various buildings, to be constructed on the Fair Grounds, for the Eastern Panhandle Fair Association. Cost, $50,000.

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Hotels.

Columbus, O.—Architect Charles F. Inscho, 1309 Brunson building, is drawing plans for remodeling a five-story brick building on West Spring and Wall streets, for Renkert Brothers. Cost $60,000.

Newark, O.—The Warden Hotel Company contemplates erecting an addition to the Warden Hotel. Architect has not been selected.

Aspinwall, Pa.—The borough contemplates erecting a one-story brick boiler house addition on Freeport avenue, to cost $30,000.

Centerburg, O.—Architect H. L. Maddocks, Newark Trust building, has completed plans for a sewer system and disposal plant, to be constructed for the village, at a cost of $20,000.

Corapolis, Pa.—The borough is about ready for estimates on the construction of a steel or concrete water tank at the head of Fleming street.

Erie, Pa.—Henry Shenk Company received the contract for erecting a two-story brick and steel fireproof machine shop at the foot of Chestnut street, for the Commissioners of Water Works of the city. Cost $8,500.

Bids are to be received until March 31 for $60,000 worth of bonds for street improvements in Hancock county, O. J. N. Traxler, Findlay, O., is auditor.
Liens Filed for Labor and Material Furnished.

- Sanders Paving & Construction Company, a corporation, vs. Mrs. Ella Deemer, owner. Building in Borough of Ingram. Cost $857.44.
- Sanders Paving & Construction Company, a corporation, vs. Robert H. Miller, owner, with notice to Isabelle Towne. Building in Borough of Ingram. Cost $797.00.

NO LIEN CONTRACTS

- W. F. Overly vs. Mary D. Loughney. Agreement made March 2 and filed March 5, 1914, to do the exterior sheet metal work on the six-story building at 928 Penn Avenue, Pittsburgh, for $850.00.
- Thomas Lane Company, a corporation, vs. Mary D. Loughney. Agreement made February 27 and filed March 5, 1914, to erect and install underwriters in clad labelled hinge fire doors, freight elevators, etc., in store building at 928 Penn Avenue, Pittsburgh, for $600.00.
- Robert W. Hare vs. Mary D. Loughney. Agreement made March 3 and filed March 5, 1914, to erect and install underwriters in clad labelled hinge fire doors, freight elevators, etc., in store building at 928 Penn Avenue, Pittsburgh, for $600.00.
- Robert W. Hare vs. Mary D. Loughney. Agreement made March 3 and filed March 5, 1914, to erect and install underwriters in clad labelled hinge fire doors, freight elevators, etc., in store building at 928 Penn Avenue, Pittsburgh, for $600.00.

Sub-Contract Notes.

Electric Work.

- South Hills Electric Company, Pittsburgh, received contract two residences, Pittsburgh. Owner, J. A. West, Pittsburgh.
- Dormont Electric Company received contract $6,000 store and apartment building, Dormont. Owner, Joseph Drexler, Pittsburgh.
- H. J. Kuhns, Vandergrift, received contract $6,000 store and apartment building, Vandergrift Owner, M. C. Householder, Pottsville.
- Axthelm Electric Company, Pittsburgh, received contract $18,000 apartment building, Pittsburgh. Owner, Conrad Dietrich, Northside, Pittsburgh.

Heating.

- H. J. Kuhns, Vandergrift, received contract $6,000 store and apartment building, Vandergrift Owner, M. C. Householder, Pottsville.
- A. P. Miller, Pittsburgh, received contract $4,000 residence, Pittsburgh. Owner, Claude J. Lawrence, Pittsburgh.

Marble and Tile.

- Edw. C. Krizner, Wheeling, W. Va., received contract $12,000 hotel addition, Wheeling. Owner, Windsor Hotel Company, Wheeling.

Mill Work.

- Scott Lumber Company, Bridgeport, O., received contract $12,000 hotel addition, Wheeling. Owner, Windsor Hotel Company, Wheeling.
- E. M. Hill, Pittsburgh, received contract $18,000 apartment building, Northside, Pittsburgh. Owner, Conrad Dietrich, Northside, Pittsburgh.

Painting.

- M. E. Casanaga, Pittsburgh, received contract $15,000 stores, motion picture theatre and club rooms, West Newton. Owner, Dr. John K. Robinson, West Newton.
- S. G. Crow, Wheeling, W. Va., received contract $12,000 hotel addition, Wheeling. Owner, Windsor Hotel Company, Wheeling.
- H. A. Walker, Pittsburgh, received contract $10,000 residence, Pittsburgh. Owner, Mrs. William Stevenson, Pittsburgh.
- John Morrow & Son Company vs. The Mally Company. Agreement made and filed March 4 to do mill work, painting and finishing for building in Oliver Avenue, between Smithfield and Wood streets, for $6941.

One of City's Jokes.

It will be remembered that about a year ago Col. E. J. Allen, Pittsburgh, owner of the Liberty Theatre, built one of the newest canopies to be seen in front of his new theatre. Without any advice from the Building Bureau of the Department of Public Safety, Pittsburgh, a horde of men were placed at work at midnight to demolish the canopy. This was done in the course of an hour or so, and the scrap carried to one of the city wharves. Col. Allen contended that the officials had no right whatever to destroy his property, but he was given little if any consideration.

What was thought at that time, to have been a "comedy" staged by the city authorities now appears as a sort of "tragedy" with Col. Allen on the heavy end. On Wednesday last an ordinance was presented before Pittsburgh council authorizing the payment of $49942 in favor of E. J. Allen, for damages to the canopy in front of his theatre and for the payment of expenses in replacingsame. The resolution asserts that the canopy was removed without just cause when it was in a perfectly safe condition.

This is but a sample of what little knowledge some of the city officials possess in regard to the building laws.

The heating contract for the Presbyterian Hospital, Northside, Pittsburgh, has been awarded to Anderson & Darrah, 3200 Penn avenue, Pittsburgh. The plumbing work has been secured by Weldon & Kelly, Pittsburgh.
WILKES-BARRE ADOPTS BUILDING CODE.

The city council of Wilkes Barre, Pa., has just adopted a new building code which was compiled by a committee of local architects and builders and which has been pronounced the most modern of its kind in the eastern section of the country.

The heights of buildings are regulated to range from not more than 16 stories or 200 feet in the first class to under 40 feet in the seventh class. The height of no building, however, shall exceed four times the width of the street upon which the structure faces and no building shall be over 200 feet in height. The heights are also governed by the widths of structures.

The code controls the seating capacity of a theatre; the ventilation of similar public buildings and safety from fire. Heretofore when a person erected a building or other structure it was necessary to do business with more than one city department. Under the new code, all business will be done with the department of buildings.

There are seven classes of buildings as follows:

1. Built entirely of incombustible fire and water proof material.
2. Similar in construction to first class, but with interior walls of brick and fireproof beams and ceilings.

NEW BUILDING ON OLD WALLS.

The Ahile Haines Optical Company, Columbus, O., will take bids about April 1 on putting in a new front, interior work, etc., for a building on N. High street, Columbus. The building will have two store rooms on first floor with offices on the second and third floors. Plans for the work were made by Architects Richards, McCarty & Bulford, Hartman building, Columbus. The material specifications will call for fire doors, oak and yellow pine trimming, patent store fronts, composition roofing, metal ceilings, tile and marble work, prism glass, electric fixtures, hard plaster, hard plating, etc. The work will cost $75,000.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Corresponding Period</th>
<th>Contracts Awarded:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1909</td>
<td>January 1, 1914, to date $14,611,000</td>
</tr>
<tr>
<td>1910</td>
<td>Corresponding period 1913 $27,253,000</td>
</tr>
<tr>
<td>1911</td>
<td>Corresponding period 1912 $12,186,000</td>
</tr>
<tr>
<td>1912</td>
<td>Corresponding period 1911 $23,557,000</td>
</tr>
<tr>
<td>1913</td>
<td>Corresponding period 1910 $12,180,000</td>
</tr>
<tr>
<td>1914</td>
<td>Corresponding period 1909 $14,472,000</td>
</tr>
<tr>
<td>1915</td>
<td>Week ending March 11, 1914 $1,893,000</td>
</tr>
<tr>
<td>1916</td>
<td>Corresponding period 1913 $2,136,000</td>
</tr>
<tr>
<td>1917</td>
<td>Corresponding period 1912 $3,213,000</td>
</tr>
<tr>
<td>1918</td>
<td>Corresponding period 1911 $1,879,000</td>
</tr>
<tr>
<td>1919</td>
<td>Corresponding period 1910 $1,114,000</td>
</tr>
<tr>
<td>1920</td>
<td>Corresponding period 1909 $1,673,000</td>
</tr>
<tr>
<td>1921</td>
<td>Week ending March 4, 1914 $1,619,000</td>
</tr>
</tbody>
</table>

The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plat as illustrated.

A High-Grade Pump at a Moderate Cost.

Send as your Conditions

Special Circulars and Prices on application

Reineke-Wagner Pump & Supply Co.
PITTSBURGH, PENN.
CANNOT SEE TIN ROOFS.

EDITOR CONSTRUCTION RECORD:

It has afforded the writer much pleasure to read the comments on Tin Vs. Composition Roofing, which have been appearing in your columns for the past month or so. So far I am still of the belief that tin does not give all the results which the manufacturers claim for it. In fact from all that I can glean from their correspondence, it would appear that the manufacturers are much at loggerheads with one another in their processes of making roofing plate. They seem to embody in their statements the same feeling of distrust and ill-feeling which appears conspicuously in their advertisements. Is it any wonder that the purchasers of roofing material have lost more or less faith in the material. It reminds me of the old saying "The pot calling the kettle black."

One party stated that a written guarantee of 10 years is given to their product, and that he has known of his brand of roofing lasting for a period of 40 years. If these conditions are right, could it not be possible for him to make a "ten-strike" and give a much stronger guarantee. The tin roofing people can talk all they please about how long a tin roof will last and of its superiority over that of composition material, yet it is a fact that right under the noses of some of the Pittsburgh manufacturers there are composition roofs which have been in existence for 35 years and not a cent has been paid for repairs. There is no such thing as spring and fall painting of composition material such as tin roofs demand.

The metal interests seem to doubt the statement that practically 75 per cent of the specifications for roof covering call for composition material. If they would glance over the columns of the Construction Record each week they would soon ascertain the vast amount of new work which calls for this material. Outside of church and costly residence construction, in which cases tin roofs are used for display purposes, the tin roof has not the call which its principal competitor has. Nor is price the reason.

Yours very truly,

F. G. R.

GENERAL NEWS.

B. E. Hamilton, of N. C. Hamilton & Sons, contractors, has accepted a position with the sales department of the Suburban Brick Company, Moundsville, W. Va.

The Cincinnati Fireproof Door Company, Cincinnati, has been incorporated with a capital stock of $15,000, to manufacture fireproof doors. The company took over the business of the J. K. Nickerson Company two months ago, which manufactured fireproof doors, hoisting apparatus and electrical machinery. C. J. Mees, Cincinnati, is the active head of the new door company.

The Cincinnati Sheet Metal & Roofing Company, Cincinnati, has increased its capital stock from $30,000 to $100,000. This was done to allow sufficient capital to purchase a new plant and to enlarge the company's manufacturing facilities. The officers are: President, E. G. Ruder; vice president, B. R. Milkin, and secretary and treasurer, H. L. Olden.

FOR SALE

A planing mill and lumber yard in one of the best towns in Western Pennsylvania. Enjoying a good trade. The mill building would make an ideal manufacturing plant. Will be sold singly or together. Reasons for selling to end a partnership. If interested get in touch at once. Address F. M. & L., care the Construction Record, Pittsburgh, Pa.

FOR SALE CHEAP.

One yard to 1 1/2 yard hand power brick mixer. Owner gone away and left this with us for sale. Must be sold quick. Inquire George Lanz & Sons, Southside, Pittsburgh. Bell Phone 790 Hemlock.

THE ROOF OF A BUILDING IS JUST AS IMPORTANT AS THE FOUNDATION

Mr. Architect, Builder and Supply Man keep your reputation up by Specifying, Using, Handling High-Grade Roofing.

Consult H. B. MORROW, Special Representative

FLINTKOTE MANUFACTURING CO.

305 Wabash Building, PITTSBURGH

Rex Flintkote Roofing—Zarex Roofing—Zolium Roofing—Rex-Tile Shingles.

Call or Write for Samples.
H. C. BEMIS
MANUFACTURERS OF
HIGH GRADE MILLWORK
BUILT UP TRIM STAIR WORK
BANK AND OFFICE FIXTURES
INQUIRIES SOLICITED

PITTSBURGH WAREHOUSE
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TWISTED BARS, PLAIN BARS,
DIAMOND BARS,
Lump Sum and Pound Quotations.
Working Drawings.

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WITHEROW STEEL CO.
GENERAL OFFICES: 210-214 KEYSTONE BLDG.

has been formed to serve Contractors for requirements in
Reinforcing Steel and Kindred Materials for Reinforced Concrete.

STANDARD SPIRAL WINDOWS
Have such exclusive features as to make it The Best Window on the market. It has
no Weights, Cords or Pulleys—Opens from the inside and is highly adapted for Ho­
tels, Schools, Hospitals, Apartments.

For further information ask

STANDARD SPIRAL WINDOW COMPANY
Jenkins Arcade Pittsburgh
Read This Letter

Mr. A. S. Johnson, Freeport, N. Y.

Dear Sir:—The work you did for me in waterproofing the cellars under the Lynbrook National Bank and Lynbrook Pharmacy has proven satisfactory in every respect.

The cellars are perfectly dry, notwithstanding the fact that the floor is nearly two feet below water level.

Would be pleased to recommend you to anyone interested in the waterproofing problem.

Yours truly
(Signed) JOSEPH S. SIMONSON.

Waterproofing Compound

Mr. Johnson uses Ceresit. On the strength of what Ceresit has done, Mr. Johnson has landed many nice contracts for waterproofing leaky cellars. Ceresit has made good in every case. It can make good for you no matter whether against slight moisture or against the heaviest hydrostatic pressures. Investigate! Write for the "Book of Evidence."

Dealers Wanted in Unoccupied Territory.
Ceresit Waterproofing Co.,
915 Westminster Building, Chicago.

Pittsburgh Agents—D. J. Kennedy Co.
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Suspended Ceilings, Metal Lath Partitions, Steel Corner Beads, Light Iron Purling, and Metal Lathing. Estimates Furnished.
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Concrete Foundations, Steel Erection.

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Krauser & Co., W. N., Smallman St., Pittsburgh.
Tylor Co., The W. S., Bessemer Blvd., Pittsburgh.

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SHEET METAL WORK.

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Watt & Son, 1130 East St. S. S., Pittsburgh.

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Empire Flooring Co., Jenkins Arcade, Pittsburgh.

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SHEET METAL WORK.

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STONE DEALERS AND CONTRACTORS.
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STAIR WORK.
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STAIR BUILDERS.

SUSPENDED CEILINGS.
J. C. Baxendell, Mt. Oliver, Pittsburgh.

TRUSSET METAL.

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WALL TIES.

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Bridges, Buildings, Roof Trusses, Girders, Columns, Builders' Iron Work, Beams, Channels, Angles, etc., in stock for quick shipment.

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Hotel Lenox is modern, fireproof, and beautifully located. It is popular with tourists because of its fair rates, courteous treatment and complete equipment. The cuisine and service are the best obtainable.

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$1.50 Per Day and Up.
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PLANNING PARKERSBURG SCHOOL.

Architect Frank L. Packard, Hayden building, Columbus, O., has plans under way for the $250,000 high school building, which will be built for the Board of Education, Parkersburg, W. Va. The structure will be 190x250 feet, two stories and basement and will be constructed of brick, stone and concrete. The roof and floors will be of reinforced concrete slab construction. Other specifications include metal lath, face brick, marble and tile work, maple flooring, yellow pine trim, steam heating, electric lighting, etc. The building will contain auditorium, manual training and domestic science departments, gymnasium, offices, etc.

COSTLY REMODELING WORK.

About $300,000 is to be spent by James C. Nicholson, New First National Bank building, Columbus, O., in remodeling a store and office building of five stories in height. The work will consist of changing front of building by building an arcade through the center to have about 50 store rooms. An additional story will also be erected which will be used for office purposes. New store fronts, changing partitions, etc., will have to be made. Material specifications for the work include reinforced concrete work, hard plastering, composition roofing, electric lighting, marble and tile work, hot water or steam heating, etc.

SELECTING ARCHITECT FOR BANK BUILDING.

The Horne Building Association Company, Newark, O., is to select an architect this week to make the plans for a two- or four-story bank and office building, 22x60 feet. It will be built of marble, brick and terra cotta, and will have reinforced concrete floor and roof construction, hard plaster, composition roofing, marble and tile work, steam heating, electric lighting, etc.

APPROVE SCHOOL PLANS.

The Board of Education, Fulton building, Pittsburgh, has approved the preliminary plans made by Architects Jansen & Abbott, Century building, Pittsburgh, for the elementary school building, to be constructed on Colombo street, at a cost of $175,000. This building will be 80x200 feet, two stories and basement and will contain 22 rooms. The various materials to be used will consist of tile roofing, reinforced concrete and tile partitions, fireproof doors metal window sash, marble and tile work, steam heating, electric lighting, maple and oak flooring, etc.

AKRON'S GARBAGE PLANT.

Plans have been completed for the proposed garbage reduction plant, which is to be constructed for the City of Akron, O. These plans are being prepared by R. W. Pratt, Hippodrome building, Cleveland and call for a one and two-story building, 67x115 feet, with an additional building 22x40 feet, both of brick and reinforced concrete construction. The equipment details have not been completed. The building material specifications include structural steel, composition roofing, steel sash, brick and reinforced concrete work, electric lighting, etc.

MATERIAL CONTRACTS AWARDED.

The Board of Education, Troy, Ohio, which has under course of construction a $100,000 school building, 194x196 feet, has awarded the steel construction to the Case Crane & Engineering Company, Columbus, O.; reinforced concrete work to the Truss Concrete Steel Company, Detroit; interior trim and fireproof doors to the Robinson-Curry Lumber Company, Marysville, O.; electric lighting to the Meeker Electric Company, Columbus. Most of the other bids for work are in and contracts will soon be awarded. John Hina, 711 Oakwood avenue, Columbus, has the general contract.

COLUMBUS SCHOOL PLANNED.

Architects D. Riebel & Son, New First National Bank building, Columbus, O., have completed plans for a $200,000 school building, which is to be built on Studer avenue, for the Board of Education, Columbus. It will be a two-story brick and stone fireproof structure 155x192 feet, and will contain 22 rooms, also gymnasium, auditorium, manual training and domestic science departments, kindergarten, etc. The foundation contract has already been awarded to Patrick Shanahan, 857 Pennsylvania avenue, Columbus.
Hodges System of Centering for Reinforcing Concrete

Jesse E. Hodges of Cincinnati, O., has invented a new system for centering reinforced concrete work which has a number of new features. This system can be applied either to flat slab or beam and girder work and has the advantage that it can be used with practically no waste of lumber for floor slabs and the joists which hold the floor slabs in place.

The system consists of a series of mats formed of ribs which can be made of metal or wood, spaced a short distance apart so that two mats can be so placed that they will lap with each other. This is well shown in Fig. 1 which shows the construction of a building being erected by the Ferro Concrete Construction Company at the corner of Eighth and Broadway, Cincinnati.

The ribs of mats are held back by flat chains fastened to each individual rib about a foot from the ends. The standard practice is to use ribs 4 feet 6 inches long, made of wood, each rib being 2 1/2 inches deep and 2 inches wide, the space between the ribs being 2 1/2 inches. The chains holding the mats together are placed on one side of the rib about a foot from each end. Thus any desired adjustment can be obtained by reversing the mats. That is, one mat will have the chains down and the adjacent mat will have the chains up. The stringers which hold up these ribs are run parallel to the beam sides in beam and girder construction. In building shown in Fig. 2 one stringer was used half way between beam and a ledger on the sides of the beam forms the ends of the mat. Thus the stringers don't have to be changed in length for different jobs as they can be used in long lengths and lap. This is a decided advantage over the systems heretofore used where joists were run between beam sides and where the joists had to be cut to fit. After the mats are in place they are covered with No. 26 gauge galvanized metal tacked on with small carpet tacks.

The metal shown in the illustration was used throughout a flat slab job in Cincinnati and this is the second building on which it has been used and it is still in very good condition. After being used on one job it is put through an ordinary hand roller, which straightens out all the bends and kinks. The sheets can be lapped as desired so that the only cutting that has to be done is small places in connection with columns. After the metal has been placed the upper surface is coated with ordinary paraffine oil and this should be used about every other time the metal is used in order to prevent the concrete adhering thereto. This is done by a long-handled brush as shown in Fig. 1, or, if preferred, the oil can be applied by dipping the sheets before they are placed.

Fig. 2 shows construction from below. Adjustable shores can be seen in this latter figure, which are so made that they can be used for varying story heights without sawing. These shores are not a part of the Hodges system and...
have been in use for some time, but when they are used in connection with the Hodges system, the shores, stringers and slab form work can be used in any building without waste of lumber or sawing; the only cutting that has to be done being that required at the columns.

**CONCRETE POLES IN STORMS.**

The strength of the reinforced concrete telegraph pole has been demonstrated upon more than one occasion during violent storms to which poles of the wooden type readily succumb. A most severe test inflicted upon them occurred during the recent blizzard. A striking example of their strength as exemplified in this storm, was in the case of the telegraph line of the Pennsylvania Railroad, where a large number of reinforced concrete telegraph poles were exposed to the storm which swept over the Hackensack meadows in the vicinity of the west entrance of the Pennsylvania tunnels leading into New York city.

The company had erected many of these poles in recognition of their durability and storm-proof properties. The storm center was in and about New York city, and so violent was the wind, which reached a velocity of 70 to 80 miles an hour, and so great the accumulation of snow and ice, that New York was practically isolated for a time, at least so far as above-ground telegraphic communication with Philadelphia was concerned. The company's telegraph line was cut off for a long time and many of the wooden poles were broken down by the wind and the burden of snow and ice. In no case, however, did a reinforced concrete pole collapse. So severe was the stress that the wooden cross-arms upon some of these poles were broken, but the poles themselves remained intact.

A similar record for reinforced concrete poles was made wherever they were put to the test. These poles are made of Portland cement concrete, reinforced with steel rods to take care of tensile strains. They are not only proof, but keep in far better alignment than poles of the customary type. They do not rot as do wooden poles and never rust as is the case with steel poles. At the present high price of timber, concrete poles are not prohibitive in first cost, and, considered as a long-time investment, are found to be economical. The Pennsylvania and other railroad companies are establishing their own manufacturing plants and it is likely that the next few years will witness a marked increase in the installation of concrete poles on all important lines.

**Standard Exterior Color Scheme**

The safe colors for a house are red, white, yellow and brown. Yellow or gray suits a plain, pitched-roof or square colonial house. Grays and browns are right for nondescript or not handsome houses. The gray tones are always more pleasing when made on a yellow shade than on cold blue tones. White is always country house. It needs and mostly has trees and shrubbery around it, and the glimpses one gets of such a house are quite pleasing. Even when autumn has made the trees naked the white still charms, and if the walls have been made yellow, trim white, it will be better still both for summer and winter landscape. The colonial style never should have dark colors, such as red, brown, and similar pronounced colors. Pure white is the one allowable color.

In some other style of house white is good, too, say a frame house, and a bottle-green trim is correct here. The old stone or frame farmhouse looks well with green blinds and almost any shade of trim will be allowable. The walls may be white, yellow or gray, with appropriate trim color. The rule is that a white body will admit of almost any shade of trim. Pea green, gray, light yellow or a very light brown trim will do. A brownish gray wall will take kindly to white trim and chrome green or deep brownish-gray blinds. Doors white or grained oak.

Houses painted in the manners indicated will always present a neat perspective, and the architectural beauty will also be enhanced. If white has palled upon the owner's taste, and he desires a change, a very agreeable one may be had by making the body of the house a warm drab or a stone gray, or medium drab, light bronze yellow, colonial yellow, fawn cream, buff, ivory white, the latter with white or color trim.

The low-built, squatty houses require light and cheerful coloring as these have the optical effect of raising the house, while dark colors only serve to emphasize its utter squattiness. Very few greens are suitable for exterior house walls. Yet an artist has suggested a terre verte and white scheme with a little yellow. Slate greens, however, are good, and a green made from black raw sienna and a touch of lake is very fine. Obviously, a green wall will look badly where the house sits amid a bit of green shrubbery and trees. In this case the house needs colors that will agreeably contrast and harmonize with the growing green things.

On account of their peculiar style of architecture, some houses should be painted entirely white, body and trim, but generally, and as a rule, a building done entirely in white does not show up to the best advantage. But always white and nothing else. For this reason the top coat might, with color advantage, be made of zinc white, or at least part zinc and part white lead. There is, of course, much difference in the white leads as to whiteness, due to methods of manufacture mostly. Hence it is best to select a pure white lead, or which there are a few well-known brands. White lead will wear better than zinc white, in respect to its not scaling or cracking, though this is offset with the known liability of white lead to chalk, so that if we add the two together we get a very lasting paint. Where there is much soft coal smoke it is a hopeless effort to maintain a pure white surface with white paint unless we repeat once or twice a year.

Success in using a dark green trim body of house white, depends on getting enough of the green on. It must be in evidence everywhere on the structure, excepting, of course, on the body of the house. Trim under eaves, window sash, corner and baseboards, porch rail, porch flor, blinds, even the foundation, all must be green.—Master Painter.

**A RUST-PROOF COATING.**

A new patent rust-proof coating for iron or steel is being used in England, and is in the form of a paint that is applied to the surface of the article to be treated and is then baked. The following are the proportions of the ingredients by weight: Linseed oil, 23 parts; calcium resinate, 30 parts; manganese borate, 1/3 part; sugar of lead, 1 part; rosin, 37/2 parts; artificial graphite, 25 parts. The whole is mixed and applied to the steel or iron by brushing, dipping, or other procedure. The article is then baked at 600 degrees F. for a period of one hour and 40 minutes. It is stated that the coating is highly lustrous and is resistant to corrosive influences, but that no other form of graphite gives satisfactory results.
Many Decorating Changes

Great changes have taken place in every line of industry, but nowhere, perhaps, has such revolution been wrought as in the art of decorating our modern homes. In the first place, a new style of architecture has sprung up—the villa and the bungalow are new ideas. The cement blocks, the rough cast, the pebble dash, are new modes of construction. The new art designs are new motives of decoration. The canvas, burlap, linoleum and a thousand other similar fabrics on the market, are new materials for accomplishing it.

In all these changes and the confusion resulting from it, the painter is often at a loss, and must carefully feel his way or suffer damage. And yet in all these new ideas, we cannot fail to see a revival of the styles of long ago modernized—that is, changed enough to serve our present requirements. Take the construction of our modern houses. What is the beamed ceiling but an improvement on the rafter; and cross-boards of the last century, which are yet common in many places of civilized habitation?

In those days the ceiling of a room was the floor of the room above. The modern fireplace is a modernized adaptation of the open hearth, which was not only the source of warmth of the tenants, but also served as a cooking establishment for the household.

Unquestionably, much that we admire and praise as modern in our houses of to-day had a different relation in the past. Everywhere evolution and progression are shown, but rarely originality. Let the one who boasts of being original beware lest he may be found to be only eccentric and grotesque.

But whatever changes have taken place in the construction of modern dwelling houses, a corresponding change has taken place in the style of their decoration. We do not now do our work as we once did. The wall paper, “ceiling, walls and borders to match,” is out of place. They do not suit the various apartments, and how could they?

Look at the houses first from the outside. The one of 25 years ago—high, self-sufficient, proud, with big columns and cornices. The one of to-day, low, spreading with large roofs and overhanging eaves, simple, comfortable, cozy. Step inside—that narrow hall with the long staircase is done away with, and an attractive reception hall, with circling stairway and large openings instead of doors, invites you. The large living room and library, with their straight lines and square casements, are the exponents of modern thought.

It is evident that the decoration should be kindled in spirit to the architecture. If the architect of the past has been chiefly modeled after the Greek order, with its mouldings and columns, and the ornamentation dominated by Greek influences, we must, if we have caught the spirit of our time, banish every trace of classic motives from our minds.

There is a certain severity in modern houses. The square casements, instead of Greek mouldings; the ceiling beams, the heavy wooden cornices, give certain prominence to linear effects.

These must be carefully dealt with. Therefore, the first thing to do in decorating a house is to select the proper color for the woodwork. Its mass and prominence give it its importance. Properly finished, woodwork simplifies wall decoration. Slight it and the case becomes correspondingly difficult.

It may be said in passing, that the hardwood should be stained. Dark stained woodwork gives dignity to the rooms. The natural colors of most woods look raw and unfinished, and a suitable wall decoration is difficult. But the stains should be wood color—any color the wood itself will not obtain by aging is barbarous. This truth lies in the very nature of things, and should not be questioned.

If the woodwork is painted, white or black are the only alternatives. The woodwork may be white and enameled if desired, and it may also be painted black in the flat, like ebony. Now let this be distinctly understood, for on this alone depends success or failure. Your doors may be painted and grained—that is, metal and glass. The importance of various substances—the hardware enriches the wood and sets it off, as we say. The glassware does the same for the wall covering. The whole arrangement of the house is enhanced by having these various materials played off against each other, contrasting, reciprocating blending like the dawn of the morning where the various colors are tenderly fused in the onward march of day.

Many of the modern lighting fixtures are a decoration in themselves. The large shades so frequent over the dining room table, for instance, have often given the color scheme of the whole room.

Besides metal, the glass must be mated. There are few people who realize the part glass plays in the struggle for the ideal house. They have French windows as a matter of course, and leaded glass, because the architect has designed it so. They have china and cut glass dishes and copper and silver utensils exhibited on a plate rail in the dining room, just because it is fashion. As for the sub-
stance itself, they have no respect. Its workmanship, which it has taken thousands of years to perfect, is only a matter of dollars and cents to them, and its real value relative to the other decorations they but dimly perceive.

The shaded windows are items of great importance. Their colored designs are generally modern and handsome, and rarely furnish suggestion, not only for tones, of color, but motives for ornamentation. It may be truly said that the charm of a modern house is in bringing into play in their proper sphere, these substances—wood, plaster, metal, glass and woven fabrics, in their straightforward simplicity.

As to the arrangement of the various rooms, the large living room shows the tendency of the age. It is a revival of the past, when all the members of a household lived together in groups scattered here and there in the large hall. It was in the good old social time. For many years past individualism has ruled the world, and therefore, human dwellings have been a cluster of small cells, a sort of pigeon-holed arrangement, where each individual could have a world of his own. At present the social instinct of the individual is emphasized, and this tendency is seen in the craving for large halls like living rooms.

* * *

GENERAL NEWS.

Earnest Troeschel and Stan Kenitz have purchased the business of the Hill Top Roofing Company from the administrator of the estate of A. J. Flock. Both parties were associated with Mr. Flock of the above company until their taking it over. * * *

The Weisberg Roofing Company, 1617 Beaver avenue, have removed its place of business to 1231 Pennsylvania avenue Northside, where they will have a more commodious building to take care of its increased work. * * *

The Electro Force Publishing Company, Strauss building, Milwaukee, Wis., have placed before the public a book entitled "Electrical Light and Motor Wiring" 1914 edition. This book is made in a special size for convenience in the vest pocket and it is the aim of the author to dwell upon the different modes of wiring under different conditions in various classes of buildings. This book should prove of considerable value to the architect or electrical contractor. It is bound in limp leather and the price is $1.00 per copy. * * *

The Bernard Glockler Company, Pittsburgh, Pa., have just issued a new catalogue dealing with cold storage doors and hardware. The information contained in this catalogue will materially aid the architect or contractor in his insulation problems. A copy will be mailed free to anyone. * * *

McNulty Brothers, Pittsburgh, have been awarded the plastering contract for the new Masonic Temple, Pittsburgh. * * *

Caldwell & Semple, Sharon, Pa., secured the heating contract for the Midland Savings & Trust Company's building at Midland, Pa. The plumbing work will be done by Chandley Brothers, Beaver Falls, Pa.; cut stone to Eike Brothers, Midland; structural steel to McClintio-Marshall Steel Construction Company, Pittsburgh. * * *

Alcoxit Brothers, Pittsburgh, have purchased the business of the Electro Force Publishing Company. The new company will include structural steel, iron stairs, etc. Separate bids will be taken on the power plant, lighting fixtures, etc.

PAINTING STRUCTURAL WORK.

The average painter asked to make a bid on steel structural work on the basis of ton weight would have to think some before answering. And then some more. It is simple enough when you know how.

The basis for estimate is found by carefully noting the amount of paint and time required to do a certain structure, knowing the weight of the structure it is easy then to calculate what it can be done for on other similar work.

First, it requires more paint proportionately for a light than for a heavy weight structure, the reason for which is quite obvious. For a heavy structure they estimate that .40 of a gallon will do two coats, the first coat requiring .25 of a gallon and the second coat .16 of a gallon. This makes .40 of a gallon of paint per ton of heat structure. For light bridge structures they figure that it takes 20 of a gallon for two coats; that is, .40 of a gallon for the first coat and .20 of a gallon for the second coat. They also figure that to paint a heavy railroad bridge three coats requires approximately .50 of a gallon of paint. For the first coat .24 of a gallon; for the second coat, .16 of a gallon, and .12 of a gallon for the third coat.

For light highway bridges they figure that it will require .80 of a gallon for three coats, as follows: For the first coat, .35 of a gallon; for the second coat, .25 of a gallon, and for the third coat, .20 of a gallon. Let us take as an illustration and to make the matter clearer, if that be necessary, a light structure containing 600 tons of steel or iron that is to be given three coats of paint. It requires .80 of a gallon to coat each ton of this metal three times. Therefore 600 tons times .80 gallons makes 480 gallons for three coats.

* * *

W. E. Ackerman, Frank W. Nesbit, William F. McKinley, William C. Eberle and Frank A. McMahon, of Wheeling.

DAYTON WORK OPEN.

Bids are to close, on the 18th inst., for building an 11-story brick, steel and reinforced concrete office and theatre building, 33x142 feet, for the Central Building Company, Reibold building Dayton, O. Architects F. J. Hughes & Company, U. B. Annex, Dayton, prepared the plans. Material specifications will include structural steel, iron stairs, tile floors, tile wainscoting, composition flooring, concrete foundations, concrete bootings, metal lath, sheet metal work: terra cotta, face brick, waterproofing, etc. Separate bids will be taken on the power plant, lighting fixtures, etc.
**Pittsburgh.**

Dr. H. E. McGuire, Pittsburgh Life building, contemplates erecting a 2½-story brick veneered residence on Darlington road, near Wightman street, to cost $8,000. Architect has not been selected and details have not been decided.

The A. & S. Wilson Company, 541 Third avenue, received the contract for altering the interior of an office on Fourth avenue, for the Freehold Real Estate Company, 334 Fourth avenue. Cost $3,000.

W. F. Trimble & Sons, 1719 Pennsylvania avenue, Northside, received the contract for altering a two-story brick and marble building on 31 Wood street, for Ham & Son, 1391 Broadway, New York City. Plans by Architects Seymour & Schoenwald, 7 W. Forty-second street, New York City. Cost $75,000.

Architect J. H. Phillips, McKees Rocks, is taking bids on the erection of a brick and hollow tile residence on Singer avenue, West Park, McKees Rocks, for Frank Wilde, 101 Singer avenue, McKees Rocks. Cost $4,000.

F. Pachirer, 645 North avenue, Millvale, received the contract for erecting three 2½-story brick residences on North avenue, Millvale, for A. Kovacs, Colton street, Millvale. Cost $10,000.

The Yost Produce Company, 70 S. Fifteenth street, will be ready for bids about April 1 on erecting a two or three-story brick mercantile building on Bingham street and Bedford square, S. S., to cost $12,000.

Architect A. B. Snyder, Empire building, is taking separate bids on erecting six 2½-story brick residences on Northumberland street, for Abel & Smith, Shady & Forbes street. Cost, $4,600 each.

Thomas Winkler, Grand Avenue, Northside, received the contract for erecting a one and two-story brick store building on Woodlawn and McClure avenues, for Raphael Frank, 1441 Woodlawn avenue, Northside. Cost, $3,500.

Contract for brick masonry let to A. J. Depp & Company, 1334 Adams street, Northside.

Architect A. B. Snyder, Empire building, will take separate bids on altering a 2½-story brick apartment building on 1024-28 Blackadore avenue, for Mrs. Josephine W. Garber, 601 Emerson street. Cost $5,000.

F. P. Hammerschmitt, 281 Hiland avenue, West View, received the contract for building a 1½-story frame residence on Mimola street, West View, for J. Welsh, 1214 Hoppler street, S. S. Cost, $2,600.

George L. Bennett, 7426 Race street, received the contract for erecting three brick residences on Worth street, for Margaret Stevenson, 7054 Commerce boulevard.

The National Fireproofing Company, Fulton building, received the contract for constructing a three-story brick and concrete fireproof manufacturing plant on Bidwell street, for the Pittsburgh Tinware Manufacturing Company. Cost, $25,000. Plans and specifications are completed.

The Central Home Building Company, Vandergrift building, received the contract for building a 2½-story brick and shingle residence on Kelton avenue, Dormont, for P. J. O'Connell, 2409 Fifth avenue. Cost, $4,000.

Architect W. D. Gilchrist, Frick building, has plans in progress for a 2½-story brick apartment building, to be erected on Roop street and Penn avenue, for the Kirk Estate, Pacific avenue. Cost, $12,000.

Architect W. A. Thomas, Park building, has plans in progress for two two-story brick residences, to be erected on Sempel street, for W. E. Trenchell, 362 Meyran avenue. Cost, $7,000.

The Oakland Presbyterian Congregational Church contemplates constructing a one story brick church on Dawson street, Oakland, to cost $100,000. Architect has not been selected.

Golden & Crick, 3512 Fifth avenue, received the contract for remodeling a three and four-story brick mercantile building on 348-50 Fifth avenue, for J. F. McCrorey, 521 Broadway, New York City. Cost, $30,000.

Architect C. W. Eier, 219 Sixth street, awarded to George E. Shipley, Vassar & Grotto streets, the contract for altering a one-story brick veneered studio on 242 S. Highland avenue, for K. Jamieson, 126 S. Highland avenue. Cost, $3,000.

Architects Cosgrove & Custer, Farmers Bank building, are taking bids on constructing a one-story brick and concrete fireproof commercial garage on Shady avenue, near Northumberland street, for Frank A. Minnemeyer, Farmers Bank building. Cost, $30,000.

W. S. Mack, 7576 Baxter street, received the contract for building a 1½-story brick and shingle bungalow on Frankstown road, for Miss M. Cox, Frankstown avenue. Cost, $3,500.

J. A. Cornelius, House building, was awarded the contract for building a two-story brick veneered and stucco residence on West Pittsburgh Terrace, for Carl T. Shaffer, 66 Oneida avenue. Cost, $8,500.

Joseph Bengler, Oakdale street, received the contract for building a two-story brick veneered and shingle bungalow on Superior avenue for August Geist, Chartiers street. Cost, $3,300.

Architect John T. Wirmther, Commonwealth building, awarded to Thomson-Starrett Company, Second National Bank building, the contract for constructing a nine-story brick and terra cotta fireproof office building on Seventh avenue and Cherry way, for the Central District Telephone Company, 410 Seventh avenue. Cost, $1,200,000.

Architect W. A. Thomas, Park building, awarded to Rubenstein & Barsky, 2108 Bedford avenue, the contract for erecting a three-story brick apartment building, on 26 Overhill street, for Isaac.
Granite fireproof construction. It will be 20 stories, 130x216 feet building will contain about 1,000 rooms. The alterations to No. 43 Engine House, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Penn Hotel, to be built on Sixth Avenue and Fifth Street, have been selected to prepare plans for a $3,000,000 hotel, for Mr. C. A. Blanchard, care C. A. Blanchard, Cherry Street, for the William Pen
THE CONSTRUCTION RECORD

Engineers building. Cost, $1,200.

Kittanning, Pa.—J. H. Bowser, Orr avenue, is contemplating erecting a frame residence on Orr avenue, from private plans. Cost, $3,500.

Lakewood, O.—Architects Derem & Beer, 220 Avenue building, Cleveland, are taking bids on erecting a 2 1/2-story brick and stone residence in Clifton Park, for Frank A. Mahling. 367 Fulton road, Cleveland. Cost, $26,000.

Architect O. K. Staple, 1017 Rose building, Cleveland, has preliminary plans in progress for a two-story residence and garage, to be erected on Lake avenue for Robert C. Rice, 1125 Ohio avenue. Cost, $3,000.

Ashland, O.—Architect Vernon Read, of Mansfield, has plans in progress for a two-story brick stone and marble fireproof residence, to be constructed on Center and Walnut streets, for P. A. Meyers. Cost, $100,000.

Beaver, Pa.—Architects Carlisle & Sherrer, Jenkins Arcade building, Pittsburgh, is taking bids on the erection of a two-story brick, stucco and tile residence, for William J. Mellon. Cost, $1,500.

Campton, Pa.—Architect Isra. E. Cas- shall, of Tarentum, is taking bids on the erection of a two-story brick and hollow tile residence, for Joseph B. Danno, Tarentum. Cost, $4,000.

Celina, O.—Architect B. R. Mathews, of Lima, has plans in progress for a two-story brick ventered residence, to be erected for Ed. Hiebel, Commercial Bank. Cost, $6,000.

Cincinnati, O.—Percy Larup, 1544 Jonathan avenue, received the contract for erecting a 1 1/2-story brick bungalow, on Robinson road, for Robert Jenson, 143 Curson street, Bellevue, Ky. Cost, $3,200.

Architect C. H. Fasse, 2529 Hemlock street, has plans in progress for a residence addition, to be erected for Mrs. Mary Crowley, 788 Wayne street. Cost, $1,500.

A. Mazzanoff & Sons, 306 Northern avenue, received the contract for building a 1 1/2-story brick and shingle residence on Bedianna avenue, for Bojinger & Hopkins, 540 Main street. Cost, $3,000.

Dr. William Satter, 2168 Central avenue, is taking bids on erecting a 2 1/2-story frame residence, on Klotter avenue, to cost $3,000. Plans by Architects Stirbley & Rasinsky, 267 Union Central building. Cost, $3,000.

Architect Anton Rieg, 2554 Vine street, has plans in progress for remodeling a two-story brick apartment building, on University avenue, for A. Bergman, 1055 Central avenue. Cost, $1,400.


Architect George S. Kopp, 316 Permanent building, has plans in progress for two 2 1/2-story brick double residences, to be erected on Parshall Drive, Cleveland Heights, for F. K. Lees, South Euclid avenue. Cost, $6,000 each.

Columbus, O.—A. B. Harward, 70 East Gay street, is taking bids on erecting a 2 1/2-story brick residence, on Chatham Road, to cost $4,500. Plans by Architects Julian & Julian, Park Savings & Loan building.

Architect Howard C. Frank, 1400 United Brethren building, is taking bids on erecting a three-story brick and hollow tile apartment building on Olive street, for Dr. J. H. Mc­ Cally, 74 South Brown street. Cost, $19,000.

Homestead, Pa.—Architect Howard C. Frank, 1100 House building, Pittsburgh, is taking bids on building a two-story brick ventered residence for Stephen Jale, to cost $5,500.

Kittanning, Pa.—Architects Vydaugh & Wolfe, 347 Fifth avenue, Pittsburgh, are drawing plans for a 2 1/2-story stucco and hollow tile residence, to be erected on Jefferson street, for Dwight C. Morgan. Cost, $12,000.

Norwood, O.—Architect Phillip Pfeiffer, of Cincinnati, awarded to Henry Peterz, 461 McNeil avenue, the contract for erecting a 2 1/2-story brick duplex residences on Allison and Sherman avenues, for Mrs. E. Schmie, 1912 12 Mills avenue. Cost, $5,000.

Toledo, O.—Architect J. A. Downey, Nash building, will be ready for bids about March 26, on remodeling a 2 1/2-story frame residence, on Cherry street, for Charles Snyder. Cost, $5,000.

Architect M. M. Stopheis, Nashy building, is taking bids on erecting a 2 1/2-story frame residence, on Scottwood avenue, for Franklin C. Vischer, 922 Fernwood avenue. Cost, $5,000.

Business Buildings.

Cincinnati, O.—Architects Samuel Hannafoad & Sons, Harbert block, will be ready for bids about April 1 on constructing a six or nine-story brick and reinforced concrete fireproof loft building on Plum street, for the Methodist Book Concern. Cost, $500,000.

Architects Have & Bach, Provident Bank building, will be ready for bids about April 1 on constructing a three-story brick and stone fireproof office building on Fourth street and Broadway, for the Western & Southern Life Insurance Company.

Cleveland, O.—Architects Cooley & Fisher, Century building, Pittsburgh, have preliminary plans in progress for a one and three-story brick and concrete fireproof bakery, to be constructed on E. Thirtieth street, for the Martin Baking Company. Cost, $40,000.

Architect J. L. Conner, 160-1900 Euclid building, will be ready for bids about March 25 on constructing a two-story brick store and apartment building on Lorain avenue and W. Eighteenth street, for Mrs. Catherine Geib.

East Liverpool, O.—Architects Peter­ son & Clark, Market street, will be ready for bids about April 1 on constructing a four-story brick and tile fireproof store and office building, on the Diamond, for the Little Hires' Estate, 10 W. Sixth street. Cost, $50,000.

St. Bernard, O.—The Ferro Concrete Construction Company, Cincinnati, received the contract for erecting a two-story brick and reinforced concrete fireproof warehouse for the Ubika Milling Company. Cost, $30,000.

St. Mary's, Pa.—Architect A. C. Brehm has plans in progress for a two-story brick store and apartment building, to be erected on Chestnut street, for John Koenig, Chestnut street. Cost, $60,000.

Toledo, O.—Architect D. L. Stine, Valentine building, has plans in progress for remodeling a three-story brick and steel bank addition on S. Clair street and Madison avenue, for the Bank of Commerce. Cost, $30,000.

Cleveland, O.—Architect A. A. Sharw­ sky, 4065 Woodland avenue, has completed plans for a one-story brick bakery addition, to be erected on 4711 Sec­ vill avenue, for B. Rosen, Secvill avenue. Cost, $3,500.

Woodlawn, Pa.—Architect F. A. Park, 3435 Kincad street, Pittsburgh, is taking bids on erecting a three-story brick and stone fireproof office building, on Reading Road for the Home Steam Avondale Laundry Company. Cost, $35,000.

The same architect has plans in pro-
Cleveland, O. — Architects W. S. Fergusson Company, 915-1900 Euclid building, have plans in progress for a three-story brick and steel office building, to be constructed on Main and Broad streets, for the National Bank of Commerce. Cost, $25,000.

Aston, O. — Architects Harper & Bliss, Nanucket building, have plans in progress for a three-story brick store and apartment building, to be erected for Jacob Nobil, South Howard street. Cost, $15,000.

Columbus, O. — Architects Mieze's, Tresselt & Bassett, Central National Bank building, awarded to Patrick Shanahan, Pennsylvania avenue, the contract for remodeling a six-story stone building, to be constructed on Spring and High streets, for the National Bank of Commerce. Cost, $35,000.

Akron, O. — Architects Harpster & Bliss, Nanucket building, have plans in progress for a three-story brick store and apartment building, to be erected for Jacob Nobil, South Howard street. Cost, $15,000.

Wheeling, W. Va. — Architects S. F. Heckert, Bessemer building, Pittsburgh, has plans in progress for a two-story brick fireproof store building, to be erected for the Mt. DeChantel Academy for the Sisters of the Visitation. Cost, $70,000. Architect has not been selected.

Jenkinson, W. Va. — Architect E. V. Garrett, of Pocahontas, Va., is taking bids on the erection of a two-story frame church, for the M. E. Congregation, to cost $3,000. Same will be built by the Pocahontas Consolidated Coal Company.

Tarentum, Pa. — Architects Ira F. Cutshall, 615-1900 Euclid building, are taking separate bids on erecting a one-story brick church on E. Eighth avenue, for the English Lutheran Congregation. Cost, $15,000.

Cleveland, O. — Architects Bohm & Parson, 911-1900 Euclid building, are taking separate bids on erecting a one-story brick church on E. One Hundred and Third street and Garfield avenue, for the Bethlehem Congregation. Cost, $30,000.

Fiqua, O. — Architects Charles Herby, of Dayton, has been selected to prepare plans for a one-story brick church, to be erected for the Grace M. E. Congregation, to cost $25,000.

Celina, O. — Architect J. A. Hasecoster, 472 Second National Bank building, Richmond, Ind., is revising plans for a one-story brick church, to be erected for St. John's German and English Congregation. Cost, $30,000.

Cleveland, O. — Architect Theodore Conner, 908 Park building, is taking bids on erecting a two-story brick and stone church and Sunday school rooms on Hampden avenue, for the Zion Evangelical Congregation. Cost, $24,000.

Columbus, O. — The Whitehall Methodist Episcopal Congregation will take bids on erecting a one-story brick church, from plans drawn by Architects Strubing & Lum, Denig-Person building, awarded to A. H. Leibrand, 250 E. Livingston avenue, the contract for building a store front on E. Nineteen north, for the S. S. Kresge Company.

Marion, O. — Architect J. J. Sloan has been selected to prepare plans for an office building to be erected for the Marion Malleable Iron Company.

Uniontown, Pa. — Architect A. K. Cooper awarded to Cuthbert Brothers Company, Bessemer building, Pittsburgh, the contract for erecting a two-story brick church and stone church building addition on Ninth and Main street, for Hogsett & Hankey, $25,000. Architect has not been selected.


Religious.

Wheeling, W. Va. — Architect S. F. Heckert, Bessemer building, Pittsburgh, has plans in progress for a two-story brick fireproof porch addition, to be erected for the Mt. DeChantel Academy for the Sisters of the Visitation. Cost, $15,000.

Grove City, Pa. — The Christian Congregation contemplates remodeling a frame church on Main and Front streets, to cost $7,000. Architect has not been selected.

Jenkinson, W. Va. — Architect E. V. Garrett, of Pocahontas, Va., is taking bids on the erection of a two-story frame church, for the M. E. Congregation, to cost $3,000. Same will be built by the Pocahontas Consolidated Coal Company.

Tarentum, Pa. — Architects Ira F. Cutshall awarded to J. L. Waltenbaugh, the contract for erecting a brick, stone or terra cotta church on E. Eighth avenue, for the English Lutheran Congregation. Cost, $15,000.

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Grove City, Pa. — The Christian Con-
Barberton, O.—Architect Vernon Redfiding of Mansfield, has been selected to prepare plans for a two-story brick fireproof high school building, to be constructed for the Board of Education. Cost $120,000.

Cleveland Heights, O.—The Board of Education will receive estimates until March 26 on constructing a three-story brick and reinforced concrete fireproof high school building on Lee road & Euclid Heights boulevard, to cost $190,000. Plans by Architects Walker & Weeks.

Toledo, O.—The Board of Education will receive bids until April 6 on constructing a two-story brick and stone high school building on Lewis avenue, Washington township, West Toledo, to cost $80,000. Plans by Architect J. W. Matz, 315 Nasby building.

Martins Ferry, O.—Architect M. L. Wells of Wellsville, W. Va., awarded to T. L. Harris, Wheeling, the contract for erecting a three-story brick school annex on Sixth street, for the Board of Education. Cost, $20,000.

Bradford, Pa.—Architects Pierce & Bickford, Elmira, N. Y., have been selected to prepare plans for a two-story brick high school addition, to be constructed for the Board of Education. Cost $50,000.

The same architects have also been selected to prepare plans for a two-story brick and concrete grade school building, to be erected in the Sixth ward, for the Board of Education. Cost, $30,000.

Athens, O.—Architect E. S. Matheney, of Crooksville, is drawing preliminary plans for a two-story brick grade school building, to be erected for the Board of Education. Cost, $15,000.

Ashland, O.—Architect Vernon Redfiding, of Mansfield, has plans in progress for a three-story reinforced concrete high school building, to be constructed on Cottage street, for the Board of Education. Cost, $110,000.

Akron, O.—Architects Harper & Bliss will receive bids until April 11 on constructing a two-story brick and reinforced concrete school building, for the Board of Education, to cost $75,000.

Cincinnati, O.—Architect A. L. Fehlheiner, Lyric Theatre building, has plans in progress for a three-story brick and stone Women's building, to be constructed on Clifton avenue, Barnett Woods, for the University of Cincinnati. Cost $175,000.

Farrell, Pa.—Architects Clepper & Owen, Sharon, awarded to A. Wishart & Sons, Sharon, the contract for constructing a two-story brick and hollow tile school building, for the Board of Education, to cost $55,000.

Hickory, Pa.—Architect C. L. Whittaker of Dravosburg, has been selected to prepare plans for a two-story brick high and grade school building, to be constructed in Mt. Pleasant township, for the School Board. Cost, $49,000.

Atlantic, O.—The Board of Education of Perry township will receive bids until April 17 on constructing a two-story brick high and grade school building, to cost $25,000. Plans by Architect J. Howard Meritian, Washington Court House.

Atlassburg, Pa.—Architect C. L. Whitaker of Dravosburg, has plans in progress for a two-story brick grade school building, to be erected for the Smith township school board. Cost $20,000.

Cleveland, O.—Architect F. C. McCormack has plans in progress for a two-story brick and reinforced concrete fireproof school building, to be constructed on Kinsman road, for the Board of Education. Cost, $120,000.

Architects Meade & Hamilton, Garfield, have plans in progress for a one-story brick and timber gymnasium, to be erected on E. One Hundred and Seventh street, for the Case School of Applied Science. Cost, $25,000.

Burrgetstown, Pa.—Architect C. L. Whitaker of Dravosburg, will be ready for bids about April 1, on erecting a brick and steel high school building, to be erected for the Board of Education. Cost $30,000.

Ludlow, Pa.—Architect W. G. Eddies, of New Castle, awarded to J. H Groves, Kane, Pa., the contract for constructing a two-story brick fireproof high school building, for the Board of Education of Hamilton township. Cost $35,000.

Smith Township, Pa.—Architect C. L. Whitaker, of Dravosburg, has preliminary plans in progress for a one-story brick grade school building, to be erected for the Township School Board. Cost $35,000.

Youngstown, O.—Architects Kling & Zehnpfennig, 155 West Federal street, awarded to Felix Peas, the contract for erecting a two-story brick fireproof annex to the Washington school, for the Board of Education. Cost $30,000. Contract for carpentry let to the Stader Construction Company.

The same architects also awarded to the same contractor the contract for erecting a brick addition to the McKinley school, on Thornton and Florencedale avenues, for the Board of Education. Contract for carpentry let to L. T. Seitz. Cost $8,000.


Fostoria, O.—The H. & M. Screw Company contemplates erecting a one-story concrete manufacturing building. Architect has not been selected.

Cincinatti, O.—Engineers Tait & Nordenmyer, International Life building, St. Louis, Mo., have plans in progress for a four-story brick and reinforced concrete ice cream plant, to be constructed on Plum & Canal streets, for the French Brothers Bauer Company. Cost $300,000.

Cleveland, O.—Architects George S. Rider & Company, 512 Century building, awarded to the Hunkin-Conkey Construction Company, 221 Cuyahoga building, the contract for constructing a concrete tank on 7600 Platt avenue, for the Cleveland Foundry Company. Cost, $4,000.

Columbus, O.—J. P. Schmidt, 253 E. Kossuth street, contemplates erecting a two-story brick and concrete cold storage addition, on 253 Kossuth street, from private plans.

Warren, O.—Architects W. S. Ferguson Company, 615-300 Euclid building, Cleveland, will be ready for bids about April 1, on constructing a brick and concrete fireproof factory building, for the Chicago Cleveland Car Roofing Company. Cost, $50,000.

Akron, O.—Walker & Curley, Bessemer building, Pittsburgh, received the contract for erecting a two-story brick fireproof sausage factory for Armour & Company, 137 South LaSalle street, Chicago. Cost $12,000.

Madison, O.—Architect William Longue, 500 Marshall building, Cleveland, has been selected to prepare plans for a two-story frame or brick canning factory, to be erected for the William Edwards Company. Cost $12,000.

St. Mary's, Pa.—Architects A. P. Mount & Son, Corry, Pa., have completed plans for a two-story brick lodge building, to be erected on Washington and Lafayette streets, for the B. P. O. E., to cost $25,000.
Mt. Vernon, O. — Architects Hake & Kuck, Provident Bank building, have plans in progress for a two-story brick and stone masonic hall, to be constructed on Clifton avenue, for the Handsome Lodge F. & A. M. Cost, $25,000.

Circleville, O. — The Circleville Athletic Club will receive bids until March 26 on erecting a one-story brick club building, to cost $10,000. Plans by Architect E. H. Rickett, 274 Twelfth avenue, Columbus.

Columbus, O. — Architects Richards, McCarry & Belford, Hartman building, have preliminary plans in progress for a six-story brick and terra cotta fireproof club building, to be constructed on Broad & Lazard streets, for the Athletic Club of Columbus. Cost, $300,000.

Youngstown, O. — Architects Stanley & Scheidle, Wick building, have been selected to prepare plans for a brick and stone Y. W. C. A. addition, to be constructed on 25 Rayen avenue, for the Y. W. C. A. Cost about $40,000.

Bucyrus, O. — Architects McLaughlin & Hulsken, 14 Central building, Lima, are ready for bids on remodeling a building for the B. P. O. E. No. 156, to cost $20,000.

Cleveland, O. — Architect Frank B. Meade, Garfield building, has been selected to prepare plans for a 2 1/2-story stone building, to be built on Mayfield road, Cleveland Heights, for the Mayfield Country Club. Cost, $36,000.

Cincinnati, O. — The General Construction Company of Louisville, received the contract for constructing a one-story concrete and brick and stone music pavilion and comfort station in Eden Park, for the Board of Park Commissioners. Cost, $15,000.

Logan, O. — Henderson & Houston received the contract for improvements on North & Walnut streets, for the Village.

Mt. Vernon, O. — W. H. Hearne, 106 N. McKenzie street, received the contract for the paving of Coshocton avenue, for the City, to cost $2,100.

New Cumberland, W. Va. — The U. S. Government is taking bids on erecting two 2 1/2-story brick lockkeepers' residences at Dam No. 9, to cost $6,000.

Aspinwall, Pa. — F. Schillo, Arnot Power building, Pittsburgh, is taking bids on erecting a 2 1/2-story brick bungalow on Delafield Heights, from private plans. Cost, $5,000.


Charleston, W. Va. — Architect A. G. Higgenbotham awarded to Given & Given, the contract for building a 2 1/2-story frame residence for W. G. Harmon, to cost $3,000.

Cincinnati, O. — Architect Anthony Kunz, Jr., 953 W. Court street, awarded to C. Milka, 2360 Glenway avenue, the contract for erecting a 2 1/2-story brick residence on Omena place, Price Hill, to Theo. Rietschel, 1047 State avenue. Cost $6,000.

Architect Anton Rez, 2554 Vine street, has plans in progress for remodeling a two-story brick apartment building on 2707 Scioto street, for Matthias Stark, 2767 Scioto street. Cost, $1,800.

Dr. W. D. Porter, Melrose building, Contemplates erecting a brick apartment building on Reading road, to cost $15,000. Architect to be announced later.

Auldenbrink & Son, Canal street, received the contract for building a 2 1/2-story brick residence on 433 Ada street, for Mrs. Sophie D. Kasecamp, 437 Ada street. Cost, $3,500.

Architects Tietig & Lee, Lyric Theatre building, awarded to James Griffith & Sons Company, Twelfth street and Reading road, the contract for erecting a one-story frame and glass residence addition, on 2245 Park avenue, for H. C. Otterbein, 2245 Park avenue. Cost, $1,000.

William Juergens, 4909 Glenway avenue, received the contract for building a 2 1/2-story brick residence on Sunset street, for Henry Wesselman, 3019 Sunset avenue. Cost, $5,000.

Cincinnati, O. — Architect Anthony Kunz, Jr., 953 West Court street, is taking bids on erecting a 2 1/2-story brick residence on 2593 Warsaw avenue, for Mrs. B. Meyer, 2611 Warsaw avenue. Cost $7,500.

Cleveland, O. — L. H. Klein, West Fourteenth street, will receive bids until April 1, on erecting a two-story frame double residence on West One Hundred and Fifth street, to cost $5,500. Plans by Architect O. N. Chamberlin, 1435 Schofield building.

Louis Dubov, 2519 Ontario street, is taking bids on erecting a two-story brick apartment building, on 929 Kingsman Road, from plans drawn by Architect George Rudolph, 5117 Woodland avenue. Cost $4,500.

Hart & Stephens, 530 East One Hundred and Fifteenth street, received the contract for erecting a two-story frame double residence, on Northfield avenue, East Cleveland, for L. A. Griffin, 34 Garfield building. Cost $5,000.

Columbus, O. — Louis Siebert, 109 Milhoff street, is taking bids on erecting a 1 1/2-story frame bungalow on Siebert street, to cost $4,000. Plans by Architect Monroe Heath Blake, 333 West Eighth avenue.

Corry, Pa. — W. P. Edmonds is taking bids on the erection of a brick veneer or tile bungalow, from plans drawn by Architects E. N. Brucker, Chicago. Cost $8,000.

Architects A. P. Mount & Son, Traction building, have plans in progress for a two-story brick and shingle bungalow, to be erected on East Congress street, for Abe Gumburski. Cost $5,000.

Dayton, O. — Architect J. Milton Dyer, 825 Cayahoga building, Cleveland, is taking bids on erecting a 2 1/2-story frame bungalow on Siebert street, to cost $4,000. Plans by Architect Monroe Heath Blake, 333 West Eighth avenue.


New Kensington, Pa. — Architect Thomas G. Easton, 845 Fifth avenue, is taking bids on erecting a 1 1/2-story brick and stucco bungalow on Woodmont avenue, for J. H. Bales, to cost $7,500.

Princeton, W. Va. — Architects Pedigo & Garry, of Bluefield, are ready for bids on erecting a two-story frame residence for the Roman Catholic Congregation, to cost $3,000.

Springfield, O. — Architect Robert C. Gowald awarded to R. G. Walker, the contract for erecting a two-story brick
venered residence on Woodland avenue, for Frank M. Krapp, 45 Gotwald building. Cost $9,000.

Tarentum, Pa. — Architect Ira F. Cus­shall has plans in progress for remodeling a two-story brick and stucco and hollow tile residence on Park avenue, for Lester Walker, Park avenue. Cost $5,000.

Wapakoneta, O. — Architect Joseph N. Uhler, Court house, is revising plans for a two-story frame and stucco residence, to be erected for J. H. Meyer, Court house. Cost $4,000.

Henry Kreutzer will select an architect about April 1, to prepare plans for a two-story brick and stucco double residence, to be erected on East Benton street, to cost $6,000.

Williamson, W. Va. — W. C. Harrisson is taking bids on erecting a two-story frame residence, from plans drawn by Architects Pedigo & Garry, of Bluefield. Cost $1,000.

Cleveland, O. — They are in progress for building a two-story brick fireproof hospital building, to be constructed for the Canonsburg Sanitarium Company, 619 Rose building, Cleveland, O. Company regrets bids not received.

Cost $150,000. Architect has not been selected.

Cleveland, O. — William Lehman, 1138 East Seventy-first street, received the contract for constructing a sanitary sewer in East One Hundred and Twenty-sixth street, for the city.

Cost $31,000.

Debit. — J. M. Hennessey & Brother, Piqua, received the contract for the paving of East Main street, from the west line of Wood street, to east Corporation line, for the village. Cost $40,000.

St. Bernard, O. — John Dempsey, 5310 Carthage avenue, Norwood, received the contract for the sewer work of Long avenue and Bismark avenue, for the city. Cost $300,000.

Dayton, O. — Architect C. I. Williams, 65 Davies building, is taking bids on erecting a one-story frame garage on 27 Oxford avenue, for Walter S. Kidder, 236 W. Fifth street. Cost $1,000.

Sharon, Pa. — Architect C. W. Hopkinson, Rose building, Cleveland, O., has plans in progress for a frame pavilion to be erected for I. H. Buhl, to cost $30,000.

Titusville, Pa. — Architect F. W. Hall of Clyde, O., has plans in progress for a stone and reinforced concrete fireproof mausoleum, to be constructed for the Keystone Mausoleum Company. Cost $30,000.

Cincinnati, O. — Architect Lyman Walker, 511 First National Bank building, Covington, Ky., awarded to Samuel Murr, 526 Hunt street, the contract for building a 1½-story brick garage, on 107 Beechwood avenue, for G. Schwartz, 907 Beechwood avenue. Cost $1,800.

North Warren, Pa. — Alfred Sharman contemplates erecting a green house to cost $3,000. Private plans.

FOR SALE CHEAP.

FOR SALE


FOR SALE

Thompson-Starrett Company, a corpo­ration, vs. Central District Telephone Company. Agreement made March 14 and filed March 16, 1914, to erect a building on Cherry alley and Seventeenth avenue, for $725,000.

George E. Crouse vs. Schenley Farms Company, a corporation. Agreement made March 14 and filed March 16, 1914, to erect a residence No. 37 on the Schenley Farms, Fourth ward, Pittsburgh, for $13,153.

Otis Elevator Company, a corporation, vs. New Jersey, vs. Schenley Farms Com­pany, contractors. Agreement made March 14 and filed March 16, 1914, to construct a building in the Fourth ward, Pittsburgh, for $9,000.

BUILDING CONDITIONS.

The following statistical table—compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Date</th>
<th>Contracts Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1, 1914</td>
<td>$18,246,000</td>
</tr>
<tr>
<td>Corresponding period 1913</td>
<td>20,537,000</td>
</tr>
<tr>
<td>Corresponding period 1912</td>
<td>13,638,000</td>
</tr>
<tr>
<td>Corresponding period 1911</td>
<td>25,478,000</td>
</tr>
<tr>
<td>Corresponding period 1910</td>
<td>14,134,000</td>
</tr>
<tr>
<td>Corresponding period 1909</td>
<td>15,744,000</td>
</tr>
<tr>
<td>Week ending March 18, 1914</td>
<td>3,635,000</td>
</tr>
<tr>
<td>Corresponding period 1913</td>
<td>2,274,000</td>
</tr>
<tr>
<td>Corresponding period 1912</td>
<td>1,452,000</td>
</tr>
<tr>
<td>Corresponding period 1911</td>
<td>1,921,000</td>
</tr>
<tr>
<td>Corresponding period 1910</td>
<td>1,955,000</td>
</tr>
<tr>
<td>Corresponding period 1909</td>
<td>1,472,000</td>
</tr>
<tr>
<td>Week ending March 11, 1914</td>
<td>1,893,000</td>
</tr>
</tbody>
</table>

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   - Architectural Terra Cotta.
2. Art and Stained Glass
   - Twin City Art Glass Works, 110 Sandusky St., Pittsburgh.
3. Asbestos Shingles
4. Automatic Elevators
5. Contractors' Pumps
6. Contractors' Work
   - Risinger Mfg. Co., East Liberty, O.
7. Elevators and Demb Waiters
   - Marshall Brothers, South Twenty-first and Mary Sts., Pittsburgh.
8. Builders' Supplies
9. Brick Contractors
10. Brick Manufacturers and Dealers
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Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.


STATE WORK AWARDED.

Meals & Johnston, Oil City, Pa., were the successful bidders for building the institutional buildings at Polk, Pa., for the Board of Trustees of the State Institute for Feeble Minded. This building was illustrated and described in these columns several weeks ago. The estimated cost of the work is $300,000.

NEW PLANT FOR CANTON.

The Monarch Metal Manufacturing Company, of Kansas City, Mo., has arrangements made for the erection of a factory at Canton, O. Metal doors and inside finishing material is company’s sole product. The main building will be 80x460 feet. One-half of the building will be two stories high and the balance one story, of brick and reinforced concrete construction.

SITE PURCHASED FOR PLANT.

The Sanitary Glass Milk Bottle Company, which has been organized by W. G. Edmunds, Benedict-Trees building, Pittsburgh, and Harry Edmunds, Moundsville, W. Va., contemplate building a plant at Moundsville, to cost $500,000. The building will be of brick and frame construction, corrugated iron roofing.

CHURCH CONTEMPLATED.

The Oakland Presbyterian Congregation, Pittsburgh, contemplates building a new structure on Dawson street, near Wilmot, and expects to spend about $100,000 on the building. No architect has been selected to prepare the plans. It will likely be one-story and basement, the latter to contain school rooms and gymnasium.

WAREHOUSE FOR ROSENBAUM.

It is probable that the Rosenbaum Company, Pittsburgh, will build a six or eight story brick and concrete fireproof warehouse on Duquesne Way, Pittsburgh. A site is in view, covering an area of 45x220 feet on which a structure to cost $140,000 is contemplated. No arrangements have been made for suitable plans and it is likely that an architect will be selected about April 25.

PLANS FOR CLUB HOUSE.

Architects Frank Meade and James Hamilton, Garfield building, Cleveland, are working on plans for a two-story and basement club house 50x300 feet which will be constructed of stucco on hollow tile. The building will be erected on S. Woodland road, Cleveland, for the Shaker Heights Country Club and will have a vapor heating system, shingle roofing, electric lighting, etc.

TIRE COMPANY TO BUILD.

While no definite plans have been prepared by the Dayton Rubber Manufacturing Company, Dayton, O., it is practically certain that a new two-story and basement factory for tire-making purposes will be built early the coming summer. The Dayton company will select an architect for the work about June 1. The building, which will probably measure 70x350 feet, will be of reinforced concrete throughout.

PLANNING WARREN FACTORY.

The Chicago-Cleveland Car Roofing Company, Peoples Gas building, Chicago, Ill., is having plans made by Architect W. S. Ferguson Company, 1900 Euclid building, Cleveland, for a one-story brick, steel and reinforced concrete fireproof factory building 140x300 feet on which bids will be asked about April 1. The building will have a cement and composition roofing, steel sash, skylights, brick flooring, fireproof doors, ventilators, electric lighting, etc. The work will cost $50,000.

WILL ENLARGE SOUTH HILLS SCHOOL.

The Board of Education, Dormont, Pittsburgh, contemplate building a two-story brick fireproof addition to the school building on Espey and Hillsdale avenue, to cost $40,000. The new work will consist of two wings, each 30x80 feet. No architect has been selected to prepare the plans. A vote on issuing bonds to cover the amount of the work will be taken April 18. J. C. Downs, Publication building, Pittsburgh, is secretary of the board.

SEWAGE TREATMENT PLANT.

Specifications have just been completed by Engineer R. W. Pratt, Hippodrome building, Cleveland, for the sewage plant to be built for the city of Akron, O. A number of buildings will be constructed, consisting of a press house, 33x40 feet, hollow tile and reinforced concrete construction; filter basin, 360x1,005 feet, 12 sedimentation tanks 25x80 feet each; grit and sewer chambers 45x130 feet; seven dry sludge drying beds 166x175 feet, pump house, sludge tank house, etc. The roofing will be used on all buildings, while each will have steam heating, electric lighting, etc.

TAKING BIDS ON YOUNGSTOWN BUILDING.

The Youngstown Hospital Association, Youngstown, O., is asking bids on the erection of a three-story brick fireproof building, 90x90 feet, which will be used as a nurses home. Architects Albert Kahn and Ernest Wilby, Trussed Concrete building, Detroit, Mich., prepared the plans. Specifications call for face brick, reinforced concrete work, reinforced concrete and tile floors, hollow cement brick or tile partitions, fireproof doors, terrazzo floors, slate or composition roofing, Kalamein doors, sheet metal work, hollow metal window frames, etc. The work will cost $100,000.
The merits of Sackett plaster board were ably described by C. W. Young, representing the United States Gypsum Company, in the Builders' Exchange auditorium, Fulton building, Pittsburgh, on Saturday last. Mr. Young, who is one of the pioneer plaster men of the country, demonstrated the use of the material by erecting a few pieces of stud­ding to represent the partition work of a room and covering same with Sackett boards over which he applied a half-inch of plaster. His methods of doing the work showed plainly how quickly and thoroughly partition work can be accomplished, but the points which Mr. Young desired to bring to the attention of the spectators were the fire-resisting, air-tight and sound-proof qualities.

No type of wall construction can be called fireproof. Walls built of metal lath and plaster or Sackett board and plaster, when properly applied, can be designated as fire-resisting.

In the case of Sackett plaster board, which is a solid sheet, and the gypsum plaster coat covering it, both are effective fire resistants. Sackett does not transmit heat through itself and under actual fire conditions the material has been the means of saving many buildings from destruction. It might be described as an artificial lath a yard long, nearly a yard wide, and of the customary lath thickness composed of alternating layers of wool felt and calcined plaster.

The plaster and wool felt have a natural affinity, and the union is perfect—the result being one solid sheet or board—firm but sufficiently elastic.

The standard sized boards cover eight square feet—nearly a square yard of plastering surface.

The boards are nailed directly to the furring, stud­ding, or joist—and are then ready to receive the plastering material without wetting or other preparations, such as are usually necessary with other lath to insure a good job.

These boards are light and easily handled. They can be cut to shape when necessary with a common saw or lath hatchet just as easily and quickly as ordinary lath. Being moderately elastic—they will bend sufficiently to make a perfectly smooth curve in "coves," arches, bay window extensions and round-cornered walls and ceilings.

For fire-retarding purposes the material is fast coming into general use, not only in large buildings, but in residences and apartments. They are preferably for partition purposes on account of their extreme lightness as compared to other partitioning materials and the ease and quickness with which they are handled and the partition wall erected.

In office buildings, hotels, theatres, libraries, schools, hospitals and similar quasi-public buildings where noise is a deterrent and costly element, they are especially appreciated for the sound-proof qualities.

Sackett plaster board is also successfully used as an outside fireproof material—as a sheathing under the siding. It is equally valuable as a fireproofing under the floors. Thus the entire framework of a light frame cottage may be made fireproof and preserved intact in case of a severe fire originating either from within or without.

It is now recognized as a standard building material by the architect, the contractor and the plasterer. There is nothing experimental about Sackett plaster board. It is a perfect article worked out with scientific accuracy from ideal materials.
New Standard of Fire Resisting Construction

What the Country’s Leading Experts Have Approved as the Ideal Building Practice for Structures that are Actually Fireproof.

By IRA H. WOOLSON,
Consulting Engineer, National Board of Fire Underwriters in the Record and Guide.

Like everything else, building construction must have a standard; but strangely, there never has been in this country what properly could be called an ideal from which a standard specification could be drawn. Attempts have been made to determine by committee investigation, research and test, what would constitute a fireproof building only to find in the end that the word “fireproof” as applied to a building is an absolute term, and such a structure could not be built and be profitable as an investment.

For instance, the tombs beneath the Pyramids are fireproof, the vaults under the Woolworth and similar buildings are fireproof, but you cannot house a business or put a home underground and take from it all light and ventilation. Wherever there is combustible material and a strong draught and sufficient heat you will always find the danger of destruction by fire. So, for that reason, this committee has discarded the term “fireproof,” as applied to a standard of building construction, because it is misleading. Instead, it has adopted the term “fire-resistive.”

This term gives us a practicable basis upon which to work. We have materials that are fire-resistive, but we have none that under any and all conditions are positively proof against fire. The term fire-resistive is of course elastic and it will doubtless become the duty of this committee to properly define the term so as to indicate the degree of resistance that would be proper to expect for different types of construction.

The committee has taken that which it had at hand, and by assembling the materials under a standard that experience had shown to be sound has evolved a structure that is in the highest practical sense fire-resistive. In fact, the committee defines this “standard building” as one which will not only safeguard the lives of the occupants, but shall be so designed and equipped that the damage resulting from a fire from within or without shall be reduced to a minimum and that it shall be able to sustain a complete burn-out of its contents without serious injury to its structural members, irrespective of its occupancy, location or efficiency of municipal protection.

These are requirements which the majority of our so-called “fireproof buildings” could not meet.

We have the gold dollar as a standard of currency, the pound as the standard of weight, and so on, but where is our standard of building construction? This committee has sought to supply it.

In arriving at this standard the committee has had data before it representing the best experience in practically every department entering into building construction the world over. The result is that the specifications call for a building 100 per cent good. It applies in its present form mainly to commercial buildings, but eventually will be modified to cover other classes of structures.

The committee’s purpose was to define a standard building applicable to any occupancy, leaving as much as possible the details of construction for special occupancy and special use of hazard to be determined by future committees as modifications of this standard.

The committee is of the opinion that a building of this fire-resistive class should be planned, built and equipped with materials that are incombustible, and with all its structural parts, such as walls, columns, floors and roofs, able to resist fire for at least four hours at an average temperature of 2,000 degrees F. without serious structural damage. It must be so constructed that a fire will be confined to the space in which it originates, and the building be protected against exterior fire by approved doors and windows or other approved devices. Applicable and safe means of egress must be provided in such a building for all occupants, and finally the building shall be equipped with such apparatus that a fire can be extinguished in its incipient stage.

The Standard Specifications.

This standard building may be constructed to comply with any of the types where all loads are carried on walls; where there are exterior bearing walls and interior bearing columns and where all loads are carried on a protected structural skeleton of steel or reinforced concrete. The allowable floor loads and wind stresses and the quality of all materials used in the construction shall conform to the best engineering practice; all work, whether fireproofing or construction, shall be installed under the constant supervision of a competent and reliable inspector, and no combustible material will be used in the structure partitions, or finish.

The height of this ideal standard building from grade to roof-line, irrespective of its occupancy, is not to exceed 70 feet, unless the building is fully equipped with automatic sprinklers, in which case the height will not exceed 125 feet; nor will any standard building exceed a height of two and one-half times the width of the widest street upon which it is located.

The area within enclosing or firewalls will not exceed 7,500 square feet, with no dimension greater than 125 feet for a building without automatic sprinklers; or 20,000 square feet, unrestricted as to linear dimensions, for a building fully equipped with automatic sprinklers.

Stair exits consist of the direct connection of any floor area to an approved stairway built in conformity with the specifications hereafter detailed, either as an enclosed interior staircase, or a smokeproof tower. The horizontal exit as a safe saving device is provided as being the connection of any floor area through a fire exit partition, fire wall, or an opening or balcony or vestibule to another floor area in the same or an adjoining building having its own independent stair exits; the other area must be of sufficient size to contain temporarily the joint occupancy of the two areas thus joined, allowing not less than five square feet of unobstructed floor space per person.

Exits Required.

Every floor area in this ideal building shall have at least two separate exits, and whenever any floor area exceeds 10,000 square feet at least one additional exit shall be provided. The occupants of every floor above the first will be provided with exits computed on the
basis of at least 22 inches of width for every 14 persons for stair exits, or 22 inches in width for every 50 persons for horizontal exits. At least one of the exits provided for every such floor area will be a stair exit. No reduction in width of exit stairway or passageway required by these rules will be permitted at any subsequent point in the direction of exit travel. Exits shall be remote from each other, and no point of any floor area shall be more than 100 feet distant from an exit. Whenever any building is more than four stories high, and has an occupancy greater than 25 people above the fourth floor, then each floor area shall be connected either directly to a smokeproof tower, or indirectly through a horizontal exit to such smokeproof tower.

In the matter of foundation walls, they shall be built of hard burned brick laid in cement mortar, or of concrete, and shall have a thickness of four inches greater than the wall next above. Exterior walls shall be impervious to water, or be adequately waterproofed. Retaining walls, if built of stone, must be plastered on the exposed side with 3/4-inch of cement mortar and all exterior, interior, party and fire walls will be built of hard burned brick, laid with flush points of cement mortar, or of reinforced concrete. Veneered walls are not permitted. All party or lot line walls shall extend three feet above the roof as a parapet, shall be the full minimum thickness, and shall be properly coped. Fire walls shall be continuous from foundation to three feet above roof level and be copped; except that interior walls need not extend above roof. No exterior wall shall be less than 12 inches thick; no party wall or fire wall shall be less than 16 inches thick, and no chimneys, chases or flues shall be permitted within the minimum required thickness of a wall.

The maximum percentage of openings allowed in any exterior wall shall not exceed 40 per cent of its superficial area per story. If a bearing wall is punctured 40 per cent of its superficial area, the wall will not be less than the following thickness: The top story, 12 inches; next three stories below, 16 inches; following two stories, 20 inches. There shall not be less than five feet of wall between openings in a vertical line, and the minimum distance between adjacent wall openings shall be 20 inches. Exterior window openings will not exceed 45 square feet in area, and no single dimensions shall exceed nine feet. No window opening shall be less than one foot from the ceiling surface. Openings in fire walls shall not exceed 80 square feet in area. No fire wall shall have more than three openings in any story, and the distance between adjacent openings shall not be less than nine feet.

All walls must be securely anchored and bonded at points where they meet. When supported by skeleton structural framework they must be properly anchored and bonded.

**[To Be Concluded.]**

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**EFFECT OF SMOKE ON OUTSIDE PAINTING.**

Richard Hooker, Pittsburgh, Pa.

Any inquiry into the effect of an atmosphere laden with smoke and soot on the paint on the exterior of buildings naturally starts with these two questions:

What is the effect, first, on the durability of the paint considered simply as a protective coating; and second, on its appearance considered as a decorative covering?

Experiments carried on in different parts of the country by means of test fences erected by the National Paint Manufacturing Association at the first seemed to show that a coating of soot actually protects the paint from the action of the weather and so aids it in its function as a protective coating. In short, it seemed to be shown that wasteful methods of fuel consumption provide what is, in effect, another coat of paint. But further observation leads to the belief that this, at least in the case of the majority of paints, is not the fact. Experience also seems to show that paint, applied over a soot covered surface, is attacked by the soot beneath, as well as by that deposited on the exposed surface, and that the life of two coats of fresh paint applied over a surface, which has already become coated with the smoke and soot of the atmosphere, is shorter and that its appearance deteriorates more rapidly than is the case where the same amount of paint is applied to a surface which is clean.

The opinion has been expressed that white paint in cities deteriorates in appearance more rapidly, paint in country districts perishes sooner, but this is explained, we believe, if it be true, by the fact that in cities better material is used and more skillful workmen employed in its application.

As to the second question, there can be but one answer and that is that the appearance is absolutely ruined.

Having satisfied ourselves that the value of the paint as a protective coating is in all probability decreased, and its value as a decorative coating absolutely destroyed by a smoky atmosphere, it is natural to ask what the money value of this damage is; in other words, what tax does the property owner pay as a result of the foul condition of the atmosphere in localities like Pittsburgh?

Answers to inquiries addressed to master painters in cities ranging from Boston, Mass., to Kansas City, Mo., justified the assumption that the proper interval between the original painting and the first repainting, if the woodwork is to be properly preserved, is five years, and that subsequent repaintings should take place every seven years, and in a locality where the air is free from such impurities as soot, which sticks to the surface and cannot be removed by brushing, repainting at these intervals would preserve not only the surface to be protected, but would also maintain its appearance. In Pittsburgh, however, in very many cases, the better class of buildings are repainted every year and in more cases they are repainted every three years. In fact, we learn from what we believe to be reliable sources that from 60 per cent to 70 per cent of the repainting in the city of Pittsburgh is done for the sake of the appearance only and not because it is necessary for the proper preservation of the structure. If the old paint is washed as clean as it can be gotten before the new is applied, it does not lighten the burden of the property owner, for to wash the surfaces as clean as possible costs as much as the application of two coats of paint and even then they must be repainted with two coats to satisfactorily restore the appearance. Another expense involved in this constant repainting results from the fact that, after the application of 10 coats, the paint has a tendency to blister and crack, which is an added injury to appearance and results also in crevices in which water may lodge and start decay in the woodwork. It might seem that the property owner under such circumstances would choose to use dark colors rather than light, for the double reason, that the darker the color the less will it show the dirt, and being work to begin with, will need to receive only one coat to cover satisfactorily when repainted. But the adoption of this policy will not give the results that might be expected. The dark colored pigment does not have the covering quality of the lighter ones, hence it requires more material for one cost of the former than for one of the latter; furthermore, the dark, heavy pigment must be burnt off more often than the lighter colored one and finally, our
investigations go to show that the popular taste is for light colors and that the landlord who paints his house with a dark, gloomy color, which shows the dirt less plainly, and needs only one coat to restore its freshness, will find it harder to obtain a tenant.

It is not difficult to reduce to dollars and cents this portion of the tax which Pittsburgh's smoky atmosphere lays upon its property owners.

In a period of 30 years the house owner who cares at all for appearance will have repainted 10 times, using two coats at each painting. During this time, he will have found it advisable, if not absolutely necessary, to have the paint burnt off at least twice, and the burning process will cost on an average five times as much as to apply a single coat of paint, not to mention that it creates for the time being a very serious fire-hazard.

It is possible to compute from the actual costs of building that at the end of the 30-year period, this repainting has meant an expense to the owner amounting to nearly 17 per cent of the first cost of his building, or nearly 34 per cent a year, and if, in his desire to have his building present a good appearance as long as possible after repainting, he goes to the expense of having the paint washed each time, this tax is increased by nearly two-thirds, while in case the repainting is done every year, which is by no means unusual, the tax will amount to 2½ per cent per annum of its original investment, even if no washing is done. On the other hand, if smoke and soot could be eliminated from the atmosphere, this tax would be diminished to less than ¾ of one per cent per annum, even assuming that two coats are used at each repainting.

The damage done to painting coating by our smoky atmosphere is thus aesthetic and material. It makes the use of light colors unsatisfactory or accounts of the slight time which they retain their true color, and even an attempt to keep the building as it should be adds a large tax to the already heavy burden of the smoky city dweller.

COLUMBUS CHURCH TO BE AWARDED.

Architects Julian & Julian, Park Savings bank building, Columbus, O., have about completed plans for the Russell Street Baptist Church building, which is to be constructed on Russell street, Columbus, O. It will be a two-story and basement structure of brick and stone trim and will contain auditorium, school rooms, balcony, social rooms, etc. Material specifications will include cut stone work, hard wall plaster, tile flooring, art glass, face brick, metal lath, reinforced concrete work, etc.

PLANNING CLEVELAND SCHOOL.

The Board of Education, Cleveland, O., is having its architect prepare plans for proposed Kinsman Road school building, which is to cost $150,000. It will be constructed of brick and reinforced concrete and will contain 20 class rooms, auditorium, gymnasium, kindergarten and domestic science departments. Specifications will include structural steel, composition roofing, metal lath, heating system, electric lighting, etc. Bids will be taken in the near future on the general contract.

SKETCHING GARAGE.

A $1,250,000 garage and salesroom is to be built at Cleveland, O., for H. J. Latimer, 5703 Euclid avenue, Cleveland, preliminary plans for which are being made by Architects E. F. Gibbons, 1900 Euclid building, Cleveland. The office and salesroom building will be 60x75 feet, two stories and garage, 75x360 feet, one-story, both buildings to be constructed of brick, reinforced concrete and steel. It will have a terra cotta front, reinforced concrete stairs with cement finish, metal sash, composition roofing, ventilators, metal lath construction, electric lighting, steam heating, etc.

PLACE CAR SHOP WORK SOON.

Bids are to close April 1 for building car barns, shops and power house additions at Springfield, O., for the American Railway Company, Witherspoon building, Philadelphia. Plans for the work were made by W. R. Keen, Witherspoon building, Philadelphia, and call for car ing, metal lath wall construction, etc. Barn building 119x324 feet, one story, carpenter and armature shop building, 71x144 feet; paint shop 36x108 feet; storage and vault room, 36x105 feet, paint and oil house 18x24 feet. All the buildings will be of brick, steel and reinforced concrete, with concrete foundations, tile or asbestos and reinforced concrete roof.
The contract for grading and leveling the Garfield play grounds for the City of Pittsburgh has been awarded to Evans Jones Company, Thirty-sixth and Liberty streets.

F. D. Cummers & Son Company, Arcade building, Cleveland, O., were awarded the contract to build the municipal asphalt paving plant on South avenue, Northside, for the city of Pittsburgh. The building will be constructed of steel and corrugated iron and will measure 25x85 feet. The estimated cost of the work is $32,000.

Architect W. S. Cohen, 2537 Oliver building, will soon complete plans for a 2½-story brick veneer residence, to be built on Winchfield avenue, for Robert Lewin, 345 South Atlantic avenue. Bids will be taken at an early date.

W. G. Briner, 7021 Susquehanna street, Wilkinson, contemplates erecting two 2½-story brick residences on Paulson street, to cost $8,000. Architect has not been selected.

Architect A. B. Snyder, Empire building, will take separate bids on erecting six 2½-story brick residences on Northumberland street, near Beechwood Boulevard, for Abel & Smith, Shady avenue and Forbes street. Cost $4,000 each.

Architect Paul W. Irwin, Renshaw building, will be ready for bids about April 1, on erecting a 2½-story stone and shingle residence, on Ashland street, Sheridan, for Charles S. T. Banker, 2956 Merwry Road, Sheridan. Cost $6,000.

The Masonic Building Fund Association contemplates constructing a three-story brick and terra cotta store and lodge building on Glenmore and Potomac avenues, Dormont, to cost $30,000. Architect has not been selected. Building will contain two store rooms, bowling alleys, pool and billiard rooms, office hall, lodge quarters. Owners expect to receive charter and select architect about April 20.

Architect H. S. Bitt, Vandergrift building, is taking bids on erecting a 2½-story brick residence, on Lebanon avenue, Mt. Lebanon township, for A. S. Reese.

A. Haiford, 410 Federal street, Northside, is having plans prepared for a 2½-story brick residence and garage, to be built on Dickson avenue, Ben Avon, at a cost of $15,000. Bids will be taken about April 10.

Specifications are being written and bids will be asked for the City of Pittsburgh, for the erection of a two-story addition to the Insane Asylum at Oakland. The building will be constructed in two wings each 80x125 feet. The work will cost about $40,000.

C. J. Fitzgerald, 3276 Second avenue, is asking bids on erection of five 2½-story brick residences on Gettysburg street, each to cost $2,500. Plans for the work were prepared by Architect R. H. Van Ormer, 7432 Race street. Contract for the work will be placed April 1.

Architect A. B. Snyder, Empire building, will award separate contracts for building a 1½-story tile and shingle cottage at Wildwood Station, for George Wittmer, Park building. The building will measure 24x30 feet and cost $1,000.

Dr. H. G. Werntz, 222 North Negley avenue, will have a two-story brick veneer and tile bungalow built on Sandy Creek road, plans for which were made by Architect L. O. Brodie, Highland building, East End.

H. A. Johnston, 347 Millvale avenue, has been awarded the contract to build a 2½-story brick and cement plaster residence, with garage, for C. M. Johnston, Bayard street. The work will be built on Devon road and cost $18,000.

Bids for the erection for the new department store, to be built at Federal and Liberty avenues, for the Rosenbaum Company, will close March 30. Plans are being figured by all former bidders.

H. A. Bloedel, 1104 Arlington avenue, received the contract to build a five-story brick warehouse on Madison avenue, Northside, for R. Rombach, 1317 Madison avenue. The building will measure 60x100 feet and cost $25,000. The brick masonry work has been awarded to Fred Blendinger, 824 O'Hara street.

Plans for the new plant of the Lawson Manufacturing Company, Homestead, to be built on Thomas boulevard, are being revised and new bids will be asked for about April 1. The main building will be 50x250 feet, three stories high, with an office building 20x30 feet.

W. A. Besty, 1036 South avenue, Wilkinsburg, received the contract to remodel and enlarge an apartment building at Forty-fourth and Butler streets, for Mrs. S. M. Dunmire, 227 South Negley avenue.

The contract for building a two-story brick and terra cotta store building at 1647 Fifth avenue, for the O'Leary Estate has been awarded to Eigenrauch Company, 5514 Beaver street. The building will measure 26x88 feet, and cost $14,000.

H. Miller & Son, Center avenue and Laurel Place street, was the successful bidder for constructing a two-story brick and terra cotta store building at 521 Wylie avenue, for the O'Leary Estate. This building will measure 21x125 feet and cost $14,000.

J. A. Cornelius, Jr., House building, received the contract for erecting a two-story brick veneered and stucco and metal late residence, on West: Pittsburgh Terrace, for Carl T. Schaffer, 66 Onondaga avenue. Cost, $6,500.

A. J. Kelly, Jr., care Schenley Farms Company, will take bids on erecting a 2½-story brick residence on Grant boulevard, from plans drawn by Architect Louis Stevens, Columbia Bank building. Cost $25,000.

Architect A. B. Snyder, Empire building, is taking bids on erecting a three-story brick office building, at East Carnegie, for the Columbia Steel & Shafting Company, Empire building. Cost $15,000.

Architect J. E. Obitz, Highland building, awarded to C. Aber, 6725 Reynolds street, the contract for erecting a two-story brick duplex residence on Gettys-

St. Phillip’s R. C. Congregaton, Crafton, will construct a two-story brick fireproof parochial school in Crafton, to cost $60,000. Architect will be selected by April 1.

W. N. Zortman, Bessem building, is taking separate bids on erecting a 21/2-story brick and stucco apartment building on N. Harrison avenue, Bellevue, to cost $14,000.

Architect H. S. Bair, Vandergriff building, awarded to Golden & Crick, 312 Fifth avenue, the contract for constructing a brick, granite and terra cotta fireproof motion picture theatre on Whitfield and Kirkwood streets, for Richard A. Rowland and James D. Clark, Empire building. Cost $200,000.

Estimates are being received on erecting a 21/2-story brick residence on Singer Place, Wilkinsburg, for Ralph Trout, Elm street, Wilkinsburg.

### Apartments and Dwellings.

**Lima, O.**—Architect Ross E. Mullen, 1259 Spring street, has plans for a twin bungalow 11/2 stories high, to be built of frame and stucco, for the Home Builders Realty Company, Holland building.

The same architect has plans for a two-story brick, stucco and frame double apartment, to cost $9,000, for Dr. Faust. The building will measure 50x30 feet.

**Oil City, Pa.**—The E. E. Bailey Company, Chambers building, has plans for a 21/2-story brick veneer residence, to be built on the Southside, for H. G. Rush, 115 West second street. The building will measure 38x40 feet and cost $9,000.

**Youngstown, O.**—John Erickson, 51 Silver street, has preliminary plans for a two-story brick and hollow tile apartment building, 60x80 feet, to be built on East Marion street, at a cost of $10,000.

**Ambridge, Pa.**—Architect H. A. Lord, 222 Charles street, is taking bids on erecting a 21/2-story brick duplex residence, on Maplewood avenue, for John Flajnik, Maplewood avenue. Cost $5,500.

**Columbus, O.**—Miss Lulu Lindermann, 206 North High street, is taking bids on erecting a two-story brick double residence, on Linwood avenue, from plans drawn by Architects Bryan & Latham, Columbus Savings and Trust building. Cost $5,500.

**C. W. Taylor, 201 Dispatch Annex building, contemplates erecting a two-story brick residence, to cost $6,000.

Architect has not been selected.

**Delaware, O.**—Architect Charles L. Inshco, 1219 Brunton building, Columbus, has completed plans for a two-story brick and stucco residence, to be erected for the Misses Cadwallader, to cost $5,000.

**Duquesne, Pa.**—The Homestead Lumber Company received the contract for building five 21/2-story brick veneered residences, to be erected on Library Place, for the Homestead Realty Company, 141 Ninth avenue, Homestead.

**Erie, Pa.**—Architect Joseph Lee, 703 State street, will be ready for bids about April 1, on constructing a three-story brick and steel fireproof apartment building, on Twenty-fourth street, for M. J. Butler, 2401 Frach street. Cost $75,000.

Consable Brothers, received the contract for building a 21/2-story brick veneered residence on Short street, for Joseph M. Fratts, 228 Short street, to cost $4,000.

C. D. Stoltz, Craig street, was awarded the contract for building a 21/2-story brick veneered residence, on Poplar street, for Frank Dudenheuffer, 347 West Twenty-sixth street. Cost: $3,500.

**Homestead, Pa.**—The Homestead Lumber Company, received the contract for building six 21/2-story brick veneered residences on Twenty-second street, for the Homestead Realty Company, 141 Eighth avenue.

Plans are in progress for four two-story brick residences, to be erected on Eighth avenue, for C. W. Dean, Eighth avenue, to cost $5,000.

H. W. Critchlow was awarded the contract for erecting a two-story frame residence on the Homestead addition, for M. E. Scorcer, Eighth avenue, to cost $2,500.

**Martinsburg, W. Va.**—A. E. Smith, Burke street, will receive bids until April 1, on erecting a three-story brick and stucco residence on West King street, from plans drawn by Architect R. W. Geare, Washington, D. C. Cost $7,000.

**Munhall, Pa.**—The Homestead Lumber company received the contract for building a 21/2-story brick veneered residence on Munchall Garden Place, for the Homestead Realty Company, 141 Eighth avenue.

The same architect has plans in progress for a two-story frame and stucco residence, to be erected for Charles Rose, to cost $4,000.

**Oil City, Pa.**—Architects E. E. Bailey Company, Chambers building, have plans in progress for a 21/2-story brick veneered residence, to be erected on the South Side, for Charles D. Berry, 216 Petroleum street. Cost $9,000.

**Newport, Ky.**—Architect L. H. Wilson has plans in progress for a 21/2-story brick residence, to be erected on Washington near Sixth street, for Dr. George Brown, 604 Washington avenue. Cost $5,000.

**Sandusky, O.**—Doerrzach & Company received the contract for erecting a 21/2-story stucco and hollow tile residence, to be erected on Columbus avenue, for George A. Biddling. Plans by Architect W. W. Hedges Company, Schiefeld building, Cleveland.

**Worthington, O.**—Architect Monroe Heath Blake, Columbus, has been selected to prepare plans for a one and two-story frame and stucco bungalow to be erected for Charles B. Wolfe, Homond street, Columbus. Cost $4,000.

**Youngstown, O.**—Architects Kling & Zenk, 115 W. Federal street, will be ready for bids about April 1 on erecting a 21/2-story brick and stucco bungalow, for Charles Clarke, to cost $10,000.

**Cincinnati, O.**—Fred W. Cole, 3301 Observatory road, received the contract for erecting a 11/2-story brick and stucco bungalow on Observatory road, for C. D. Hildwein, 530 E. Liberty avenue. Cost $4,000.

**Delaware, O.**—Architect William R. Powell, 1106 Hippodrome building, Cleveland, has plans in progress for a two-story brick residence, to be erected for James Driver, 334 N. Liberty street. Cost $8,000.

J. A. Collins, 108 Griswold street, contemplates erecting a two-story brick residence, to cost $4,000. Architect will be selected about April 1.

Architect H. L. Brease has plans in progress for a two-story frame residence, to be erected for Charles Rose, to cost $4,000.

The same architect also has plans in progress for a two-story frame and stucco and metal lath residence, to be erected on Woodland and Liberty avenues, for Charles Rose, Court House to cost $4,500.

**Manon, O.**—D. A. Frank, Center and Prospect streets, will be ready for bids about April 1 on erecting a two-story pressed brick residence from plans drawn by Architect Vernon Redding, of Mansfield. Cost $7,500.

**Sandusky, O.**—Architects E. E. Bailey Company, Chambers building, have plans in progress for a 21/2-story brick veneered residence, to be erected on the South Side, for Charles D. Berry, 216 Petroleum street. Cost $9,000.

**Munhall, Pa.**—The Homestead Lumber Company, 141 Ninth avenue, Homestead. Cost $5,000.

**Youngstown, O.**—Architects Boucherle & Son, 516 'Stambaugh building, Youngstown, O. Architects Kling & Zenk, 115 W. Federal street, will be ready for bids about April 1 on erecting a 21/2-story brick and stucco bungalow, for Charles Clarke, to cost $10,000.

**Cincinnati, O.**—Fred W. Cole, 3301 Observatory road, received the contract for erecting a 11/2-story brick and stucco bungalow on Observatory road, for C. D. Hildwein, 530 E. Liberty avenue. Cost $4,000.
avenue, for J. H. Davis, 301 Belmont avenue. Cost, $5,500.

Nelsonville, O.—H. L. Hack is taking bids on erecting a two-story brick and stucco residence, plans drawn by Architects Bryan & Latham, of Columbus. Cost $5,000.

Pleasant Ridge, O.—Dickman & Thompson, Provision Bank building, Cincinnati, received the contract for erecting a 15-story frame bungalow, on Woodford road, for Harry Mersfelder, 210 Lawrence street, Cincinnati. Cost $3,500.

Union City, Pa.—W. J. Midleton, received the contract for erecting a 2-story frame residence, for Dr. A. J. Sherwood, Main street, to cost $3,500.

Youngstown, O.—Architects Louis Boucherie & Son, Stambaugh building, have plans in progress for a one-story frame and shingle residence, to be erected for Paul Boucherie, 316 Stambaugh building. Cost $5,000.

The same architects are taking bids on erecting a three-story brick and hollow tile apartment building, for Mrs. Max Schwartz, Ford avenue. Cost $8,000.

The same architects have completed plans for a two-story stone and cement plaster residence, to be erected near Iwora park, for W. H. Park, 127 North Phelps street. Cost $15,000.

Ashland, O.—The Kaufman-Bostick Company, Rose building, Cleveland, are about ready for bids on erecting a two-story stucco and hollow tile residence and garage, for T. W. Miller.

Cleveland, O.—Architect S. H. Weis, 1052 Schofield building, has been selected to prepare plans for a two-story brick apartment building, to be erected on East Thirty-first street, for M. B. Abrams, 2350 East Forty-sixth street. Cost $20,000.

Columbus, O.—Charles A. McAllister, Deshler building, is taking bids on erecting five 2-story frame residences, on Kumwall Place, from plans drawn by Architects Bryan & Latham, Columbus Savings and Trust building. Cost $3,000 each.

Architects Howell & Thomas, 151 East Broad street, awarded to Bebb & Thomas, 1442 Eastwood avenue, Cleveland, the contract for remodeling a two- and three-story frame residence, at Fielden, for J. L. Hamill, Harrison building. Cost about $6,000.

Coshoncton, O.—Architects Howell & Thomas, of Columbus, have completed plans for a two-story brick residence, to be erected for D. G. Gayle, to cost about $8,000.

Findlay, O.—Architects McLaughlin & Hulsken, of Lima, will be ready for bids about April 5, on erecting a 2-story brick and stucco residence, for M. Cook, to cost $10,000.

Grove City, O.—Architects Julian & Julian, Columbus, have plans in progress for two 2-story frame double residences, to be erected for E. C. Grant, Ebery building, Columbus.

Homestead, Pa.—Architects Wolfe & Coulbough, are taking bids on erecting a 2-story brick veneered residence, on the Voudra Plan, for Mrs. E. Kennedy, of Munhall. Cost $3,000.

Architect J. C. Rowland, of West Homestead, has plans in progress for 10 two-story brick residences, to be erected on Seventh avenue, for W. Shuckman, to cost $12,000.

Business Buildings.

Ambridge, Pa.—Charles Miller, Ambridge, received the contract to build a three-story brick store and apartment building on Market street, for William Heaven, 832 Lindem avenue, East Pittsburgh, Pa. The building will measure 22x86 feet and will cost $11,000.

Cleveland, O.—The Rutherford Company, 200 East Eighteenth street, was awarded the contract to build a brick and reinforced laundry building on Central avenue, for the Miller Brothers Realty Company, 1330 Brownell street. The building will measure 52x100 feet.

Felix Heinrich, 740 Woodlill road, was awarded the contract to build a two-story brick store and apartment building at 278 E. Seventy-sixth street, for John Magy, 2787 E. Seventy-sixth street. The building will contain two stores and three suites.

Franklin, Pa.—The Producers Supply Company contemplates the erection of a two-story brick warehouse, 30x50 feet, from private plans. The building will cost $4,000.

Lima, O.—Architect J. A. Chapin, Holland building, has plans for a three-story brick and semi-fireproof store and nickelodeon building, to be constructed for Minor C. Crossley. The building will measure 50x200 feet and cost $40,000. Bids will be taken about April 5.

Marion, O.—Architect J. Lewis Ellis, Ackerman building, has plans under way for a two-story brick store and apartment building, to be built on West Center street. Bids are now being taken on the work.

Sketches are being prepared by Architect J. J. Sloan, 120 Jefferson street, for a three-story brick store and apartment building, to be constructed for Dr. R. C. Dugan, 225 E. Center street. The building will contain two stores and four apartments and will cost $12,000.

Norwood, O.—Wiese Brothers, Builders' Exchange, Cincinnati, were awarded the contract to build a three-story brick store and apartment building on Sherman avenue, for Helen B. Kathe, 510 Race street. The building will be 50x60 feet and will contain one store and five apartments, the work to cost $10,000.

Scottsdale, Pa.—Hemming & Christner, Scottsdale, awarded the contract to enlarge and remodel a building for the First National Bank of Scottsdale, work consisting of interior alterations and new bank fixtures, and building a three-story addition, 42x43 feet.

Springfield, O.—Architect William F. Miller, Kelly building, has plans for enlarging a building for the Simon Publishing Company, same to be of concrete and wood joint construction.

Cincinnati, O.—Architects D. H. Burnham & Company of Chicago, awarded to Wilke & Hoggan, 418 Wrightwood avenue, Chicago, the contract for constructing a 10-story terra-cotta, steel and hollow tile store and office building addition on Fourth street, west of Walnut street, for the Union Savings & Trust Company. Cost $70,000.

Cleveland, O.—Architect E. F. Gibbons, 1000 Edbild building, is taking bids on constructing a four and five-story brick and reinforced concrete storage warehouse on E. Fifty-fifth street and Veal avenue, for the Central Storage Warehouse Company. Cost, $55,000.


Homestead, Pa.—Architect J. C. Rowlands, West Homestead, awarded to Morgan & Company, the contract for erecting a three-story brick store and apartment building on Eighteenth avenue, for T. S. Shlupin, Eighth avenue. Cost, $7,000.

Lima, O.—Architects McLaughlin & Hulsken, 14 Central building, will take bids about April 1 on erecting a reinforced concrete fireproof office building on North and Central streets, for H. M. Scotts, 301 Fourth street. Cost, $20,000.

Sidney, O.—N. C. Dewese & Company contemplate erecting a three-story brick building on North Side, for the Square. Architect has not been selected.

Youngstown, O.—Plans are in progress for a three-story brick store building, to be erected on Boardman street, for Charles Herbert, 752 Mahoning avenue. Cost $16,000.
Akron, O.—Architects Henry & Murphy, Doyle Block, awarded to the Carlshal Construction Company the contract for erecting a three-story brick and hollow tile store and stag hotel on S. Main street, for the Barharkett Realty Company. Cost, $25,000.

Cleveland, O.—Architect Nicola Petiti, 1808 Euclid avenue, is preparing plans for a four-story brick and tile fireproof store, office and club building, to be constructed on Central avenue and E. Fourteenth street, for O. G. Melarague, Central avenue and E. Ninth street. Cost, $60,000.

The Burchard-Roberts-Wales Company, Swettland building, awarded to George B. McMullen, 1794 E. Fifty-fifth street, the contract for erecting a one-story brick and steel warehouse on 8304 Madison avenue, for the Kirk-Tatty Manufacturing Company. Cost, $80,000.

Lima, O.—Architect B. F. Mathews, Opera House Block, will be ready for bids April 1 on erecting a one-story brick garage on W. Market street, for J. C. Thompson, W. Elm street.

McKeensburg, Pa.—Architect C. C. Moffit, Masonic building, awarded to William Nolwel, the contract for constructing a two and three-story brick, steel and ornamental terra cotta mercantile building on 317-19 Fifth avenue, for M. E. Neiman, 541 Sixth avenue. Cost, $30,000.

St. Bernard, O.—Architect J. P. Striker, 612 W. Fifth street, Cincinnati, has plans in progress for a four-story brick lodging house, to be erected on Railroad avenue and Beech street, for Peter Steiner, 2215 Beech street. Cost, $15,000.


Wheeling, W. Va.—Architect Edward Bates Franchin, awarded to R. K. Kitchen Company, the contract for erecting a five-story brick and steel fireproof store building addition a Market street, for the Hub Clothing Company. Cost, $30,000.

Cincinnati, O.—Architect E. N. Rauscher, 312 Mercantile Library building, awarded to J. C. Cooper, Traction building, the contract for erecting a three-story brick livery, store and apartment building on Glenway street, for H. Haunke, 1027 Freeman avenue. Cost, $12,000.

Cleveland, O.—Architect E. F. Gibson, 1900 Euclid building, awarded to Metcalf-Cloyd Company, 704 Hippodrome building, the contract for constructing a two-story brick and stone church and school building, for St. John's Roman Catholic Congregation. Cost, $25,000.

Columbus, O.—Preliminary plans are in progress for remodeling a three-story brick and stone fireproof building, on corner of Goodale and High streets, for the Security Savings Bank.


W. Va.—Architect Ross E. Mullen, 1069 Spring street, is taking bids on erecting a two-story concrete, brick, stone and terra cotta store and flat building, for D. C. Dunn, Hollowell building. Cost, $10,000.

Marion, O.—Architect J. J. Sloan, 120 Jefferson street, is taking bids on erecting a two-story brick garage, store, livery stable and apartment building on N. Main street for J. H. Hime, N. Main street.


Religious.

Columbus, O.—Architect E. F. Mathews, Opera House Block, Lima, is working on plans for a one-story brick church building, 35x40 feet, to be constructed for the First M. E. Church of Rawson. Cost, $60,000.

Sharon, Pa.—Architect Joseph Bremer, Verboek Theatre building, Oil City, has completed plans for a 2½-story brick veneer parsonage for St. Adelbert's Rectory. Owners will take bids about April 1.

Archbold, O.—Architect Abe Boegeley, of Fremont, has plans in progress for a one-story pressed brick church, to be erected for St. John's Reformed Congregation. Cost, $20,000.

Charleston, W. Va.—The First South Methodist Episcopal Congregation, will receive bids until April 1 on constructing a 1½-story marble or stone church on Washington and Dickinson streets, to cost $75,000. Plans by Architect H. Rus Warne, Capitol street.

Cincinnati, O.—Architect Anton Rieg, 2554 Vine street, has plans in progress for a two-story brick and stone school building, to be constructed on Calhoun street, for St. George's Roman Catholic Congregation. Cost, $50,000.

Cleveland, O.—Architect Theodore Connover, 908 Park building, will be ready for bids soon constructing a two-story brick church and Sunday school rooms, on Hampden avenue, for the Zion Evangelical Congregation. Cost, $24,000.

New Brighton, Pa.—Architects Boyd & Stewart, Century building, have been selected to prepare plans for a two-story brick Sunday school building addition, to be erected on Seventh avenue for the Baptist Congregation. Cost, $10,000.

Osgood, O.—Rev. B. Franzner, pastor of St. Nicholas Catholic Congregation, will receive bids until April 1, on erecting a two-story brick parochial residence, to cost $5,000. Plans by Architect W. L. Jaekle, 130 United Brethren building, Dayton.

Fiqua, O.—Architects F. J. Hughes & Company, Dayton, are taking bids on erecting a two- and three-story brick and terra cotta parochial residence on North street and Broadway, for St. Mary's Roman Catholic Congregation. Cost, $30,000.

Lima, O.—Architect B. F. Mathews, Opera House building, will be ready for bids about April 15, on constructing a two-story brick and stone church on Kibby and Elizabeth streets, for the Grace Methodist Congregation. Cost, $60,000.

Monessen, Pa.—Architect J. M. Beall has plans in progress for a two-story brick and stone fireproof church, to be constructed for the First Methodist Episcopal Congregation, to cost $50,000.

St. Patrick's, O.—Architects Thiss & Thies, Bellinger building, Dayton, have plans in progress for a one-story brick church, to be erected for St. Patrick's Roman Catholic Congregation.

Hubbard, O.—Architects Kling & Zenk, 115 West Federal street, Youngstown, are taking bids on erecting a one-story brick and hollow tile terra cotta parochial school building, for St. Patrick's Congregation. Cost, $15,000.

Cincinnati, O.—Architects Samuel Doolin & Sons, Hubbard Block, are taking bids on erecting a three-story brick and stone school building on 3rd street, for St. Joseph's Convent. Cost, $60,000.

Columbus, O.—Murray & Sinclair, of Columbus, O., have been selected to construct a two-story brick church and Sunday school building, on corner of 3rd and North street, for the Zion Evangelical Congregation. Cost, $24,000.

Sharon, Pa.—Architect Joseph Bremer, Verboek Theatre building, Oil City, has completed plans for a 2½-story brick veneer parsonage for St. Adelbert's Rectory. Owners will take bids about April 1.

Archbold, O.—Architect Abe Boegeley, of Fremont, has plans in progress for a one-story pressed brick church, to be erected for St. John's Reformed Congregation. Cost, $20,000.

Charleston, W. Va.—The First South Methodist Episcopal Congregation, will receive bids until April 1 on constructing a 1½-story marble or stone church on Washington and Dickinson streets, to cost $75,000. Plans by Architect H. Rus Warne, Capitol street.
The First M. E. Congregation will be ready for separate bids about April 1 on rebuilding a one-story brick and stone church on Linden Heights, to cost $12,000. Plans by Architect E. H. Rickett.

Dayton, Ky.—Architect L. H. Wilson, Newport, has plans in progress for a one-story brick church, to be erected for the M. E. Congregation, to cost $10,000.

Educational.

Mantua, O. — Bids will be taken by Architect Paul T. Cabell, 1900 Euclid building, Cleveland, for constructing a two-story and basement brick and reinforced concrete school building, for the Board of Education. The building will measure 40x100 feet and cost $25,000.

Shawnee Township, O. — Plans are under way by Architect E. G. Mathews, Opera House building, Lima, for a one-story and basement brick school building, to be built for the Board of Education. The time for taking bids is indefinite.

Springfield, O. — Plans for two-story brick school building for the Wittenberg College, are being prepared by Architect R. C. Gotwald, Gotwald building, who will take bids on the work about May 1. The building will contain six recitation rooms, an art hall, and will cost about $40,000.

Steubenville, O. — Architects Peterson & Clark, Steubenville, have been selected to prepare plans for a two-story brick and steel fireproof high school building on North street, for the Board of Education, to cost $75,000. A $35,000 addition to the Grant school building, a two-story brick and steel fireproof addition, to the Washington school building, to cost $35,000, and a two-story brick and steel fireproof building on Pleasant Heights, to cost $35,000.

Bluffton, O.—Architects McLaughlin & Hulseken, 14 Central building, Lima will be ready for bids about April 1 on constructing a three-story brick and stone administration building and science hall, for the Bluffton Mennonite College. Cost, $30,000.

Dayton, O.—The Board of Education contemplates erecting a two-story brick grade school building at Dayton View, to cost $126,000. Architect has not been selected.

Eric County, Pa.—Architect Joseph Lee, 703 State street, Erie, has plans in progress for a one-story brick and steel fireproof school building, to be erected in Mill Creek township, for the School District of Mill Creek township. Cost, $8,000.

Homestead, Pa.—The Board of Education will select an architect to prepare plans for a brick and stone addition to the Second Ward school, to cost about $35,000.

Mingo, O.—The Board of Education of Wayne township contemplates erecting a one-story brick school building addition, to cost $7,000. Architect has not been selected.

Fory, O.—The Board of Education of Bethel township will advertise for bids about April 1 on erecting a one-story brick and reinforced concrete high school building, to cost $15,000. Plans by Architect C. I. Williams of Dayton.

Lakewood, O.—The Board of Education has selected a site on Detroit and Arbor avenues on which they will construct a library to cost $40,000.

Oxford, O.—Architect E. C. Fennimore, Columbus, is revising plans for a fraternity house, to be erected for the Beta Theta Pi, to cost $12,000.

Rudolph, O.—Architects Howard & Merriam of Columbus, have been selected to prepare plans for a two-story brick and concrete township grade and high school building, to be constructed for the Board of Education of Liberty township, to cost $35,000.

Bluffton, O.—The Trustees of Bluffton College will be ready for bids about April 1 on erecting a 1 1/2-story brick dormitory from plans drawn by Architects McLaughlin & Hulseken, Lima. Cost $20,000.

Bowling Green, O.—Architects Howard & Merriam, E. Broad street, Columbus, will be ready for bids about April 10 on constructing a one-story brick fireproof heat and power plant in the State Normal School for the Board of Trustees of the Northwestern Ohio Normal School, Cost, $40,000.

Concord Township, O.—Architect E. H. Rickett of Columbus, is preparing sketches for a two-story brick township grade and high school building, to be constructed for the Board of Education, to cost $25,000.

Dover, O.—Architect E. H. Rickett, of Columbus, has been selected to prepare plans for a two-story brick township grade and high school building, to be erected for the Board of Education of Dover township. Cost about $35,000.

Gable, O.—The Board of Education of Wayne township contemplates erecting a two-story brick township school building to cost $20,000. Architect has not been selected.

Goshen Township, O.—Architects Richards, McCarty & Bullford of Columbus, have plans in progress for a two-story brick and concrete centralized township high and grade school building, to be erected for the Board of Education of Goshen township. Cost $30,000.

Magnetic Springs, O.—Architects Schureman & Schureman of Delaware, O., have been selected to prepare plans for a one-story brick high and grade school building, to be erected in Leesburg township, for the Board of Education. Cost, $12,000.

Miles, O.—The Board of Education will receive bids until April 16 on constructing a brick and stone fireproof high school building from plans drawn by Architect W. G. Eckles of New Castle. Cost, $130,000.

Paulding, O.—The Carnegie Library Association will be ready for bids about April 1 on erecting a 1 1/2-story brick and stone fireproof Carnegie Library, from plans drawn by Architects Howard & Merriam, of Columbus.

St. Paris, O.—The Board of Education contemplates erecting a brick grade and high school building, to cost $16,000. Architect has not been selected.

Sebring, O.—Architect W. G. Eckles of New Castle, Pa., will receive bids until April 6 on erecting a two-story brick and concrete fireproof school building for the Board of Education. Cost, $260,000.

Youngstown, O.—Architects Kling & Zeck, 115 W. Federal street, awarded to Felix Pesa, 125 N. Hird street, the contract for masonry, and to the Sader Construction Company, Wick building, the contract for carpentry for a two-story brick fireproof school building, to be constructed for the Board of Education Cost $40,000.

Manufacturing.

Marion, O.—Architect J. J. Sloan, 120 Jefferson street, has prepared sketches for a four-story factory addition 30x100 feet, for the H. F. Last Company, North Main street. The work will mature at an early date.

Medina, O.—The Medina Foundry Company is asking bids on the erection of a one-story brick and steel foundry building, 70x100 feet, plans for which were made by Architect Charles Calvert, 508 Sweetland building, Cleveland, O.

Cleveland, O.—Architects Christian, Schwarzenberger & Gaede, 1900 Euclid building, awarded to George B. McMullen, 1704 East Fifty-fifth street, the contract for erecting a two-story brick and timber factory and office addition, on 3540 East Seventy-second street, for the Foster Bolt & Nut Manufacturing Company. Cost $70,000.

Dayton, O.—The C. M. Walter Company is taking bids on erecting two...
brick paint manufacturing buildings, on rear of 48 South Henry street, to cost $5,000. Plans by Architect David McNeal, 333 Salem avenue.

Erie, Pa. — Engineer Arthur G. McKeen, Rockefeller building, Cleveland, has plans in progress for a one-story brick power plant addition, to be erected for the H. F. Watson Company.

Kenton, O. — Plans are in progress for a one-story brick and concrete ice and cold storage plant, to be constructed for the Kenton Ice & Delivery Company. Cost about $30,000. Hinderman & Krueger, of Detroit, Mich., and the engineers and general contractors.

Moundsville, W. Va. — The Sanitary Glass Milk Bottle Company contemplates constructing a one-story brick and frame glass plant, from private plans Cost $30,000.

State, County and Municipal.

Shelby County, O. — The Board of County Commissioners awarded the contract to construct waterworks for Cleveland Heights, the work to cost $5,000. Plans by Architect David McKeen, Rockefeller building, Cleveland, has plans in progress for a two-story brick armory, to be erected on Second and State streets, for the State Armory Board. Cost $30,000.

Painesville, O. — The city will be ready for bids about May 1, on constructing a viaduct on North State street, to cost $150,000. Work will include concrete retaining wall, structural steel bridge, sewerage and paving.

Paulding, O. — The Board of County Commissioners will advertise for bids about April 15, on constructing the New Dover bridge, 200-foot steel span, 18-foot roadway, over Mill Creek. Cost $7,000.

Columbus, O. — Architect W. G. Storrer & Company, Fairbanks building, Columbus, has plans in progress for a one-story brick and frame plant, to be constructed for the New Bremen Bridge Company, of New Bremen, the contract for constructing a bridge superstructure over Leatherwood Creek, in Greene township.

Alliance, O. — Architect Frank L. Packard, of Columbus, has been selected to prepare plans for a three-story brick and stone city hall, to be constructed for the Board of Public Service. Cost $75,000.

Cleveland, O. — The city has awarded to the Great Lakes Dredge & Dock Company, Williamson building, the contract for the dredging and filling of the Cuyahoga river. Cost $60,000.

Architect M. R. Porcher, 722 Garfield building, will prepare plans for a one-story brick and steel fireproof power plant, to be constructed on Scranton road for the city. Cost $90,000.

Columbus, O. — The city has awarded to the Andrews Asphalt Paving Company, of Hamilton, the contract for the grading, drainng, paving and curbing of Glennamur avenue, from Hudson street to Indiana Boulevard, to cost $17,585.

Waynesburg, Pa. — Architect W. G. Wilkins, Westinghouse building, Pittsburgh, awarded to McGarvey Blair, the contract for erecting a one- and two-story brick armory on Washington street and Strawberry Alley, for the State Armory Board. Cost $30,000.

Cleveland, O. — W. B. Smith, 726 Columbus building, Cleveland, has been awarded the contract to construct water mains on Lee road, for the village of Cleveland Heights, the work to cost $10,000.

Columbus, O. — The city of Columbus, contemplating erecting a brick and stone addition, to the city hall, on East State street, to cost about $30,000. Architect has not been selected.

Oil City, Pa. — Architects E. E. Bailey Company, Chambers building, have plans in progress for a two-story brick armory, to be erected on Second and State streets, for the State Armory Board. Cost $30,000.

Painesville, O. — The city will be ready for bids about May 1, on constructing a subway on North State street, to cost about $30,000. Hinderman & Krueger, of Detroit, Mich., and the engineers and general contractors.

Franklin, Pa. — Architects E. E. Bailey Company, Chambers building. Oil City, have plans in progress for a two-story brick and steel fireproof theatre building, to be erected on Liberty street, for the Orpheum Theatre Company. Cost $17,000.

Youngstown, O. — Architect George Vaughn, 13 Diamond block, has plans in progress for a one-story brick and hollow tile motion picture theatre, to be erected at East Youngstown, for James Liske, Robinson avenue, East Youngstown. Cost $10,000.

Cleveland, O. — Plans are being made by Architect George Randolph, 5217 Woodland avenue, for a one-story brick motion picture theatre building, 40 by 82 feet, to be built on East Sixty-third street and Quincy avenue, for Philip Surad, 5209 Woodland avenue.

Hospitals.

Springfield, O. — Architects A. W. Storer & Company, Fairbanks building, Springfield, are working on plans for a two-story concrete block and reinforced concrete fireproof hospital building, 44 x 100 feet, for the Home Private Hospital, 200 Clifton avenue. The work will cost $40,000.

DuBois, Pa. — Architects Harrington & Howard, Deposit National Bank building, awarded to Clyde Hatton, the contract for constructing a brick fireproof hospital building, for the Sisters of Mercy, to cost $25,000.

Youngstown, O. — Architect J. L. Decker, Stambaugh building has plans nearly completed for a three-story brick, terra cotta and stucco sanitarium, to be constructed on Madison avenue, for the Youngstown Sanitarium. Cost $30,000.

Aberdeen, O. — Architects Fred W. Hagloch, Flat Iron building, has plans in progress for a two-story brick fireproof vaudeville theatre, to be constructed on South Main street, for the Akron Theatre Company. Cost $60,000.

Warren, O. — Architect J. L. Decker, of Youngstown, awarded to A. C. Croll, the contract for erecting a one-story brick, stone and hollow tile motion picture theatre, for J. A. Reeves, to cost $15,000.

Cincinnati, O. — Fred W. Harr, 2722 Massachusetts avenue, received the excavating and masonry contract for a two-story brick fireproof motion picture theatre for the Forest Theatre Company. Cost $50,000.

Columbus, O. — Asa Billings, 283 Woodland avenue, is taking separate bids on erecting a one-story brick motion picture theatre on Oak street, to cost $6,000. Plans by Architects Bryan & Latham, 429 Columbus Savings and Trust building.

Theatres.

Aberdeen, O. — Architects Fred W. Hagloch, Flat Iron building, has plans in progress for a two-story brick fireproof vaudeville theatre, to be constructed on South Main street, for the Akron Theatre Company. Cost $60,000.
Society and Club Buildings.

Sharon, Pa. — Architect Lewis Bouchelle & Son, Stambough building, Youngstown, O., are taking bids on the erection of a tile swimming pool 16x60 feet, for the Buhl Club.

Bucyrus, O. — Architects McLaughlin & Hulken, 14 Central building, have plans in progress for remodeling a three-story brick and stone building, for the B. P. O. E. No. 150, to cost $30,000.

Findlay, O. — Architects McLaughlin & Hulken, Lima, are preparing sketches for a two-story brick and stone home, to be constructed on East Hardin and Main streets, for the B. P. O. E. lodge, to cost $14,000.

Oil City, Pa. — Architects E. E. Bailey Company, Chambers building, are taking separate bids on erecting a four-story brick and steel fireproof store and lodge building, on Seneca street, for the Oil City Lodge of I. O. F. No. 589.

Miscellaneous.

Akron, O. — Plans for a two-story brick, timber, plaster and hollow tile garage and stable are being made by Architect Charles Schneider, 2248 Euclid avenue, Cleveland, to be built for F. A. Sieberling. The building will measure 120x130 feet.

Cleveland, O. — The contract for building 50 miles of electric railroad extending from Cleveland to Orrville, has been awarded to the Lathrop & Shea Company, New Haven, Conn. The Cleveland, Barberton, Coshocton & Zanesville Railway Company, which is operating the line, expect to extend the work to Alliance, O., by the close of the budding season.

Cleveland, O. — Architects Knox & Elliott, Rockefeller building, will be ready for bids about April 1, on erecting a brick and steel passageway in the Hippodrome building, to cost $5,600.

Sheet metal workers allied with the Amalgamated Association of Sheet Metal Workers in Youngstown, O., which includes tinners and slaters, have made a demand for an increase in wages of five cents an hour, or 40 cents per day of eight hours. If the increase is granted the sheet metal workers will receive $4 a day instead of $3.60, after May 1.

The Milford Center Lumber & Supply Company, Milford Center, O., has increased its capital stock from $5,000 to $15,000.

TALK ON CREDIT.

G. F. Hammon, secretary of the Lumber Dealers' Credit Association, Youngstown, O., speaking on the subject "Credits as Applied to the Retail Lumber Business," states there are two classes of credit systems, first, credit the job, and second, credit the purchaser or contractor. He believes the lumber dealer is too often afraid of giving offense to the contractor, and consequently he does not take the proper steps to protect himself in credit and lien matters. He said it is important for dealers to serve notice on the contractors and on the owners when material is delivered. A lumber dealer should know whether the contractors with whom they have practiced fraud or deceit, and when liens should be waived and when not. He also explained the card index system which is used by his association in Youngstown, where a key to each case is kept of all contractors. He urged close co-operation between the lumber dealer, the contractor, and the building owner, and urges the lumber dealers to always be fair and square in all credit matters.

Erie Looks Good.

Eric, Pa., promises to have one of the best building seasons ever experienced. The reports for the month of February and March show an astonishing increase over that of last year. Last month there was an increase of 20 per cent in new work over that of the same month last year, while up to the present date of March the figures show an increase over that of March, 1913. The combined cost of new buildings in February and March, 1913, aggregated $171,800, while the two months of this year, even with the extremely bad weather for building operations, show a total of $185,500.

The speaker said that a mechanic's lien always takes precedence over mortgages wherein lumber dealers have conformed with the provisions of the lien law, but in case they fail to do so trouble is likely to arise in establishing pri
ority claim. He said there were some loop holes in the lien law whereby the dishonest contractor could defraud the lumber dealer, but he expressed the opinion that these wrinkles would all soon be ironed out by the passing of amendments to the law.

SELECTED ARCHITECTS FOR SCHOOL WORK.

The plans for the proposed high school building, for the Board of Education, Rudolph, O., will be prepared by Architects Howard & Merriam, 8 East Broad street, Columbus, O. This will be a two-story and basement structure and will contain 10 rooms, built of brick and reinforced concrete, with composition roofing, reinforced concrete floor, and roof slab construction, hard wall plaster, mechanical heating system, etc.

WILL TAKE SEPARATE BIDS.

The Hunting-Davis Company, Century building, Pittsburgh, who designed the warehouse for the McKinney Manufacturing Company, Preble avenue, Northside, Pittsburgh, will take separate bids on the heating system, automatic sprinklers, elevators, etc., about April 15. The electric lighting contract has been awarded to the Iron City Electric Company, 711 New Grant street, Pittsburgh.

LOW BIDDERS FOR CLEVELAND SCHOOL.

Contracts for building a two-story and basement addition to the Gilbert school building, Otto street, Cleveland, O., are being awarded by the Board of Education. The carpentry work has been let to Alexander Brothers, Williamson building; masonry and reinforced concrete work to the Bolton-Pratt Company, Columbia building; composition roofing to Norton Brothers, East Sixty-ninth street; steam heating to J. Reemer Heating Company, St. Clair avenue; plumbing to Maurer Brothers, Lorain avenue; plastering to Cleveland Fireproof Company, Hippodrome building; cement floors to C. J. Leach, Eddy road; sheet metal work to W. J. Birmingham, Superior avenue; granolithic floors and marble work to the Forest City Art & Mosaic Company, Cleveland.

The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plate as illustrated.

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CIGAR FACTORY FOR YOUNGSTOWN.

The United Cigar Manufacturing Company, 1016 Second avenue, New York city, contemplates the erection of a three-story reinforced concrete or brick mill factory building 50x180 feet, which will be built at a cost of $35,000. No architect has been selected to prepare plans, but it is thought that bids on the general contract will be taken about April 15. The structure will have composition roofing, steam heating and plumbing, etc.

Y. M. C. A. WORK TO BE PLACED.

It is thought that the contract for building the $275,000 Y. M. C. A. building at Youngstown, O., will be placed April 3. The building will be a six-story brick fireproof structure, 88x220 feet and will embody every new feature of such an institution, including bowling alleys, billiard room, music room, laundry, etc., etc. It will have composition roofing, Kalamein frames and sash, sheet metal work, reinforced concrete floor construction, waterproofing, etc. The plans were made by Architects Jackson, Rosecrans & Waterbury, 1328 Broadway, New York city.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the last five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded</th>
<th>Corresponding period 1913</th>
<th>Corresponding period 1912</th>
<th>Corresponding period 1911</th>
<th>Corresponding period 1910</th>
<th>Corresponding period 1909</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1, 1914 to date</td>
<td>$36,886,000</td>
<td>$32,265,000</td>
<td>$15,020,000</td>
<td>$24,984,000</td>
<td>$18,758,000</td>
<td>$4,621,000</td>
</tr>
<tr>
<td>Corresponding period 1913</td>
<td>$32,265,000</td>
<td>$15,020,000</td>
<td>$24,984,000</td>
<td>$18,758,000</td>
<td>$4,621,000</td>
<td>$36,886,000</td>
</tr>
<tr>
<td>Corresponding period 1912</td>
<td>$15,020,000</td>
<td>$24,984,000</td>
<td>$18,758,000</td>
<td>$4,621,000</td>
<td>$36,886,000</td>
<td>$15,020,000</td>
</tr>
<tr>
<td>Corresponding period 1911</td>
<td>$24,984,000</td>
<td>$18,758,000</td>
<td>$4,621,000</td>
<td>$36,886,000</td>
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<tr>
<td>Corresponding period 1910</td>
<td>$18,758,000</td>
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<tr>
<td>Corresponding period 1909</td>
<td>$4,621,000</td>
<td>$36,886,000</td>
<td>$15,020,000</td>
<td>$24,984,000</td>
<td>$18,758,000</td>
<td>$4,621,000</td>
</tr>
</tbody>
</table>

ASK BIDS ON CHILDREN'S HOME.

The Board of County Commissioners, Court House, Columbus, O., will build a one- and three-story brick and concrete home for children, near Mt. Vernon, O., plans for which have about been completed by Architects Marriott, Allen & Hall, Hayden-Clinton building, Columbus. The main building will be three stories high, with two one-story wings and occupying a space of 60x125 feet. Steam heating and electric lighting fixtures will be installed.

The ventilating system to be installed in the new institutional buildings, at Polk, Pa., for the State Institute for Feeble Minded, has been awarded to the Anderson-Darragh Company, Pittsburgh; electric work to the Axthelm Electric Company, Pittsburgh, and the plumbing to Stinson-Kennedy Company, Pittsburgh.

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Elevator Doors and Wire Goods.
ELKS TO BUILD HOME.

Sketches for the proposed $60,000 home for the Findlay Lodge, B. P. O. E., Findlay, O., are being made by architects McLaughlin & Hulsken, Lima, O. The building will be constructed of brick and stone, tile and slate roofing. Other specifications will include marble and tile work, combination lighting fixtures, hot water or steam heating, electrical work, cement flooring, etc. Bids on the work will be taken April 10.

ASKING SUB-BIDS FOR POST OFFICE BUILDING.

The F. F. Schellenberg Company, Oliver building, Pittsburgh, which has the general contract for building the $80,000 post office building at Belleair, O., for the United States government, is requesting bids on sand and gravel, non-staining cement, waterproofing, sheathing paper, structural terra cotta, reinforcing fabrics, metal and concrete steps, metal wall ties, etc.

COMPLETING PLANS FOR LODGE BUILDING.

It is thought that the plans for the new lodge building to be constructed at Penn avenue and Earkers Place, Pittsburgh, for the Loyal Order of Moose, 510 Fourth avenue, Pittsburgh, will be completed next week by Architect U. J. L. Peoples, Vandergrift building, Pittsburgh. The building is to be six stories, with sub-basement 80x120 feet, of steel construction, and will contain swimming pool, bowling alleys, billiard rooms, lodge rooms, auditorium, gymnasium, glass enclosed roof garden, etc. The estimated cost of the building is $150,000.

NEW CHURCH FOR LIMA.

The Grace Methodist Church, Lima, O., is having preliminary plans prepared by Architect E. F. Mathews, Opera House building, for a two-story brick and stone church building, 80x120 feet, which will cost $60,000. The building will contain an auditorium having a seating capacity of 1,000, school room, gymnasium, showers, ladies' room and kitchen. Bids will be taken by the architect on the general contract about April 15.

SUB-BIDS FOR OIL CITY WORK.

Sub-bids are being taken for erecting a store and lodge building for the Oil City Lodge of I. O. O. F. Plans for the building were prepared by the E. B. Bailey Company, Chambers building, Oil City, which calls for a four-story brick and steel structure, 67x180 feet. Specifications include structural steel, face brick, sandstone, elevators, waterproofing, composition roofing, storefronts, skylights, plumbing, heating, metal lath, fire doors, electric lighting, etc.

PENNSY'S NEW STATION.

Bids are to be taken about the 25th inst. on the super-structure work for the new freight station office building to be built at Federal street and Church avenue, Northside, for the Pennsylvania Railroad Company. The freight warehouse will measure 31x801 feet, two stories high, and the office building 40x110 feet, two stories high, both of brick and steel fireproof construction. The structural steel will be furnished by the McClintic-Marshall Steel Construction Company, Pittsburgh, and the steel erected by the Pittsburgh Construction Company, Diamond Bank building, Pittsburgh. The building materials will consist of ornamental terra cotta, cut stone, hollow tile partitions, and flooring, face brick, reinforced concrete flooring, steel window sash, ornamental copper cornice sills, etc.

ASK BIDS ON THEATRE.

A one-story brick reinforced concrete and hollow tile theatre building is to be built at East Liverpool, O., for J. C. Walsh, from plans which have been completed by Architects Clepper & Owen, Mahoning Bank building, Youngstown, O. The building will measure 60x100 feet and will have a seating capacity of 1,000. The building requirements will consist of face brick, metal lath, reinforced concrete work, tile and mosaic work, lighting fixtures, fire doors, hollow tile, interior trim, etc.

WILL PLACE GARAGE CONTRACT.

It is thought that the contract for a brick and concrete fireproof sales garage which will be constructed on Baum boulevard and Morewood avenue, Pittsburgh, for the Vestal Motor Company, N. Highland avenue, Pittsburgh, will be placed early in the coming week. The building, which will be a two-story structure, will measure 48x100 feet and will require structural steel, reinforced concrete flooring, reinforced concrete roof slabs, metal lath, terrazzo flooring, steel rolling doors, patent plaster, stucco work, sheet metal work, face brick, cut stone, composition roofing, etc.

ROSEBAUM CONTRACT AWARDED.

The contract for constructing the 15-story department store building for the Rosenbaum Company, Pittsburgh, was awarded early this week to James L. Stuart, Oliver building, Pittsburgh. The building will measure 156x240 feet and will be constructed at Federal street and Liberty avenue. The steel contract has already been awarded to the American Bridge Company. The exterior of the building will be of brick and terra cotta. Separate bids are to be taken on the heating and electric work. Sprinkler system, pressure and gravity tanks, ventilating systems, show window floors and back grounds are reserved contracts. The contract for elevators, escalators, and dumb waiters, has been awarded to the Otis Elevator Company, Keenan building, Pittsburgh. It is understood that the general contract was taken at $2,200,000.
Ashtabula’s Proposed School Building

The citizens of Ashtabula, O., took definite action a few days ago concerning issuing bonds to the amount of $125,000, for erecting a high school building. The Board of Education, Ashtabula, commissioned Architect Frank L. Packard, Hayden building, Columbus, O., to prepare plans for the structure. These have been nearly completed and call for a fireproof building.

The proposed school, as shown herewith, will contain 20 recitation rooms, manual training and domestic science departments, chemical, physical and biological laboratories, offices, gymnasium, auditorium with a seating capacity of 1,000, rest room, etc.

The building will be of brick and reinforced concrete construction and will have such other details of workmanship as to make it one of the best school buildings of its size in the country.

NEW BUREAU OF MINES BUILDINGS.

Plans for the proposed $500,000 experiment station of the United States Bureau of Mines to be located in Pittsburgh, have been approved by the commission appointed by Congress for that purpose. The Federal Government now owns the property upon which will be erected a group of buildings, especially designed and adapted for the carrying on of the mine-safety work and other investigations.

Congress a year ago, in the public buildings bill, authorized a new home for the Bureau of Mines to cost $500,000. It is now expected that Congress in its present session will make a specific appropriation so that construction work may begin. It is hoped that contracts may be let by July 1. The director is hopeful that the buildings may be completed in the fall of 1915.

The group consists of three main buildings, the central or mining building, having three stories, flanked by the mechanical and the chemical buildings. In the rear of these and inclosing a court will be the service building. Beyond will be two buildings, over the roofs of which will pass the roadway to the Carnegie School buildings and Schenley Park.

Between the main group and the power and fuel group will be the entrance to a series of mine shafts. One of these will be used as an elevator to carry heavy material and passengers from the lower level to the upper; another will be for tests of hoisting ropes and similar mining appliances; another will be an entrance to tunnels extending under the buildings and in which mining experiments, such as fighting mine fires, will be conducted.

The main or mining building will contain the administrative offices and those of the mining force. In it will be an assembly and lecture hall, a library, and smoke and other rooms for demonstrations and training in mine rescue and first aid. The mechanical building will be for experiments and tests of mining machinery and appliances and the chemical building for investigations and analyses of fuels, explosives, and various mineral substances.
ERIE'S NEW OFFICE BUILDING.

The contract has just been placed with the Mayer Brothers Construction Company, Erie, Pa., for building the 10-story brick and reinforced concrete office building at Twelfth and State streets, Erie, Pa., for Henry Mayer, Erie. The estimated cost of the work is placed at $250,000.

Plans were prepared by Architect Richard Irvin, Union Bank building, Pittsburgh, who included the following materials in the specifications for construction: Composition roofing, red face brick, metal lath partitions, marble and tile work, patent store fronts, low pressure steam heating system, electric lighting, ornamental iron work, sheet metal work, etc.

WOOD VS. BRICK RESIDENCES.

The opponents of wood construction invariably tell the prospective builder that a frame building is very expensive to maintain and that the cost of painting a house is a burden to be avoided if possible. This has been one of their most effective arguments and it has produced results where all others have failed. Its effectiveness is due to the most ordinary of human traits, and tendency to "shy" at anything that looks like needless expense.

In the first place, a frame house does not have to be painted. The prospective builder of a frame dwelling can avoid the expense of painting. If he is willing to apply a color as permanent as the color of the brick he might have used he can have his yellow pine siding treated with a heavy creosote oil that will preserve the wood for many years and will eliminate the need for paint. But as a rule the builder of a frame house is not willing to put on a permanent color. He wants a chance to vary its outward appearance every two or three years, something he can not do well with a brick or stucco house, and so he prefers to paint it.

The application of two coats of lead and oil or oxide of zinc oil costs money. But it corresponds exactly with other things that have to be done in connection with the maintenance of a house built of stone, brick or stucco. In the first place, any building of masonry construction has to be tuckpointed every few years or it acquires a very shabby appearance. Stucco walls will crack especially in a climate where frost has a chance to get into them. Tuckpointing and repairing cracks also cost money, and while the average man in a pinch can undertake the job of applying some ready-mixed paint to his own house very few will undertake to patch up a brick wall or to fill up the cracks in a dilapidated stucco structure.

Brick walls frequently reach such conditions that paint is the only restorative, and it costs just as much to paint a brick as it does to paint a frame wall—generally a little more. But a painted brick wall is always more or less hideous, and a coat of paint on a brick house is an admission that it is altogether passable, whereas paint on a frame house is an indication of its owner's prosperity.

The difference of cost between frame and brick construction of any given plan is easily estimated. Take that difference, which on a house of moderate size will amount to several hundred dollars in favor of the frame type, figure interest at a reasonable rate, add to that interest the cost of repairs and replacements.
that have to be made in connection with the brick construction, and the total will pay the cost of painting the frame house with two coats of the best paint every two and a half or three years, which, ordinarily, is often enough.

The insurance rate on the frame dwelling is higher than on the brick dwelling, but the brick dwelling will pay enough more taxes to offset the difference in the cost of fire insurance.

Few people are able to plan their homes so that alterations are not apt to be called for. Any property that changes hands is almost always unsatisfactory in some respect. If it is of frame construction alterations are easily made, at comparatively little cost. But if brick walls have to be torn down or stucco construction has to be dismantled and then patched up, the undertaking is a serious one, worthy of much consideration.

In the long run the cost of maintenance of a frame house is a negligible consideration, assuming, of course, that it is well constructed in the first place. And a well built frame dwelling that is 25 years old can be made to look like new by a little painting and renovating, whereas the making over of a brick or stucco house of the same age presents a difficult problem.

### HEIGHTS OF BUILDINGS.

During the last eight months there has been under way a remarkably thorough and intelligent study of the regulation of the heights of buildings. This investigation was financed by a $15,000 appropriation of the Board of Estimate and Apportionment of the city of New York.

The commission has investigated the practice of many cities in America and Europe in height, area and occupancy regulations. Studies have been made as to the effect of these regulations on property and rental values and on the more general growth and development of the community. The attitude of the courts with regard to the constitutionality of such regulations has also been considered.

The commission’s investigations brought to light many interesting facts. One finds, for example, impressive evidence of New York’s peculiar situation as regards building heights by comparing the city’s tallest skyscraper with the height of buildings in other cities. The Woolworth building is 750 feet in height. This is 670 feet higher than the ‘maximum limit for buildings in London, 671 feet higher than the limit in Paris, 678 feet higher than the limit in Stock-holm.

A building erected to a height equal to the combined maximum heights permitted in these five great European capital cities would be seven feet lower than the World building, and the World building is only half as high as the Woolworth building. A building erected to a height equal to the aggregate height limits of London, Berlin, Paris, Rome, Stockholm, Edinburgh, Zurich, Frankfurt-on-Main, Cologne, Dusseldorf and Hamburg would exceed the height of the Woolworth building by only 14 feet.

The maximum heights of buildings permitted by ordinance in some of the large cities of the United States having such restrictions are:

<table>
<thead>
<tr>
<th>City</th>
<th>Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore</td>
<td>175</td>
</tr>
<tr>
<td>Boston</td>
<td>125</td>
</tr>
<tr>
<td>Charleston, S. C.</td>
<td>125</td>
</tr>
<tr>
<td>Chicago</td>
<td>200</td>
</tr>
<tr>
<td>Cleveland, O.</td>
<td>200</td>
</tr>
<tr>
<td>Essex, N. Y.</td>
<td>200</td>
</tr>
<tr>
<td>Fort Wayne, Ind.</td>
<td>200</td>
</tr>
<tr>
<td>Indianapolis, Ind.</td>
<td>200</td>
</tr>
<tr>
<td>Los Angeles, Cal.</td>
<td>150</td>
</tr>
<tr>
<td>Manchester, N. H.</td>
<td>125</td>
</tr>
<tr>
<td>Milwaukee, Wis.</td>
<td>250</td>
</tr>
<tr>
<td>Newark, N. J</td>
<td>200</td>
</tr>
<tr>
<td>Portland, Ore.</td>
<td>160</td>
</tr>
<tr>
<td>Providence, R. I.</td>
<td>120</td>
</tr>
<tr>
<td>Salt Lake City</td>
<td>125</td>
</tr>
<tr>
<td>Scranton, Pa.</td>
<td>125</td>
</tr>
<tr>
<td>Worcester, Mass.</td>
<td>125</td>
</tr>
</tbody>
</table>

The commission’s report contains tabulations which were most difficult to obtain, but which were invaluable in framing the recommendations bearing on safety and health. In this connection there are tables showing the number of people on each floor in a number of typical factory and office buildings; showing the use of artificial light near the windows of office buildings on narrow streets at noon in summer; showing the movements of people down stairways; showing the movements of crowds on the level; showing the congestion in office buildings, factories, large department stores, etc. From such data calculations were made showing the length of time it would take to get people out of certain typical crowded buildings, showing the congestion that would result in certain downtown streets if the buildings were vacated in a panic and showing the inadequacy of exit facilities in many buildings.

Much attention has been given by the commission to the districting or zoning system in German and Austrian cities and to the increasing adoption of this system of height and occupancy restrictions in the United States. The American cities represented in such maps are Boston, Washington, Los Angeles, Minneapolis, Milwaukee, Baltimore and Indianapolis.

### RAISING TRACKS IN JOHNSTOWN

Contracts have been placed during the past week by the Pennsylvania Railroad Company, Pittsburgh, for grade crossings, track raising, etc., at Johnstown, Pa. One portion of the work was awarded to John Goll, 1539 Eibert street, Philadelphia, and the remaining part to P. McManus, Thirty-fourth and Lancaster avenues, Philadelphia. The retaining wall will be 5,000 feet long, with an average height of 10 feet. There will be 35,000 feet of excavating and 45,000 cubic yards of gravel concrete work. The estimated cost of these improvements is $501,000.

### LODGE BUILDING FOR DAYTON

The Fraternal Order of Eagles, No. 321, Dayton, O., is having sketches submitted for a proposed lodge building, 76x235 feet, which is to be of brick and steel construction, and to contain auditorium with stage, social rooms, cafe, billiard room, bar, card room, etc. The estimated cost of the work is $70,000.

### FORMING NEW ORGANIZATION

A permanent organization of retail lumber dealers and building supply dealers of West Virginia, is being held at Huntington, W. Va., this week. Only the retail dealers are eligible as active members with wholesalers and manufacturers as honorary or associate members. D. J. Dickenson is secretary of the temporary organization.

### GENERAL NEWS

Announcement was made by the Asbestos Protected Metal Company that the Pittsburgh offices have been moved from the Union Bank building to the Benedum-Trees building.
Pittsburgh.

Architect Thomas Hannah, Keenan building, is taking bids on the convent and church addition at Castle Shannon, for the St. Anna R. C. Congregation. The work consists of a new convent, three stories and basement, and an addition to the church one and two stories, 60x80 feet. Cost, $30,000.

The general contract for a two-story brick veneer residence, to be built for E. C. Storch, Greensville road on Birming­ham avenue, has been awarded to William J. Williams, 35 Miller street, Carrick, Pa.

John Brown, 2031 Forbes street, has private plans for a warehouse addition and alterations costing $35,000, to be built on Aiken avenue, for Jesse J. Stewart, 209 Ferry street. The work will be brick fireproof construction, one story.

Architect George Schwan, Peoples Bank building, is taking separate bids for the erection of a $35,000 church, which is being built on Greensville road for the Concord Presbyterian Congregation. The building will be of brick and stone construction, one story and balcony, 40x100 feet. The work will be started soon.

W. E. Snaman, architect, Empire building, has plans under way for the store building remodel, 405 Federal street, Northside, for A. A. Hess & Company.

The general contract for the mercantile building at Penn avenue and Stan­wix street, for J. Alex. Hardy, Fifth avenue, has been awarded to W. B. Ben­nett, 742 N. Negley avenue. The building will contain about 25 stores, and be constructed of brick and terra cotta, three stories, 44x48 feet, costing $50,000.

Ross K. Selton, 510 E. Diamond street, has received the general contract for the residence to be built on Solway street and Murray avenue, for Harry Ward, Thirty-second street and Penn avenue. The building will be constructed of red tapestry brick.

John H. Haddrick, 2750 Broadway, Dormont, is taking sub-bids for an apartment building, which he is constructing on Broadway, Dormont. The building will cost $15,000 and be of brick veneer construction, three stories and having six apartments.

Rose & Fisher, Pennsylvania avenue, have received the award of the contract to build the $30,000 church for the Ensworth M. E. Congregation. The building will be constructed of stone, two stories.

Architect George Schwan, 1007 People­les Bank building, will probably complete plans by April 10 for interior alterations in the factory building of the Wolfe Brush Company, 15th street.

Bids are being taken by Architect Charles Geisler, 107 Eighteenth street, and the Vestal Motor Company, Highland avenue, on the erection of a sales garage on Baum boulevard and More­wood avenue. The building will be of brick and concrete fireproof construction, two stories and basement, 48x100 feet.

The general contract for remodeling the store building of J. Diamond, 100 Federal street, has been awarded to Max Parker, 1008 Clark street.

George E. McKee, Alger street, has received the general contract for remodeling the store building of Mrs. A. M. Shoemaker, at 439 Market street. The work consists of new wood fronts and general interior alterations.

R. H. Fisher, Holmes street, has received the general contract for the erection of a parsonage at Butler and Forti­th street, for the Butler Street M. E. Congregation. The building will be of brick construction, 2½ stories and base­ment, brick construction.

The Central Home Building Company Vaerdugriff building, has received the general contract for the erection of a two-story residence for Albert Hansen, Sherloc avenue, Northside.

W. D. Beauty Company, 900 Burd street, Northside, has been awarded the general contract for the erection of a $37,000 motion picture theatre to be located on W. North avenue, for the Park Estate. The building will be constructed of brick and ornamental terra cotta.
15. The new building will be brick fireproof construction, having two stories and basement and will contain an auditorium.

Architect W. E. Snaman, Empire building, has about completed plans for a two-story brick cottage, to be built in Millvale, for Mrs. Emma Kimmerling, Millvale. Cost, $3,000.

Sketches are being made by Architect Charles Bickel, May building, for making a number of interior alterations to Boggs & Buhl's department store, Federal street, Northside. The work will cost about $16,000.

Plans may be about completed about May 1, by Architect John P. Brennan, Old City Hall, Northside, for an addition to be built to the hospital building at Marshall-town for the City of Pittsburgh. The work consists of building two or three wings, each 60x60 feet.

Emmian & Snelde, Madison avenue, Northside, have been awarded the general contract for a 2½-story brick veneer residence, costing $4,800, to be built on Gibbon street, near East street, for John Buttner, Vista street. G. G. Mentel, Martin building, is the architect.

Architect W. E. Snaman has the plans completed for a $6,000 residence to be built for L. H. Smith, care The Pittsburgh Press, on Andover Terrace, Schenley Height. The building will be brick veneer, 2½ stories and basement.

Plans are being completed for two residences, to be built at McKee Place, for W. E. Wright, McKee Place. The buildings will be of brick construction and will cost $6,000 each. W. E. Snaman, Empire building, is the architect.

Architect George Schwan, Peoples Bank building, has about completed plans for a 2½-story brick and cement plaster residence, to be built on Alderson street, for Clyde F. Loughridge, 813 Liberty avenue. Cost, $7,500.

Robert J. Cleland, Rogers avenue, is contemplating the erection of a $15,000 residence on Squirrel Hill. The architect has not yet been selected.

Architect A. B. Snyder, Empire building, is taking separate bids for one block, containing six residences, to be built on Northumberland near Beechwood boulevard, for Able & Smith, Shady and Forbes street. The buildings will be of brick construction and cost $4,000 each. The date for closing has not yet been set.

Plans are in progress for a commercial garage, costing $8,000, to be built on Brilliant avenue, for Henry Brothers Third street, Aspinwall. The building is of brick, semi-fireproof construction, one and two stories, 30x50, and will contain repair shop in the rear of brick construction, one story, 18x22, with office space of 18x50. Plans will probably be completed this week.

Architect A. Morgan Smith, Mt. Lebanon, is taking bids on a $4,000 residence, to be built for Harry T. Hall, in Mt. Lebanon. The building will be of brick and hollow tile construction, two stories.

Plans will probably be completed by April 20 for addition to be built to the Nurses' Home, 900 Sherry avenue, Northside, by Architects Boyd & Stewart, Century building. The building is owned by Mrs. S. P. Harbison, Davis avenue. The work will cost $10,000.

J. I. Robinson, 2319 West Liberty avenue, is taking bids for a residence of a $5,500 residence for J. P. Jayne, Brighton Road. The building will be of stone and cement construction, two stories.

M. Nirdlinger, Diamond Bank building, is taking bids on the erection of a brick factory, costing $20,000, on Liberty and Fish streets, for the Standard Cigar Company, Liberty avenue.

John Howarth, 39 Prospect street, Mt. Washington, is taking bids on the erection of two brick veneer residences, 2½ stories, costing $3,200 each.

Bids will close April 6, on the erection of a high and grade school building, costing $30,000, for the Board of Education. The building will be of brick fireproof construction, two stories and basement, 60x12 feet. J. H. Phillips, Chartiers avenue, McKees Rocks, is the architect.

A. M. Nirdlinger, Empire building, has plans well under way for the general contract for a residence, 38x75 feet. Cost $5,000.

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A. M. Nirdlinger, Empire building, has plans well under way for the general contract for a residence, 38x75 feet. Cost $5,000.
Donora, Pa. — V. J. O'Donnell has private plans for the erection of a $4,000 residence, of brick construction, 2½ stories. The site has not yet been selected. The owner will take bids soon.

Duquesne, Pa. — Architect A. L. Miller, Chislett street, Pittsburgh, prepared the plans for a $5,000 brick residence, 2½ stories, to be built on Second street, for W. J. Roybeck, Grant street, Duquesne. E. W. Workman, McKeesport, received the general contract.

Indiana, Pa. — The general contract has been awarded to E. M. Lockard, for a $5,000 brick veneer residence, 2½ stories, to be erected on School street.

McMenemy, W. Va. — William Rigs has been awarded the contract for a frame residence, two stories, to be erected by W. S. Leach, 2239 Eoff street, Wheeling, costing $4,500. Charles McCarty, Exchange Bank building, Wheeling, architect.

Monessen, Pa. — Alvin Salstein has had private plans for a frame residence which is being erected. The building will be 2½-stories, and cost $2,500. Victor Lautimus received the general contract. No sub-contracts have been awarded.

Monongahela, Pa. — A. J. Hilton, has private plans for the erection of a frame residence on Grant street. The building will be 2½ stories, and will cost $2,500. The general contract has been awarded to W. A. Caldwell, Coal street. No sub-contracts have been awarded.

William A. Caldwell has received the general contract for erecting a frame residence on High street, for Charles Kelley. The cost will be about $2,500. No sub-contracts have been awarded.

Morgantown, W. Va. — Architect Emler F. Jacobs, Farmers & Merchants Bank, has plans under way for the erection of a brick veneer, 2½-story residence, for Hon. G. C. Baker, Chestnut street. The building will cost $21,000. Bids are being taken by the architect.

Portsmouth, O. — Architects Richards, McCarty & Bulford, Hartman building, Columbus, are now ready for bids on the brick residence which is to be built for Wade S. Kennedy, Gallia street. The building will be two stories and basement.

Richards, McCarty & Bulford, Hartman building, Columbus, O., have plans under way for the erection of a brick residence, costing $7,000, for C. L. Spencer.

Shields, Pa. — Architects Rutan & Russell, Fifth avenue, Pittsburgh, are taking bids on the residence which is being erected for William J. Crittenden, Oliver building, Pittsburgh. The building is of brick fireproof construction, 2½ stories, and will cost $75,000.

Toledo, O. — The site for an apartment building, to be built by Jack Lastig, 99 Main street, has been purchased. The building will be located on Scottwood avenue, near Bancroft street, and will be of brick construction, two or three stories, costing about $50,000. The architect has not been selected.

Charles Hartman, Nicholas building, has purchased a site for an apartment building, on Columbia street, where he will erect a brick building, two or three stories. The project will mature during the summer.

Wilmington, O. — Mrs. Madge Smith, care Clinton Telegraph Company, is contemplating the erection of a $3,500 frame residence, 1½ stories. Architect has not been selected.

No architect has been selected for the $6,000 residence which T. H. Bryan is planning to erect. Plans will probably mature about April 15.

Zanesville, O. — The general contract has been awarded to Dunsweiler Brothers, Main street, for the erection of a 2½-story brick residence, for W. H. Hardesty. Cost $4,000.

Midland, Pa. — F. Sinnott Sons, 2801 Perrysville avenue, Northside, Pittsburgh, was the low bidder on the lock-keepers' residences, to be built at Dam No. 7, Ohio river, for the United States government. The cost will be $12,078 total for the two residences. Contract will probably be awarded this week.

New Cumberland, W. Va. — The contract will probably be awarded this week for the erection of two lock-keepers' residences at Dam No. 9, for the United States government. F. Sinnott & Sons were the low bidders.

Niles, O. — Morris L. Hake has been awarded the general contract for the erection of a 2½-story frame residence, for W. Y. Sayers.

Sadie Hubbard has private plans for the erection of a $2,900 residence, at Niles. The dwelling will be of frame structure, 2½ stories.

F. E. Heames is taking bids for the erection of a frame dwelling, 2½ stories. The residence will cost $2,500, for which the owner has private plans.

Parkersburg, W. Va. — Edward B. Franzheim, Schmulbach building, Wheeling, has been selected architect for a $12,000 residence, brick and stone trim, 2½ stories, for W. H. Wolfe.

Toledo, O. — The Muller Construction Company, Franklin avenue, has received the general contract for the erection of an apartment building at 409 Victoria street, for J. H. Wittman, 236 Summit street. It will be a frame building, two stories.

Warran, O. — John Damm has private plans for the erection of a frame dwell-
THE CONSTRUCTION RECORD

awarded to V. M. Sandburg, Corry. The building will be of brick construction.

Fairmont, W. Va. — Architect G. H. Smider, has plans under way for the erection of an apartment building for W. A. Sprague. The building will be of brick three stories, 40x80 feet.

Middletown, O. — Architect George Barkman, Keily building, Hamilton, O., will be ready for bids about April 25 on a $8,000 residence, to be built for Edward Sebald, Third and Main street.

Youngstown, O. — Frank B. Meade and James Hamilton, 168 Garfield building, Cleveland, were the architects for a residence and garage which will be erected at Tod avenue for Philip Wiek, who is now taking bids. The building is to be a frame structure, two stories.

Beaver, Pa. — R. B. McDaniel Company, New Brighton, has been awarded the general contract to build the new $10,000 brick residence on Second street, for James Bernard.

Cleveland, O. — Architect Charles Pennington, 1407 Lake avenue, Lakewood, O., is taking bids on the $7,000 residence which is to be built on Clifton boulevard and W. One Hundred and Third street, for C. H. Brandt, Franklin avenue.

Columbus, O. — Francis Bowman, 314 Dakota avenue, has received the general contract for the erection of four houses, for Charles Kienerer, Hamilton avenue to be built of brick tow stories and basement.

Duquesne, Pa. — The award of the general contract for a residence for W. J. Roybeck, Grant street, has been let to A. L. Workman, Seventh avenue and Kennedy street. The building will cost $5,600, and will be of brick construction.

Grafton, W. Va. — L. J. Mason has private plans for the erection of a $3,000 residence, which is contemplated building in the near future. The contract will probably be awarded to S. L. Jones.

Middletown, O. — Thomas Hicks, Woodlawn avenue, has private plans for the erection of a residence of brick veneer construction, two stories and basement, to cost $5,600. The general contract has been awarded to Miller Brothers, 719 Charles street, who will be ready for sub-bids about April 10.

Mt. Sterling, O. — Architect H. Charles Jones, Dascher building, Columbus, will be ready for bids about April 6 for the erection of a residence for M. J. G. Loofborrow. The building will be of cement block.

Sanusky, O. — No date has been set for closing the bids being taken by Architects Wachter Bellman & Schreiber.

Business Buildings.

Ashland, O. — The architect has not been selected for the contemplated mercantile building, to be erected on Main street, for James L. Smith, 193 Main street. The building will be of brick and terra cotta ordinary construction, two stories, 22x100 feet.

Bentleyville, Pa. — Architect George W. Yohe, Monongahela, has the plans under way for the erection of a $10,000 store and apartment building, on Main street. It will be of brick and tile construction, three stories and basement. Brunner & Co., Main street, is the owner.


Cincinnati, O. — Architect Louis G. Dittoe, Provident Bank building, is taking bids for the erection of a brick store and office building, 3½ stories, for Henry Behringer & Son, John and Oliver streets.

Specifications are being written for a bank and office building, to be erected by the Western & Southern Life Insurance Company. The building will be of brick and stone fireproof construction, three stories and basement, 84x180 feet. Architect Harry Hake and Charles Kick, Provident Bank building, are taking bids.

Cleveland, O. — W. S. Ferguson Company, Euclid building, has been selected architect for the store and apartment building, to be erected by Ernest Schimmel, St. Clair avenue. The building will be of brick, two stories, containing five stores and nine suites. Cost $25,000.

Architect Paul Schmidt, Avenue building, has the plans completed for the saloon remodel, 11,000 Cedar avenue, for H. Fisse. The owner will take bids soon.

The Rutherford Company, Eighteenth street, have received the award of the general contract for the laundry building to be erected on Central avenue, by Miller Brothers Realty Company, Brownell building. The building will be of brick reinforced concrete fireproof construction, two or three stories, 52x110 feet.

Donora, Pa. — The Allen Lumber Company was the successful bidder for the erection of a brick and tile store and apartment building on McKean avenue, and Second street, for N. Freedlander. Second and McKean avenue. The building will be two stories and cost $8,000.

The general contract has been awarded to C. C. Compton, Post Office building, for the erection of a two-story brick building for Joseph Melisetsch, Thompson avenue. The building will contain a bakeery, stable and apartment building, and cost $20,600.

Eric, Pa. — The general contract has been awarded to Leible-Binney Construction Company, for the erection of a store and office building on State street for the United Hardware & Supply Company, Titusville, Pa. Bids will be taken at once. The building will be of brick, two story and basement, and cost $16,000.

Greenville, Pa. — Architect C. F. Owsley, Mahoning National Bank building, Youngstown, has plans nearly completed for remodeling bank of the Greenville National Bank. The building will be of brick, one story and basement, and will cost $8,000.

Lancaster, O. — Architect Richards, McCarty & Bullard, Columbus, O., has plans nearly completed for the erection of a brick and stone building, three stories, which will contain three stores and apartments. The building will be erected for the Thimmes Estate.

Leetsdale, Pa. — Tate, Jones & Com-
company, Empire building, Pittsburgh, have private plans in progress for the erection of an office building of brick and concrete construction, one story and basement, to be located on Beaver avenue. The owner will take bids soon. Cost $3,500.

Mannington, W. Va.—S. F. Phillips is contemplating the erection of a store and apartment building, to be built of brick and concrete construction, three stories, 48x80 feet. The building will cost about $12,000. The architect will be selected shortly.

Mrs. Rose Burt is contemplating the erection of a three-story concrete and brick store and apartment building, to cost $15,000. No architect has been selected.

Newark, O.—Architect Louis Sullivan, 30 Congress street, Cleveland, is making plans for a bank and office building, marble brick and terracotta construction, two stories and basement, to be erected on Hudson street, by the Home Building Association Company.

Williamson, W. Va. — Architect R. C. Clark, 117 South LaSalle street, Chicago, has plans under way for a $25,000 brick and reinforced concrete market house, two stories, to be erected for Armour & Company, 117 LaSalle street, Chicago, Ill. The architect will take bids shortly.

Canonsburg, Pa.—Taylor & Crawford, 10 Orchard street, have received the general contract for a two-story brick and loft building, to be built for Charles Schade on Jefferson avenue. Cost $3,500.

Cincinatti, O.—J. B. Schmitz, 216 E. Sixteenth street, has been awarded the general contract for a dry cleaning plant and store building, costing $15,000, to be erected for The Fenton Dry Cleaning Company, 4301 Reading road. The building will be of brick and terracotta construction, one story and basement, 30x65 feet.

No architect has been selected for the store and loft building which S. F. Nelson & Company 304 W. Fourth street, is contemplating erecting at 202-4 W. Fourth street. The building will cost $20,000 and will be of brick and steel fireproof construction, six stories and basement, 40x80 feet.

Cleveland, O.—Architect E. F. Gibson, Euclid building, has plans under way for the erection of a brick store and apartment building, three stories, at St. Clair and E. One Hundred and Seventeenth street. The building will cost $18,000 and will contain 13 suites and two store rooms.

Anders Construction Company has received the general contract for the erection of a packing plant addition at 3620 Clark avenue, for the Hildebrand Provision Company, Clark avenue. The building will be of brick and steel fireproof construction. Cost, $12,000.

Columbus, O.—The general contract for the erection of four store, a theatre, and loft building on S. High street, for H. L. Chapman, Wyandotte building, has been awarded to John Heckert, Ruggery building. The building will cost about $60,000 and will be of brick, concrete and terracotta construction, 72x 70 and 70x117 feet.

Donora, Pa.—No architect has been selected for the erection of a store and apartment building, costing $15,000, for J. Wilson, West Newton, Pa., R. F. D.

Monesen, Pa.—Architect J. A. Lothman will take bids shortly for the erection of a store and apartment building costing $13,000, for Emanuel Feldman, Morgan avenue. It will be of brick construction, three stories.

Youngstown, O.—The general contract has been awarded to W. R. Packard, Park avenue, for the erection of two stores and terraces, costing $15,000, for T. Ambronrotz, S. Watt street.

Columbus, O.—The general contract for the erection of an addition to the cold storage plant of J. F. Schmidt, at 255 Kossuth street, has been awarded to E. Elford, Hayden Clinton Bank building. No sub-contracts awarded. The work will be of brick and concrete.

New Kensington, Pa.—The general contract for the erection of a store and apartment building, costing $8,000 for Crown Bottling Company, has been awarded to Graeham & Wiles. The building will be of brick construction.

Wheeling, W. Va.—Architect M. F. Gissey, Mellon Bank building, Pittsburgh, is ready for bids for the erection of a brick mercantile building at Thirty-sixth and Jacob street, for the Cooey-Bentz Company. Cost $50,000.

On account of the bids being unsatisfactory, Architect Edward Bates Freih, Schmulbach building, is preparing new plans for the $55,000 brick and terracotta bank at Twelfth and Main streets, which is being remodeled and enlarged for the Peoples Bank, of Wheeling.

Religious.

Akron, O.—Plans are being prepared by Architects A. M. Allen & Company, Euclid building, Cleveland, for the erection of a brick and stone church and Sunday school room, one story, costing $12,000, to be built on North Hill, by the North Hill Disciple Congregation.

Denmark Center, O.—No architect has been selected for the $7,000 church, which the First English Evangelical Congregation is contemplating erecting in the near future. The church will be built of brick.

Edgewood, W. Va. — Dominick Ja- croverty, Water and Twelfth streets, Wheeling, W. Va., has been awarded the general contract for the erection of a retaining wall, to be built for the Carmelite Convent, Wheeling, W. Va. The wall will be of reinforced construction, and cost $10,000.

Erie, Pa. — Architect W. B. Guenther, Akron, O., will take bids shortly for the erection of a Parish House to be built for the St. Patrick's Roman Catholic Congregation, at 130 Fourth street. The building will be of brick and tile construction, one story, 21x37 feet.

Hamilton, O. — Architect J. G. Shellessey, Byrnmyer avenue, Cincinnati, will take bids shortly for the erection of a church on Beckett avenue, for the St. Veronica's Roman Catholic Congregation. The building will be of brick and stone trim fireproof construction and will cost $40,000.

Monongah, W. Va. — Bids close this week on the erection of a $20,000 church and parish house for the Consolidated Coal Company, care C. S. Riggs, Fairmont, W. Va. The building will be of brick construction, one-story, 68x37 feet.

New Philadelphia, O. — Architects Langdon & Hohly, Nicholas building, Toledo, O., may take bids about April 20 for the erection of a brick church, two stories, to be built for the First Reformed Church.

Sewickley, Pa. — Architects Rutan & Russell, Magee building, Pittsburgh, are taking bids for the alterations and addition to the Sewickley Presbyterian Church, Beaver and Grant streets. The addition will be of stone construction, two stories, containing assembly room and kitchen, office and Sunday school rooms. The cost will be $35,000.

Sharpsville, Pa. — Architects Carlisle & Sharrer, Jenkins Arcade building, will take bids soon for an addition which is to be built to the church building, for the First Baptist Congregation. The addition will be of brick, one story, 35x52 feet. Cost $6,000.

Waynesville, O. — Architect C. T. Boeke, Young building, Piqua, O., will take bids shortly for the erection of a $15,000 church for the Waynesville Methodist Congregation. The building will be of brick construction, 1½ story and basement, 50x72 feet.

West Rushville, O.—Plans are about completed by Architect Forest S. Rush, Brunson building, Columbus, for the erection of a $12,000 church for the Pres-
by the Congregational Church of O. Lakeville, O.—G. C. Butler, Wooster, educational.

Lakeville, O.—G. C. Butler, Wooster, O., has been awarded the general contract for the erection of a $3,000 church for the German Reformed Congregation. The building will be of brick and stone construction.

Lingler, Frickling building, Hamilton, has plans nearly completed for the erection of a high school building, costing $20,000, for the Board of Education of Wayne township. The building will be of brick composition construction, one story and basement, 75x81 feet. The architect will be ready for bids about April 25.

Tunnelton, W. Va.—Architect A. C. Lyons, Fairmont, W. Va., has plans under way for the erection of the high and grade school building for the Kingwood District Board of Education. The building will cost about $30,000 and will be of brick ordinary construction, two stories.

Wheeling, W. Va.—The Board of Education is contemplating the erection of a large grade school building. The new building will cost about $75,000 and will be of brick fireproof construction, two stories and basement. It will contain a gymnasium, swimming pool, etc. No architect has been selected.

Ashtabula, O.—No architect has been selected for the erection of the $10,000 school building which is to be built for the Board of Education of Saybrook township, Ashtabula county.

Beaver Falls, Pa.—Bids close this week on the $14,000 grade school building which is being erected on College Hill for the Board of Education. The building will be of brick construction, two stories and basement, 32x83 feet. Carlisle & Sharrer, Jenkins Arcade building, are the architects.

Brecksville, O.—Architect Albert E. Skel, Rose building, Cleveland, O., is preparing plans for the erection of a $25,000 school building for the Board of Education, Brecksville township, Cuyahoga county. The building will be of brick construction, two stories.

Carey, O.—Bids close this week on the erection of the $25,000 parochial school which will be of brick and terra cotta construction, two stories and basement, for the School of Our Lady of Consolation.

Cincinnati, O.—Architect A. L. Fechner, Lyric Theatre building, has plans under way for the erection of a women's building, costing $75,000, which is to be constructed for the University of Cincinnati. The new building will be of brick and terra cotta fireproof construction, three and two stories and basement, 60x110 feet.

Cleveland Heights, O.—Roland Curry, Cleveland, is reported to be the low bidder on the high school building to be built for the Board of Education on Lee road and Euclid Heights boulevard. William Dunbar, 820 Cedar avenue, received the carpentry; Alexander Brothers, 325 Williamson building, the reinforced concrete contract. The building will cost $140,000, and will be of brick and reinforced fireproof construction, three stories and basement, 270x32 feet. It will contain an auditorium with stage and Domestic science department.

Erie, Pa.—Sketches are being made by Architects W. B. Ittner, St. Louis, Mo., for the erection of a grade school building, costing $175,000 on Seventeenth and Poplar streets, for the Board of Education. The new building will be of brick and steel fireproof construction, three stories and basement, 150x175 feet, containing 25 rooms with gymnasium, shower baths, manual training department, Domestic department and kindergarten.

Fairhaven, O.—Architect George W. Barksman, Reilly building, Hamilton, O., will have plans prepared shortly for the erection of a grade school building for the Board of Education. The new building will cost $5,000, and will have brick construction, one story and basement, 81x80 feet.

Mansfield, O.—The Board of Education is taking bids on the school addition, Bowman street, which will contain Domestic science rooms and manual training rooms. It will be of brick and stone construction, two stories. Architect Vernon Redding, Bird building, prepared the plans.

The Board of Education is taking bids for the erection of an addition to be built to the school addition on East Fourth street. The addition will be of brick and stone and contain four rooms.

Mansfield, O.—Bids close April 21 for the remodeling of the school on Prospect street, by the Board of Education. The owner is taking bids.

Meadville, Pa.—Architects W. L. Blythe and H. DeCourcey Richards, 608 Chestnut street, Philadelphia, Pa., are ready for bids on the school building, alterations and addition, for the Meadville School District. The building will be of brick and steel fireproof construction, two stories. Cost $20,000.

Mooresfield, W. Va.—Banks Construction Company, Clarksburg, W. Va., has received the general contract for the high and grade school building, costing $20,000, to be built for the Board of Education. The building will be of brick and frame semi-fireproof construction, two stories and basement, 50x55 feet, containing 10 rooms.

New Richmond, O.—Bids close about April 19 on the erection of a school building, costing $40,000 by the Board of Education. The building will be of brick fireproof construction, two stories, containing 10 rooms.
Manufacturing.

Cleveland, O. — W. I. Thompson & Son, 6110 Euclid avenue, were awarded the contract to build a one-story brick and steel reinforced concrete shop building 52x184 feet, and a two-story store and work room 52x51 feet, for the Cleveland Railway Company.

The Hunkin-Conkey Construction Company, Cuyahoga building, was awarded the contract to build a one-story brick and steel factory building, for the Peters Machine Manufacturing Company. The building will measure 60x240 feet.

Bids will soon be taken by Architect G. A. Mueller, Brettmeyer building, Detroit, for construction of an ice making plant on Union avenue, for the Forest City Brewing Company.

Columbus, O. — The John Brown Manufacturing Company, Merion Road, contemplates building a three-story brick factory addition 100x400 feet, plans for which are being prepared by Architects Zibrick & Lunn, Dennig-Person building.

Erie, Pa. — The general contract for building an addition to the boiler plants for the Wayne Brewing Company has been awarded to the Henry Schenk Company, Erie, who will soon place sub-contracts. The work will cost $25,000.

Mannington, W. Va. — The Mannington Brick Works contemplate building a 16-kiln plant. The Tyro Brick Works, Tyro, Ill., will be dismantled and rebuilt at Mannington.

The contract for building a three-story building for the Mannington Bottle Works, has been awarded to J. F. Adamson, Mt. Vernon, O. The building will measure 200x400 feet and will cost about $50,000.

Monongahela, Pa. — W. N. Kratzer & Company, Twenty-third and Smallman streets, Pittsburgh, have been awarded contract to rebuild foundry of the Cyclops Foundry Company. The building will be one-story, 80x200 feet, concrete and steel construction.

Morgantown, W. Va. — A one-story concrete and corrugated iron addition is to be built by the United States Glass Company. The building will measure 150x220 feet and will cost $35,000.

Sandusky, O. — Architect A. M. Allen & Company, 190 Euclid building, Cleveland, have been selected to prepare plans for a four-story brick building, to be built for Hinde & Dauch. The building will cover an area of 300,000 square feet.

Springfield, O. — The contract for building a three-story reinforced concrete factory addition to the plant of Robing & Meyers Company, has been awarded to the Structural Concrete Company, Dayton, O.

Parksburg, W. Va. — Architect D. W. Daley, Linn street, is ready for bids on a brick and steel manufacturing plant, four stories, 92x104 feet, which is to be built for the Parksburg Transfer & Storage Company.

Washington Court House, O. — Architect J. Howard Hicks has plans under way and will be ready for bids in the near future for the construction of a factory building costing $7,000, to be erected for C. L. Craig Company. The building will be of brick construction, two stories and basement, 54x100 feet.

Belleville, W. Va. — Specifications are being written for the construction of a power plant at Dam No. 20 for the United States government, care Engineer J. P. Jervey, Postoffice building. The building will cost $25,000, and will be of brick construction, one-story and basement, 30x80 feet.

New Martinsville, W. Va. — Specifications are being written by Engineer J. P. Jervey, Postoffice building, for the erection of a $25,000 power plant at Dam No. 15, for the United States government. The work will be of brick and concrete construction.

A $65,000 storm sewer will be constructed by the City of Cleveland on Lake Shore boulevard, E. One Hundred and Fortieth street to One Hundred and Fifty-second street. William Lehman, E. Seventy-first street, has the general contract.

The City of Cleveland has awarded the general contract for the construction of a $25,000 storm sewer on S. Clair avenue, to Hoag & Zullo, National Commercial Bank building.

Wheeling, W. Va. — The Board of Control has passed a $20,000 bond issue for grading, curbing and paving of Sixteenth street, from Main to McCullough street. C. R. Cooke is the city engineer. The work will consist of 2,500 feet of brick paving 30 feet wide with concrete base and stone curb.

Wheeling, W. Va. — The United States Government, care J. E. Jervey, engineer, Post Office building, Wheeling, W. Va., will take bids until April 28, for furnishing 2,500 barrels of Portland cement, no make specified, for the construction of Dam No. 28.

Oakdale, Pa. — The borough of Oakdale has selected A. M. Morgan, Harris Trust building, Chicago, to prepare plans for a water works and sewerage disposal plant, to cost $40,000.

Waynesburg, Pa. — The contract to build a one and two-story brick armory building, 62x104 feet, for the State Armory Board, has been awarded to W. F. Blair & Sons, Waynesburg.

Youngstown, O. — Specifications are being prepared by F. M. Lillie, City Engineer, City Hall building, for the proposed additions and alterations to the pumping and filter plant for the city of Youngstown. Bids on the work will be taken within a few weeks.

Antwerp, O. — Bids will be taken about April 15, for building three-quarter-mile of brick paving concrete curbing, etc., for the city of Antwerp.

Bellaire, O. — F. F. Schellenberg & Company, Oliver building, Pittsburgh, are the general contractors for the erection of the new $80,000 post office building, and are taking bids on various materials.

Butler County, O. — Plans will be ready about April 20 by Fred Hammel, county engineer, Hamilton, O., for erecting a steel truss bridge over the Miami river, to have a 600-foot span.

Greensburg, Pa. — Frank H. Hurst, Mt. Pleasant, Pa., received the contract to build a two and three-story armory building 75x120 feet, for the State Armory Board.

Newark, O. — Showers & Taylor, Crooksville, O., were awarded the contract for an administration building and fire station for the city of Newark. The work will cost $6,500.

Theatres.

Butler, Pa. — E. B. Lee, architect, Peoples Bank building, Pittsburgh, has plans in progress for the erection of a $300,000 vaudeville theatre for the Lyric Company, Inc., Main street. The building will be of brick construction, 62x115 feet.

East Liverpool, O. — Architects Clepper & Owen, Mahoning Bank building, Youngstown, O., will take bids soon on the erection of a theatre building for J. C. Walsh. This will be of brick and hollow tile reinforced concrete construction, one story and basement, 60x100 feet.

Cleveland, O. — Architects Richardson & Yost, Rockefeller building, are taking
separate bids for the erection of a theatre and store building on Water­
loo Road, for M. E. Moran. The cost will be $15,000.

Hospitals.

Columbus, O.—Architects Stribling & Lam, Denig-Ferguson building, has
started the plans for the erection of a $25,000 hospital building on East Towa
street, for Dr. F. F. Lawrence, East State street. The building will be of
brick, concrete, and terra cotta construction, four stories and basement.
Lima, O.—The National Concrete Fireproofing Company, Citizens building,
Cleveland, was awarded the contract to build a two and three-story brick and
reinforced concrete administration building, 70x106 feet, for the Board of
Commissioners, Lima State Hospital for the Insane.

McKeesport, Pa.—Preliminary plans are being made by Architects Janssen
& Abbott, Century building, Pittsburgh, for a two-story brick insurance office
for the St. Barnabas Free Home, W. H. Schoen, Farmers Bank building, Pitts­
burgh, chairman.

Miscellaneous.

Alliance, O.—Plans are completed for the construction of a water system, macadamized drive
way, etc. Bids on the work will be taken in the course of a month or so.
Ashville, O.—The Ashville Grain Company, which was recently incorporated, has
plans for the erection of a frame building, 2,400 cubic yards of concrete, and a coal yard.
Donora, Pa.—Architect E. C. Compton, Post Office building, has plans for a
two-story brick and tile office building, 44x100 feet, to be built for H. C. Ford. Separate bids will be taken for the work.
Erie, Pa.—Jacob Roth, 1117 State
drive, plans for the construction of a building to be used as a fireproof garage, 32x165 feet. No architect has been selected.
Philipsburg, O.—James L. Road, West South street, has plans for a two-story brick and concrete building, 60x200 feet, for which he will purchase all materials.

Kingwood, W. Va.—The Kingwood Collieries Company, 812 Harrison building,
Columbus, O., is having preliminary plans made by Glendenning and Finder­
burg, Kingwood, for the construction of the brick and stone fireproof
Synod Hall and Chancery at Craig street near Fifth avenue, Pittsburgh, for $21,755.
J. A. Gravatt vs. Louis Pickel. Agreement made and filed to erect a two-story brick building between Fourth and Fifth avenues, Tarentum, for $6,000.

Max Parker vs. J. Diamond. Agreement made and filed to erect a steam plant in
W. Va.—The Kingwood
Hillsboro, O.—

Roscoe, Pa.—Architect J. H. Harmon,
First National Bank building, Union­
town, has plans underway for the erect­
ion of a lodge building, costing $15,000; for the Senior Order of United American Mechanics, Elmer Buckney, chairman, Roscoe, Pa. The building will be of brick construction, two stories and basement, 58x64 feet.
Barberton, O.—The Ironton MASONIC TEMPLE ASSOCIATION contemplates the erection of a two-story brick lodge building 45x100 feet, at a cost of $15,000. No architect has been selected.
Canonsburg, Pa.—Joseph McKenna, Pittsburgh, has been awarded the contract to build a two-story lodge building, for the B. P. O. E., at the cost of $3,000.

Tucson, O.—Architect John Schweitzer, Chillicothe, has plans nearly com­
pletied for a two-story frame lodge building 45x60, to be built for the Red Men's Lodge. The work will start at an early date.

Hotels.

Erie, Pa.—Kirschner Brothers, Erie, were awarded the contract to remodel the Reed House, the cost of which will amount to $25,000.

Liens Filed for Labor and
Material Furnished.

NO LIEN CONTRACTS.

Allegheny County, Pa.

Dauphin Building Company vs. Diocese of Pittsburgh Rt. Rev. Regis
Canevin, bishop. Agreement made Feb­
ruary 7, 1914 and filed March 27, 1914, to provide all material and work for the
erection of the brick and stone fireproof
Synod Hall and Chancery at Craig street near Fifth avenue, Pittsburgh, for $21,755.
J. A. Gravatt vs. Louis Pickel. Agreement made and filed to erect a two-story brick building between Fourth and Fifth avenues, Tarentum, for $6,000.

Max Parker vs. J. Diamond. Agreement made and filed to erect a steam plant in

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout
Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

Week ending February 7, 1914 and filed March 27, 1914, to make alterations
in, and stone trim residence, 73x97 feet, to

Youngstown, O., for a three-story brick and concrete garage, 30x75 feet, to

C. F. Owsley, Mahoning Bank building,
McKeesport, Pa. The Trum­
buildings, for $514.

Lancaster, O.—Architect John Schweitzer, Chillicothe, has plans for a
Lodge building 45x60, to be built for the Red Men's Lodge. The work will start at an early date.

ACCOUNTS AWARDED:

Week ending April 1, 1914... 4,326,000
Corresponding period 1913... 2,215,000
Corresponding period 1912... 1,319,000
Corresponding period 1911... 1,700,000
Corresponding period 1910... 1,316,000
Week ending April 1, 1914... 4,326,000
Corresponding period 1913... 2,215,000
Corresponding period 1912... 1,319,000
Corresponding period 1911... 1,700,000
Corresponding period 1910... 1,316,000
Week ending April 1, 1914... 4,326,000
Corresponding period 1913... 2,215,000
Corresponding period 1912... 1,319,000
Corresponding period 1911... 1,700,000
Corresponding period 1910... 1,316,000

ENLARGING STEEL PLANT.

Work is soon to be started on the erection of a new building 75x100 feet, and
enlarging three buildings, 70x120 feet, for the Turnball Steel Com­
p, Warren, O. All the buildings will be of steel and corrugated iron and will be
constructed by the Riter-Conley Company, Pittsburgh, Pa. The Turn­
ball Company will soon take bids for furnishing cranes, feed water heaters,
pumps, water tube boilers, automatic
stokers, etc.

LARGE RESIDENCE FOR NEW CASTLE.

Plans have been started by Architect
C. F. Owsley, Mahoning Bank building,
Youngstown, O., for a three-story brick
and stone trim residence, 75x97 feet, to
be constructed on Leasure street, for
Miss M. Hett. The building will cost
$50,000, will have a face brick exterior,
pergola, sun porch, hardwood floors
and finish, art glass, hot air heating
system, vacuum cleaning system, private
water supply system, macadamized drive
way, etc. Bids on the work will be taken in the course of a month or so.
The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plat as illustrated.

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Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.

NEW ORNAMENTAL IRON INTERESTS.

The Highland Ornamental Iron Company, Pittsburgh, has been organized by George C. Rodgers and Fred T. Johnson, both of whom have had considerable experience in this line of work. The company has made arrangements to manufacture the Long self-dumping wheel barrow at its works. Headquarters have been established at 5748 Ellsworth avenue, East End, Pittsburgh.

ENLARGING ELECTRIC PLANT.

The contract for building two large additions to the plant of the General Electric Company, Erie, Pa., will be awarded on the 15th inst. One of the buildings will measure 250x150 feet, one story and the other 80x350 feet, five stories. Both buildings will be of brick steel and reinforced concrete construction, with slag roofing.

TAKE BIDS ON SCHOOL.

Bids will close on the 17th inst. for constructing a three story and basement brick and concrete high school building, for the Board of Education, Fomeroy, O. The plans of Architect Frank L. Packard, Hayden building, Columbus, O., call for a building 66x87 feet, to contain assembly hall, library and study hall, chemical and physical laboratories, domestic science and manual training departments, etc. The building will have reinforced concrete floor and roof slabs, metal lath partitions, galvanized iron skylight, hard plastering, mechanical steam heating system, composition roofing, electric lighting, etc.

OFFICE BUILDING FOR EAST LIVERPOOL.

The contract for building a five-story brick and hollow tile store and office building at East Liverpool, O., for Mr. A. S. Castle, Pa., prepared the plans and specifications, the latter calling for structural steel, ornamental iron, steel and concrete stairways, marble and terazzo work, ornamental terra cotta, composition roofing, pine or white oak interior finish, hollow tile and concrete construction, store fronts, face brick, lighting and heating system, etc.

MAJOR SCHOOL WORK PROPOSED.

The Board of Education, Huntington W. Va., is having plans made by Architect V. T. Ritter, Huntington, W. Va. for a two-story concrete and steel fire-proof high school building, to cost about $300,000. The citizens of Huntington recently voted favorably on a $800,000 bond issue to cover the proposed high school, erection of several grade school buildings, and the remodeling of a number of the present buildings.

ASK SCHOOL BIDS.

A $110,000 high school will be built in Ashland, O., by the Board of Education. The building will measure 80x192 feet and will contain 15 class rooms, manual training and domestic science departments, auditorium, gymnasium, kindergarten and probably a swimming pool. Plans for the building are now being prepared by Architect Vernon Redding, Bird building, Mansfield, O. It will be constructed of brick and reinforced concrete.

WILL ENLARGE COLLEGE.

Five new buildings are to be erected by the Board of Trustees of Allegheny College, Meadville, Pa., at a cost of $200,000. These buildings will consist of a chemistry building, power plant, men's dormitory, biology building, etc. Plans for the work will likely be designed by Architect E. L. Titton, 32 Broadway, New York City. A campaign is now under way to finance the project which will mature early next year.

STORAGE BUILDING FOR WHEELING.

Plans for a six-story mercantile building, to be built at Thirty-sixth and Jacob street, Wheeling, W. Va., for the Cooly-Betz Company, have been completed by Architect M. P. Giesey, Mellon Bank building, Pittsburgh. The building will measure 50x500 feet and have a steel frame, with patent store fronts, separate contract for which will be awarded. Low pressure steam heating system will also be installed. The estimated cost of the work is $50,000.

NILES SCHOOL TO BE AWARDED.

A thoroughly modern school building of brick and stone fireproof construction measuring 90x200 feet, is to be built by the Board of Education, Niles, O., at a cost of $150,000. Architect W. G. Eckles, New Castle, Pa., prepared the plans, which called for a three story and basement structure, to contain domestic science and manual training departments, swimming pool, in addition to the regular class rooms. Building specifications will include terra cotta, hollow tile, face brick, sand stone, concrete work, metal lath, structural steel, composition roofing, electric work, plumbing, ceramic tile, etc. The heating and ventilating contracts will be included in the general contract.

MODERN SCHOOL FOR BARBERTON.

Providing a bond issue is passed by the voters of Barberton, O., the Board of Education will build a $120,000 high school, preliminary plans for which are being made by Architect Vernon Redding, Bird building, Mansfield, O. The structure will be two stories and basement, brick and fireproof construction and contain auditorium, domestic science, manual training and kindergarten departments.

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The contract for building two large additions to the plant of the General Electric Company, Erie, Pa., will be awarded on the 15th inst. One of the buildings will measure 250x150 feet, one story and the other 80x350 feet, five stories. Both buildings will be of brick steel and reinforced concrete construction, with slag roofing.

TAKE BIDS ON SCHOOL.

Bids will close on the 17th inst. for constructing a three story and basement brick and concrete high school building, for the Board of Education, Fomeroy, O. The plans of Architect Frank L. Packard, Hayden building, Columbus, O., call for a building 66x87 feet, to contain assembly hall, library and study hall, chemical and physical laboratories, domestic science and manual training departments, etc. The building will have reinforced concrete floor and roof slabs, metal lath partitions, galvanized iron skylight, hard plastering, mechanical steam heating system, composition roofing, electric lighting, etc.

OFFICE BUILDING FOR EAST LIVERPOOL.

The contract for building a five-story brick and hollow tile store and office building at East Liverpool, O., for Mr. A. S. Castle, Pa., prepared the plans and specifications, the latter calling for structural steel, ornamental iron, steel and concrete stairways, marble and terazzo work, ornamental terra cotta, composition roofing, pine or white oak interior finish, hollow tile and concrete construction, store fronts, face brick, lighting and heating system, etc.

ASK SCHOOL BIDS.

A $110,000 high school will be built in Ashland, O., by the Board of Education. The building will measure 80x192 feet and will contain 15 class rooms, manual training and domestic science departments, auditorium, gymnasium, kindergarten and probably a swimming pool. Plans for the building are now being prepared by Architect Vernon Redding, Bird building, Mansfield, O. It will be constructed of brick and reinforced concrete.

WILL ENLARGE COLLEGE.

Five new buildings are to be erected by the Board of Trustees of Allegheny College, Meadville, Pa., at a cost of $200,000. These buildings will consist of a chemistry building, power plant, men's dormitory, biology building, etc. Plans for the work will likely be designed by Architect E. L. Titton, 32 Broadway, New York City. A campaign is now under way to finance the project which will mature early next year.

STORAGE BUILDING FOR WHEELING.

Plans for a six-story mercantile building, to be built at Thirty-sixth and Jacob street, Wheeling, W. Va., for the Cooly-Betz Company, have been completed by Architect M. P. Giesey, Mellon Bank building, Pittsburgh. The building will measure 50x500 feet and have a steel frame, with patent store fronts, separate contract for which will be awarded. Low pressure steam heating system will also be installed. The estimated cost of the work is $50,000.

NILES SCHOOL TO BE AWARDED.

A thoroughly modern school building of brick and stone fireproof construction measuring 90x200 feet, is to be built by the Board of Education, Niles, O., at a cost of $150,000. Architect W. G. Eckles, New Castle, Pa., prepared the plans, which called for a three story and basement structure, to contain domestic science and manual training departments, swimming pool, in addition to the regular class rooms. Building specifications will include terra cotta, hollow tile, face brick, sand stone, concrete work, metal lath, structural steel, composition roofing, electric work, plumbing, ceramic tile, etc. The heating and ventilating contracts will be included in the general contract.
The Pittsburgh Art Commission has on exhibition the finished drawings made by Architect E. H. Bennett, Chicago, showing the general working plan for improving the Point district. These plans are to be submitted to council for approval.

The plan presented accepts the location of the North Point bridge, also the South Point bridge for reconstruction, and furthermore it accepts in general lines the approach to these bridges as shown on the plans under contract for the city government.

The plan presented has been considered primarily in its relation to the general topography of Pittsburgh and its surroundings as it is realized that it will be seen from the heights as well as from below. Owing to the great height at which the government regulation has placed the North Point bridge and will, in all probability, later place that of the South Point bridge and the extreme nearness of both these massive structures to the slender Point itself, the consideration of first importance is to raise the level of the whole Point and terrace it in such a way that the approaches to the bridges and the bridges themselves shall appear to rise from a reasonable base and shall not project so high above the level of the ground as to be unsightly.

The treatment suggested for Water street is that which will be the best suited to express the front of the city and be later combined with such plans as may be adopted for the civic center, the general idea being to preserve and develop its sloping banks.

A different treatment is suggested for the Allegheny river front where it is proposed to concentrate as much as possible of the shipping requiring the operation of mechanical loading devices and vertical quay walls, and to encourage the concentration along this frontage of strictly wholesale and warehouse development. This treatment does not, however, exclude the possibility of an approach along Duquesne Way and this approach can be developed as shown in conjunction with a future playground park development of the public property on which the Exposition buildings now stand. It is thought that they will at some time be removed to a more centrally-located spot and that all this property immediately fronting on the river will become available for the use of the public in a most satisfactory manner.

The construction of the Duquesne Way approach is with a view to developing an easy grade for this ramp, filling Duquesne Way at its intersection with the ramp to an elevation of about 735 feet. It is recommended that the triangular corner of the property owned by the Pennsylvania Company be acquired in order that this improvement may be properly carried out.

The construction of lower rip-rap or rough masonry or concrete wall, walks and retaining walls is advised; developing of the Plaza between bridges and carrying out of architectural features, stairs, balustrades, bridge pylons, walks, lighting scheme, etc.

The widening and regrading of Duquesne Way and so designing the street as to separate the teaming from the lighter traffic. The roadways should be raised to an elevation at Third street and sloped evenly at the bridge ramp.

The ultimate rearrangement of the site now occupied by the Exposition buildings for either the Exposition Society or as a playground park, the latter being recommended. In either case a broad promenade should be located at
the water's edge, running continuous along the entire water front between the Sixth street bridge on the Allegheny river to the Smithfield street bridge on the Monongahela river, passing under the Point bridge approaches.

A wall and level quay is recommended along the Allegheny river front since the natural slope of the bank is steep and the available space narrow. A different condition exists on the banks of the Monongahela river, where there is much space between the harbor line and the water line.

The plan suggests additions to, rather than removal of existing structures and those under contract for construction, and the process of its development may be gradual. With the exception of one concrete arch, that nearest the south approach of the North Point bridge—in which a modification is suggested—no changes are proposed in the carrying out of the Point scheme that will require the removal of any structure.

A retaining wall should be constructed so as to protect the low levels along Duquesne Way from inundation, be built along the line of the driveway and directly north of the proposed driveway and railroad tracks. This wall should be crowned with a closed parapet about 3½ feet high, which may serve as a means of protecting the city from exceptional floods.

That a lower quay be constructed along Duquesne Way at an elevation of nine feet above pool full.

That the Allegheny river be dredged along the quay line to a level of 10 feet below pool full elevation for the South side.

That Water street be regraded and widened to approximately 80 feet in width including a 12-foot walk on the Northside and a 20-foot promenade along the South side.

It has not been considered within the province of this analysis to discuss methods and cost of construction, but to offer recommendations and suggestions as to the development of the Point district and adjoining waterfront. No mention has been made of the approach of the future Southside bridge or the North approach of the Northside bridge, but these are shown on the drawings. No radical modification has been offered in connection with the latter. The pylons at the end of the truss should be similar to those at the Point, and the architectural embellishment of the arched approach made similar in general character to the South approach detail.

The improvement of Duquesne Way will necessitate the raising of the railroad tracks crossing it near Third street and in connection with this modification certain architectural improvements are essential. This work like everything else projected in this vicinity should be consistent with a fine development of the whole Point.

**PLANNING HOSPITAL.**

The General Hospital, Du Bois, Pa., is having plans made by Architects Harrington & Howard, Du Bois, for a two and three-story hollow tile and stucco hospital building, which will be built in three wings. The building requirements will consist of ornamental iron work, hollow tile floors and partitions, tile roof, skylights and ventilators, tile wainscoting, plate and prism glass, hardwood floors, electric work, heating, plumbing and lighting system, electric, freight and passenger elevators, laundry machinery, etc.

**ENGINE PLANT TO BE BUILT.**

Bids have been submitted for building the Pittsburgh Model Engine Company's plant, Lexington avenue, Pittsburgh, and it is likely that the contract will be awarded before the end of the week. The main building will be 234x254 feet, one story, brick concrete and steel fireproof construction, with office building 50x50 feet, one story, brick construction. Both buildings will have reinforced concrete walls and roof construction, saw tooth type, sheet metal work, steel doors, gravel or slag roofing, etc. Separate bids are being taken on the plumbing, heating and lighting system.

**FRANKLIN SCHOOL UP FOR BIDS**

Separate and general bids will be taken on building a $50,000 addition to the high school building for the Franklin, Pa., school building. This will be a two-story brick and stone building, 60x80 feet, designed by Architect E. E. Bayley, Chambers building, Oil City, Pa. The contract which will be figured as a whole or in part, will be awarded on the 20th. Material specifications include stone work, fireproofing, terra cotta, cement work, damp-proofing, plastering, electric work, exterior and interior wood finish, skylights, sheet metal work, plumbing, masonry work, slate roofing, stucco column work and beam covering.

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**Sub-Contract Notes.**

**Concrete Work.**

Cornish & Bianchi, Uniontown, Pa., received the contract for ice cream plant, Uniontown, Pa., Owners, J. N. Hagen & Sons, Uniontown, Pa.

**Electric Lighting.**


**Heating.**

Regan & Hormell, Charleroi, received the contract for the store and apartment building, Charleroi, Pa., Owners, Fred Kahut, Fifth street, Charleroi, Pa.

**Marble and Tile Work.**

John D. Carr, Uniontown, Pa., received the contract for the high school building at Latrobe, Pa. Owner, Board of Education, Latrobe, Pa.

**Mill Work.**


**Plastering.**

Hovis Brothers, Wilkinsburg, Pa., received contract for high school building, Braddock, Pa. Owner, Board of Education, Braddock.

**Plumbing.**


**Sheel Metal Work.**


**Structural Steel.**

Pittsburgh.

Phillip Rogers, 157 Moultrie street, has been awarded the general contract for the erection of a $7,000 residence on Small street, for W. E. Tremel, Meyran avenue. The building will be of brick construction, two stories.

Architect Walter S. Cohen, Oliver building, will take bids shortly for the erection of a $1,500 garage, of brick construction, to be built on Wemple avenue, for Marcus Aaron, Second National Bank building.

Architect A. B. Snyder has plans for the erection of four residences, costing $5,000 each, for Samuel Etchich, Jenkins Arcade. The buildings will be of brick, tile and plaster construction, two stories. The owner will award separate contracts.

Plans are being prepared by Architect C. W. Hodgdon, 810 Penn building, for a residence costing $5,000, to be erected for W. A. Young, Grant avenue, Millvale. The building will be of brick construction. Bids will probably be taken about April 15.

George Bauerlein, Millvale, has received the general contract to build a brick residence on William street, for E. T. Lippert, Lincoln avenue, Millvale. Cost $4,000.

Architect W. A. Thomas, Park building, has plans about completed for the erection of a brick apartment building addition on Townsend street, for Samuel Harris, Center avenue.

The general contract has been let to W. H. Woodward, 25 Kenwood avenue, to build a $10,000 bungalow on McClintyre avenue, Northside, for H. K. Veilp, Duquesne avenue. The building will be of stone and shingle construction, 1½ stories and basement.

Wrecking has been started on Federal street and Liberty avenue, in preparation of a $2,000,000 department store building, which Rosenbaum Company will erect. Jarvis Hunt, 5 West Jackson Boulevard, Chicago, Ill., is the architect, and Martin Schwab, 5 West Wabash avenue, Chicago, the engineer. The building will be of brick and terra cotta fireproof construction, 13 stories, basement and mezzanine 136 x 240 feet. The general contract has been let to James L. Stuart, Oliver building.

Architect Carpenter Strong, Union Bank building, will soon have plans completed for the erection of a $245,000 elementary school for the Board of Education. The building will be of brick fireproof construction, two stories and basement, 150 x 270 feet, and will contain an auditorium, kindergarten, offices, etc.

Architect Thomas Hannah, Keenan building, has plans nearly completed for the erection of an orphanage and home in Mt. Lebanon township, for the Baptist Orphanage and Home Society of Western Pennsylvania. The building will be of brick construction, three stories and basement, and cost $25,000.

Architect Carlton Strong, Union Bank building, has plans to build a $2,000,000 department store building, for the Board of Education. The building will be of brick fireproof construction, two stories and basement, and cost $25,000.

Edward Harms, 408 Griffin street, has received the general contract to build a $3,200 residence for George Guenther, Cedarhurst street. The building will be of brick veneer.

Golden & Crick, 3512 Fifth avenue, has received the general contract to build a brick garage for M. Rief, Farmers Bank building Cost $4,500.

R. W. Buchholz, 2231 Murray avenue, was the low bidder for the erection of a $7,500 residence for J. M. Crounover, Frick Building Annex. Cost $7,500.

Charles Schmidt, 2213 Sarah street, has been awarded the general contract to build the Monastery on Church avenue, Carrick. Cost $8,000.

The general contract to build a $5,500 residence for C. J. Gracey, 71 Maple avenue, has been awarded to Jacob Brednich, Lelia street, Mt. Washington. The building will be of brick veneer construction, 2½ stories and basement.

L. M. Merritt, Zephier avenue, Shadyside, has been awarded the general contract to build a brick residence, costing $3,500, for C. G. Schumack, Chartiers avenue, Shadyside.

Architect James L. Beatty, 146 Sixth street, has plans under way for the erection of a $20,000 barn, brick and tile construction, to be built for the Uniondale Cemetery Company.

Bids close soon on the addition and alterations to the St. John General Hospital, on McClure avenue, Northside. The work is of brick and stone fireproof construction, and will cost $25,000. R. M. Trimble, Ferguson building, is the architect.

Architect A. B. Snyder, Empire building, has plans completed to build seven residences, costing $25,000, total, for Mrs. Josephine A. Garber, Emerson street. The buildings will be of brick, cement plaster and tile construction.

Architect Carlisle & Sharer, Jenkins Arcade building, have plans under way for the erection of a brick parochial school building, costing $12,000, to be built for the St. Stanislus Roman Catholic Congregation at Ambridge, Pa.

No architect has been selected to prepare the plans for the erection of a $12,000 brick residence for W. H. Goethert, 8042 Stanton avenue, which will be built in the near future.

Charles Bickel, May building, has plans for the erection of a brick and cement plaster residence for Dr. H. C. Updegrass, Brownsville road, Carrick. W. B. Bennett, 742 N. Negley avenue, has been awarded the general contract. Cost $8,000.

The general contract to build a $5,000 residence for C. J. Gracey, 71 Maple avenue, has been awarded to Jacob Brednich, Lelia street, Mt. Washington. The building will be of brick veneer construction, 2½ stories and basement.

L. M. Merritt, Zephier avenue, Shadyside, has been awarded the general contract to build a brick residence, costing $3,500, for C. G. Schumack, Chartiers avenue, Shadyside.

Thomas Kenyon, North avenue, Northside, is contemplating the erection of a $2,500 stone private garage on Grant
boulevard. Alden & Harlow, Farmers Bank building, are the architects.

Walker & Curley Company, Bessemer building, have received the general contract to build a $2,000 garage, fireproof construction, for J. M. Denholm Brothers Company, Frankstown avenue.

Paul W. Irwin, Kenshaw building, has been selected architect to prepare plans for an addition to the school building on Hesperus and Hillsdale avenue, Dormont. The building will be of brick fireproof construction, two stories and basement, and cost $40,000.

Architect H. J. Lohman, M. & M building, Wilkinsburg, is taking bids on the remodeling of an apartment building, for Dr. H. McClaymonds, Hay and Kelly streets.

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**Apartments and Dwellings.**

Ambridge Pa.—Louis Von Gunten was the low bidder for the erection of a brick 2½-story residence, to be built on Maplewood avenue, for John Flajnik, Tomlin building. The building will cost $5,000.

Ashtabula, O.—Architect Vernon Redding, Bird building, Mansfield, O., will take bids about May 1 for the erection of a $75,000 residence for P. A. Meyers. The building will be of brick, stone and marble fireproof construction, two stories and basement.

Brownsville, Pa.—Mrs. Nellie Pearcull Water street, South Brownsville, is contemplating the erection of a brick veneer residence, costing about $5,000. The project will probably mature about May 1.

Cincinnati, O.—Architects Garber & Woodward, Union Central building, will be ready for bids about April 10 for the erection of a brick duplex residence, costing about $15,000, for Dr. W. D. Porter, Melrose building.

Clarksburg, W. Va.—Bids will be taken about April 10 for the erection of a brick veneer residence, costing about $25,000, for a stock company. S. W. Ford is the architect.

Cleveland, O.—Architect A. F. Janowitz, Permanent building, has plans completed for the erection of a $4,000 frame residence for M. Shapero, Scoville avenue.

A. P. Janowitz, Permanent building, has been selected architect for the erection of a brick apartment building, costing $30,000, for M. Shapero, Scoville avenue. Work will be started shortly by the owner.

Columbus, O.—Architect C. W. Bellows, Ruggery building, will start plans about April 15 for the contemplated erection of a $6,000 residence for Jesse Van Horn, East Spring street. The building will be of brick construction.

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**Plan for a Residence in Wilkinsburg.**

Two stories.

Plans are being prepared by Architect H. Charles Jones, Deshler building, for the erection of a brick residence on Eastwood avenue, for W. H. Jones. The building will cost $4,000. The architect will probably be ready for bids about April 11.

Elsins, W. Va.—The general contract for the erection of a brick residence for S. S. Deal is awarded to J. R. Whileman. Cost, $4,000.

Lakeview, O.—A brick and stone residence is being erected in Clifton Park, for Frank Meiling, 1607 Fulton road, Cleveland. A. Farinacci, East Twenty-ninth street, has received the contract for the masonry, and W. W. Jepson, Brighton avenue, East Cleveland, the contract for the carpentry. Cost $20,000.

McKees Rocks, Pa.—Harry Cobb, Russellwood avenue, West Park, McKees Rocks, has received the general contract to erect a double residence for J. H. Kaglist, Knox street. The building will be of brick veneer construction and cost $4,000.

Middletown, O.—New sketches are being prepared by Architect C. E. Oden, 212 Jacoby building, for the erection of a brick residence, two stories and basement, costing $5,000, for Bert Stewart, Shuman avenue.

Wilkinsburg, Pa.—The general contract for the erection of a $15,000 residence and garage on Iuka avenue, for N. D. Levin, 1814 N. High street, has been let to McColl & McCoy 24 W. Franklin avenue. The building will be of stucco, brick, and metal lath construction.

Indiana, Pa.—Longville Brothers have received the general contract for the erection of a $4,000 residence, brick veneer construction, for Miss Mable S. Evans, Grant street.

McMechan, W. Va.—Bids will be taken about April 16 by Architect George H. Dieringer, Wheeling, W. Va., for the erection of a frame residence for W. C. McCullard, Boggs Run, Wheeling. The building will be 2½ stories and cost about $3,500.

Springfield, O.—P. W. Hamm, 422 Bushnell building, received the general contract for the erection of a $10,000 frame residence, two stories and basement, for Edmond S. Ralph, 615 Liberty street.

**West Liberty, W. Va.**—Architect Edward Bates Franchin, Shmullbach building, Wheeling, will probably be ready for bids about April 20, for the erection of a frame residence, for J. A. Bloch, Water street, Wheeling.

**Cincinnati, O.**—Newbold L. Pierson, Gibson Hotel, has been awarded the general contract to build a brick residence for P. V. Meyers, Hamilton avenue. Sub. bids are being taken by the general contractor.

**Mansfield, O.**—Architects Joseph Hersh & Son, 25 Dickson building, have plans underway for the erection of a $5,000 residence for Dr. D. C. Wise, Stocking building. The building will be of brick.

**Shinamon, W. Va.**—No architect has been selected for the erection of a $4,000 frame residence, which C. G. Girard is contemplating erecting in the very near future.

**Architect I. W. Hartley has plans in progress for the erection of a brick residence for H. P. Boon. Cost, $5,000.**

**Springfield, O.**—Architect Roy F. Gable, Bushnell building, is preparing plans for the frame of a frame bungalow, costing $4,000, for Benjamin Albin, W. Pleasant street.

**Beaver Falls, Pa.**—On account of bids running too high the lowest bidders are regrouping plans for the residence and garage to be built for W. L. Sutter. The buildings will be of brick, costing $5,000.

**Clarksburg, W. Va.**—Architect S. W. Ford has plans under way for the erection of a brick and terra cotta tile residence, for Haze Morgan. Cost $15,000.

**Cleveland, O.**—Bids close April 9, on the erection of a $20,000 residence for H. C. Hawkins, care Architect Theodore Connor, Park building.

**Mansfield, O.**—Architect B. F. Seibert will be ready for bids about April 20 on a brick apartment building, which will be built for Fred Lauer. Cost $55,000.

**Newark, O.**—Work will be started soon on the erection of a residential subdivision, of brick construction, two stories and basement, for M. H. Baker, Madison avenue. Cost $6,000.

**Ravenna, O.**—Plans are being prepared by Architects Bohmmer & Parsons, Euclid building, Cleveland, for an addition and alteration to a residence for A. S. Cole. The work will be of frame construction and cost $8,000.

**Shaker Lakes, O.**—Architect R. H. Hindsdale, Osborne building, Cleveland, is preparing sketches for a residence which Charles Williams will build. It will cost $9,000.

**Springfield, O.**—Architect Roy F.
Gable, Bushnell building, has preliminary plans in progress for the erection of a $20,000 apartment building for W. R. Bush, Liberty street, to be of brick construction, two stories and basement.

Ambridge, Pa. — Specifications are being written by Architect H. A. Lord, Oakmont, for the erection of a brick and terra cotta store and apartment building, for O. S. Noble. Cost: $7,000.

Bridgeville, Pa. — Bids will close April 11, on the store and apartment building which is to be erected for Jacob Silverglate. The building will be of brick construction, three stories and basement, 24x100 feet, and cost $18,000. W. A. Thomas, Park building, Pittsburgh, is the architect.

Cleveland, O. — The general contract to build a brick store and apartment building for W. G. Marshall, Marshall building, will probably be awarded to Uhl-Jaster Company, Euclid avenue. Cost: $25,000.

Springfield, O. — Architect: Roy F. Gable, Bushnell building, has plans nearly completed for the erection of a frame residence on North Limestone street, for Wilbur E. Shevailer, Olive street. Cost: $4,000.

Architects Tirach & Miller, Kelly building, have plans underway for the erection of a double residence, to be built for Mrs. M. Doyle, Main street. The building will be of frame construction, costing about $4,500.

Tiffin, O. — Plans are being prepared by Charles Charles Erns for the erection of a brick residence on Monroe street, for Fred W. Gill. Cost, $3,000.

Uniontown, Pa. — Bids are being taken by Morris Friedman, Morgantown street for the erection of a brick semi-fireproof construction apartment building, to be built on Fayette and Iowa streets.

Ashland, O. — John Wetley has private plans for a $10,000 apartment building, which he is contemplating erecting sometime during the summer.

Beaver, Pa. — R. D. Hunter was the low bidder for the residence which is to be erected for S. C. Hamilton. The building will be of brick construction, two stories and cost $5,500. Charles M. Matthey, 224 Insurance avenue, is the architect.

Architects Carlisle & Sharrer, Jenkins Arcade, Pittsburgh, are ready for bids on a $5,000 brick stucco and tile residence, which will be built for William J. Mellon.

Brownsville, Pa. — Architect A. P. Cooper, First National Bank building, Uniontown, will take bids about May 1 on a $5,000 brick residence, which is being built for Mr. Mathew Story.


New bids are being taken by Architect A. G. Higgenbotham, C. R. building, on a brick residence to be erected for C. E. McCoy. Cost: $5,000.

Architect Davis Dick, Citizens' Bank building, will take bids about April 15 on a $25,000 apartment building, brick construction, to be erected in the near future.

Deweyville, Pa. — Architects Clepper & Owen, Sharon, Pa., have plans nearly completed for a frame residence to be built for Harry Cook. Cost: $1,500.

East Palestine, O. — Architects: Clepper & Owen, Sharon, Pa., will be ready for bids about April 15 on the erection of a frame residence, 2 1/2 stories, to be built for Richard G. Jennings, Linden Place, Sewickley, Pa.

Marietta, O. — Architect G. W. Hooye is taking bids on a $12,000 stucco and single residence, to be erected for E. H. Reedyihaus.

Sewickley, Pa. — Architects: Alden & Harlow, 307 Fifth avenue, Pittsburgh, will probably be ready for bids April 15th on the erection of a frame residence, for S. G. Cooper, 202 Beaver street.

Sandusky, O. — Lorenz Zorback, Central avenue, has received the general contract to build a brick residence for Miss S. B. Woolworth. Cost: $20,000.

Sharon, Pa. — Bids are being taken by Architects Clepper & Owen on the erection of six frame residences for Frank Flowers, Harmony block, to cost $3,000 each.

Uniontown, Pa. — A. P. Cooper, First National Bank building, has plans almost completed for an $8,000 brick and tile residence, to be erected for H. C. Jeffrey.

Harry W. Altman, First National Bank building is preparing plans for a brick and tile residence, costing $8,000, to be built for E. H. Klemmer, 230 Fayette street. Architect will take bids about May 1.

Bids are being taken by Architect George W. Green, 67 Union street, on a frame residence costing $2,500, to be built for W. T. McClintock, Calhoun avenue.

Work will be started about April 15 on the erection of a $10,000 brick and tile residence, to be built for J. C. Rider, Mt. Vernon avenue. Architect A. P. Cooper, First National Bank building, is preparing the plans for the building.

Business Buildings.

Belair, O. — Architect John Wood, Swing building, will be ready for bids April 15 for the erection of a bank and apartment building on Belmont and Crescent streets, for the Larry Witt Italian Bank. The building will be of brick, pre-proof construction and cost about $16,000.

Charleston, W. Va. — Andrew Murray, 729 Twelfth street, N. W. Washington, D. C., is taking sub-bids on the addition and alterations to the telephone building for the Chesapeake & Potomac Telephone Company, Baltimore, Md. The work will cost $20,000.

Clarksburg, W. Va. — S. W. Ford, architect, has plans underway for the erection of a $15,000 laundry building, brick and steel construction, two stories, for the Empire Laundry Company. The plans will be ready for estimate April 10.

Donora, Pa. — The general contract for the erection of a $30,000 bakery, apartment buildings and stable has been let to the Donora Lumber Company. The work will be of brick.

Fayetteville, Pa. — A. Wiskart & Sons, Sharon, Pa., were the low bidders for the erection of a brick and terra cotta store building, one story and basement, for George E. & Louis Lorch, Jr., Seventeenth and Carson streets, Pittsburgh, Cost, $7,000.

Irononton, O. — Frank L. Packard, Hayden building, Columbus, O., has been selected architect for the erection of a bank building for the Citizens National Bank. The building will be of brick, stone and concrete construction, two stories.

Johnstown, Pa. — The Dollar Savings Bank has awarded the contract for the remodeling of their bank to the Bankers Building Bureau, 106 E. Eighteenth street, New York City. The work consists of ornamental plaster, cabinet work, marble, tile, interior, brass and bronze, lighting fixtures, etc.

Martinsburg, W. Va. — Lee N. Bender has been awarded the general contract for the erection of two stores, and two apartments, costing $15,000, for Louis Bott, Market street.

McDonald, Pa. — Crooks & McMaster, architects, Curry building, are preparing sketches for the erection of a mercantile building, costing $40,000, for Mel Moorehead. The building will be of brick, three stories, 52x100 feet.

Youngstown, O. — The plans have been completed by Architects Stanley & Scheibl, Wick building, for the erection of a building containing two stores, and two apartments, costing $8,000, for Henry Friedman. The building will be of brick, steel truss construction, two stories and basement, 38x60 feet.

Burgettstown, Pa. — The general contract to build a store and apartment building for Phillipponi Brothers, Bridgeville, has been awarded to Victor
Louisa, Bridgeville. The building will be of brick and frame construction, two stories, and cost $8,000.

Cincinnati, O. — O. S. S. & G. H. Godley, Navey building, have been selected architects to prepare plans for a $35,000 brick, steel and reinforced store and loft building, to be built for Val Duthenhofer, Sixth and Syracuse streets.

Circleville, O. — C. F. Anderson, Circleville, will take bids at once on the erection of an $8,000 brick and stone store building, which Architects Strubleing and Linn, Denig-Ferguson building, have plans prepared.

Clarksburg, W. Va. — Architect S. W. Ford has plans under way for the construction of a store and office building, costing $55,000, and will probably be ready for bids about May 15. The building will be of brick and stone terra cotta fireproof construction, seven stories, 40x95 feet.

Cleveland, O. — Masters & Moulen, Rose building, have been awarded the general contract to build a $55,000 brick and reinforced concrete storage warehouse for the Central Storage Warehouse Company. The building will be five stories and basement, 60x110 feet.

Duquesne, Pa. — Architect C. L. Whitaker, Dravo, is taking bids on a store and apartment building, to be built for Samuel I. Wiess. The work will be of brick, two stories and basement, and will cost $8,000.

Good Hope, O. — Architect J. Howard Hicks, Dennis Block, Washington County House, will be ready for bids about April 15, on the erection of an $8,000 store and lodge building, for the Junior Order of United American Mechanics. The building will be of brick construction, two stories and basement.

Rices Landing, Pa. — Bids are being taken by Architect A. P. Cooper, First National Bank, for the erection of a $10,000 bank building for the Rices Landing National Bank. The building will be of brick and hollow tile construction. Bids will close April 25.

South Brownsville, Pa. — No architect has been selected to prepare the plans for a new store and apartment building, brick and tile construction, which Howard B. Johnston, Market street, is contemplating erecting. Cost $6,000.

Springfield, O. — The general contract to build a reinforced concrete fireproof laundry building, for the Monarch Laundry Company, Main and Murray streets, has been awarded to Frank Barnhart, Belmont street. Cost $20,000.

New Castle, Pa. — Architect W. G. Eckles, Lawrence Savings & Trust building, has plans completed for the erection of a brick, hollow tile and steel store and apartment building, to be built for E. E. Roberts, Oak avenue. The building will cost $15,000 and will contain two stories and six apartments.

Piqua, O. — Architect W. E. Russ, 1407 Merchants Bank building, Indianapolis, Ind., is ready for bids on the erection of a wholesale grocery building for the S. L. Zollinger Company. The building will be of brick and concrete construction, 100x100 feet, and cost $35,000.

Rocky River, O. — Architect W. S. Logan, Marshall building, Cleveland, O., is preparing plans for the erection of a $19,000 store and apartment building, for Mr. V. Kennedy. The building will be of brick construction and will contain three stories and three suites.

Springfield, O. — Plans are being prepared by Architect Roy F. Gable, Bachell building for a store building, to be built for Joseph C. O'Brien, Spring street. The building will be of brick construction, two stories and basement. Cost $6,000.

Architect Robert C. Griswold, Griswold building, is preparing sketches for a brick store and manufacturing building, to be built for Kelly Wilcox Marble Company, East Main street.

Washington Court House, O. — Architect Joseph Williams, Dennis Block, is preparing preliminary plans for building an addition and making alterations in the store, office and apartment building on Court and North streets, for Frank Bending. The work will cost about $10,000, and will consist of adding two stories and tearing out partitions.

Wheeling, W. Va. — Architect M. F. Giese, German Bank building, has plans nearly completed for a mercantile building, to be built for the Cooly-Bentz Company, Twenty-sixth and Jacobs streets. The building will be of brick construction, five stories and basement, 50x100 feet and cost $50,000.

Cleveland, O. — Architect E. F. Gibbons, 1900 Euclid building, has plans under way for a brick store and apartment building, to be built for Louis Arnoff, 547 E. One Hundred and Seventeenth street. Cost $18,000.

Dayton, O. — The Ferro Concrete Construction Company, Cincinnati, O., has received the general contract for the erection of an office and motion picture building, to be erected by the Central Building Company, Reibold building. The building will be of reinforced concrete fireproof construction, 11 stories and basement, 33x142 feet, and cost $175,000.

East Liverpool, O. — The Kerr Lumber Company has received the general contract to build a store building, costing $6,000, for Thomas Fisher. The building will be of brick construction.

Farrell, Pa. — A. Wishart & Sons, Sharon, Pa., has the general contract for the erection of a store building, brick and stone construction, for George E. and Louis Lorch, Seventeenth and Carson streets, Pittsburgh, Pa. Cost $22,000.

Marinburg, W. Va. — The general contract has been let to Charles D. Burns Lumber Company, to build $10,000 store and apartment building for the Gerling Estate, C. A. Young, administrator, Citizens National Bank building. The building will be of brick construction.

Adena, O. — Architect Charles McCarty National Exchange Bank building. Wheeling, W. Va., has plans nearly completed for the erection of a bank and office building, for the Peoples National Bank. The building will be of brick and terra cotta construction, two stories and will cost $10,000. The architect will probably be ready for bids about April 12.

Cleveland, O. — Architect A. F. Janowitz, 322 Permanent building, has plans underway for the erection of a $35,000 store and apartment building for M. L. Lees, E. Fortieth street. The building will contain eight stories and 12 suites, and be of brick construction.

Columbus, O. — No architect has been selected for the remodeling of a store and office building for the United Woolen Mills Company. The work consists of changing the entrance and the interior and will cost about $25,000.

Charleston, W. Va. — Bids close April 16, on the addition which is to be built to the Charleston National Bank. The building will be of brick and steel fireproof construction. W. H. St. Clair is the architect.

Cincinnati, O. — Architect Samuel Hannon & Sons, Hullbert Block, is taking bids on the erection of a brick and reinforced concrete fireproof loft building, six or nine stories, to be built for the Methodist Episcopal Church. The work consists of changing the entrance and the interior.

Lafayette, O. — Architect A. P. Cooper, First National Bank building, Uniontown, has plans nearly completed for an $18,000 brick and hollow tile store building, to be built for the Lazard Mercantile Company, Steubenville, O.

Religious.

 Altoona, Pa. — Architect W. H.Nicholas, 1900 Euclid building, Cleveland, O., has plans started for a $6,000 stone and steel church, to be erected for the First Baptist Congregational.

Columbus, O. — Architects Richards, McCarty & Baliff, Hartman building, have plans nearly completed for remodeling St. Joseph's Cathedral on E. Broad and Fifth streets. The work will cost about $10,000.

Penn Station, Pa. — J. E. Meyers has received the general contract to build a parochial school building for the Ro-
man Catholic Congregation. The building will be of brick fireproof construction, and cost $16,000.

Youngstown, O.—A. Wishart & Sons, Sharon, Pa., general contractors, are taking sub-bids on the erection of a church for the South Side United Presbyterian Congregation. The building will be of brick, stone trim, construction.

Bellaire, O.—Architects Fulton & Butler, Uniontown, Pa., have the preliminary plans in progress for a church and parish house, to be built for the Christian Congregation on Belmont street.

Carey, O.—The general contract has been awarded to W. H. Snyder, for the erection of a brick and terra cotta parochial school, two stories and basement, for the School of Our Lady of Consolation. Cost, $25,000.

Cleveland, O.—Architect Emil Ulrich, 1900 Euclid building, has plans completed for the erection of a $22,000 church, brick and reinforced concrete fireproof construction, for the St. Elizabeth Hungarian Catholic Church.

Martins Ferry, O.—The Free Methodist Congregation is erecting a new building on South Main street. It will be of brick construction, one story and basement.

New Brighton, Pa.—Boyd & Stewart, Court building, Pittsburgh, will probably complete the plans about May 2 for the erection of a church for the M. E. Congregation. Bids will probably be taken about May 1.

Farmington, W. Va.—C. H. Snyder, Peoples Bank building, Fairmont, W. Va., will be ready for bids about April 13 on the erection of an $8,000 church brick and stone construction, which the First Baptist Congregation on Seventh avenue.

Rowlesburg, W. Va.—Architect S. W. Ford, Clarksburg, has plans underway for the erection of a church and parsonage for the M. E. Congregation. Bids will probably be taken about May 1.

Niles, O.—Bids close April 16 on the erection of a new high school building, which the Board of Education is erecting. The building will cost $150,000 and will be of brick and stone fireproof construction, three stories and basement.

Bridgeport, O.—Architect: F. F. Farris, Schumack building, Wheeling, W. Va., is preparing specifications for the erection of a high and grade school building for the Board of Education. The building will be of brick, fireproof construction and cost $65,000. It will contain a manual training room, a gymnasium, and a school building, two stories and basement.

Cincinnati, O.—The general contract has been awarded to C. W. Fisher and G. W. Scott, for the erection of a school building on Vine street. The building will contain three class rooms, a gymnasium, and a school building, two stories and basement.

Ohio County, O.—A. B. Bliss, courthouse, Steubenville, has been awarded the contract for the erection of a new county courthouse, for the Ohio County Board of Commissioners. The building will be of brick and stone construction, one story and basement, 56x100 feet.

Carmel, O.—Architects Crooks & McMaster, Curry building, Pittsburgh, have plans complete about April 28, for the addition to be built to the high school building, by the Board of Education. The addition is of brick construction, two stories and basement, and four class rooms.

Crooks & McMasters, Curry building, Pittsburgh, have been selected architects for the erection of a new high school building, for the Board of Education. The building will cost $250,000 and will be of brick construction, two stories and basement.

Youngstown, O.—A. Wishart & Sons, Sharon, Pa., general contractors, are taking sub-bids on the erection of a church for the South Side United Presbyterian Congregation. The building will be of brick fireproof construction, and cost $16,000.

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and concrete fireproof construction, three stories and basement and will contain a domestic science room, manual training room, class rooms, assembly hall, library and study hall, chemical and physical laboratories and offices.

Rittman, O.—The National Engineering Company, Marshall building, Cleveland, is writing specifications for the erection of a $25,000 school building, for the Board of Education. The building will be of brick fireproof construction, two stories, and will contain six rooms, auditorium, offices, etc. Bids will be taken soon to close about April 23.

Springfield, O.—Architect Robert C. Cotwald, Cotwald building, has plans nearly completed for the erection of a college school building, costing $40,000, for the Vittenberg College. The building will be of brick construction, two stories.

St. Louisburg, O.—The Board of Education is taking bids on the erection of a high and grade school building, of brick and concrete construction, two stories and basement. Cost $40,000.

Warren, O.—No architect has been selected for the contemplated grade school building, to be erected by the Board of Education. Cost about $235,000.

Ashland, O.—Architect Vernon Redding, Mansfield, O., is preparing plans for a high school building, costing $110,000, for the Board of Education. The building will be of reinforced concrete (brick) construction, two stories, 80x80 feet. Bids will be taken about May 1.

Bluffton, O.—Bids close April 15 on the Administration building and Science hall, to be erected for the Bluffton College. The building will be built of brick and stone semi-fireproof construction, costing $30,000.

Elyria, O.—Architect Paul A. Kressman has plans completed for a high school building to be built for the Board of Education. It will be of brick fireproof construction and cost $130,000.

Fairmont, W. Va.—The State Normal School is completing the erection of two normal school buildings, and two dormitories, to cost $200,000. H. Rus Warne, Capitol street, Charleston, W. Va., has been selected architect.

Forgy, O.—Plans and specifications have been completed by Architect C. F. Williams, Davis building, Dayton, O., for the erection of a high school building, of brick and reinforced construction, one story and basement, which the Board of Education will build in the very near future. Cost, $15,000.

Salem, O.—The bond issue has been passed for a $85,000 high school, to be built for the Board of Education. The building will be of brick, reinforced concrete and hollow tile construction.

Charles Owsey, Dollar Bank building, Youngstown, is the architect.

Uniontown, Pa.—Bids will be taken shortly by Architect John M. Harmon, First National Bank building, on the school building to be erected by the St. Joseph Roman Catholic Congregation. The building will be of brick, semi-fireproof construction and cost $12,000.

Vanport, Pa.—The Board of Education is taking bids on the erection of a grade school building, brick and steel construction, to be erected in the near future. Cost, $18,000.

Brecksville, O.—Plans are being prepared by Architect A. E. Skeels, 202 Avenue Building, Cleveland, for a brick school building, costing $25,000, for the Board of Education.

Homestead, Pa.—A. C. Wickerham, McClure street, has been selected architect to prepare plans for a school addition on Eighth avenue, for the Board of Education. The work will be of brick and stone, and cost $5,000.

Ironton, O.—Sketches are being received by the Board of Education for a high school building, to be built of brick, concrete and steel fireproof construction, two stories and basement, costing $150,000. No architect has been selected.

McDonald, Pa.—The Board of Education has awarded the general contract to F. L. Cadoil, Sturgeon, Pa., to build a $40,000 high school building, brick, stone, and terra cotta semi-fireproof construction.

Sebring, O.—Anderson & Kramer, New Castle, Pa., have received the general contract to build a $26,000 school building, for the Board of Education. The building will be of brick and concrete construction.

Manufacturing.

Erie, Pa.—The Hunting-Davis Company, Century building, Pittsburgh, is preparing plans for the erection of a brick and steel fireproof annealing building, costing $30,000, for the Erie Malley Iron Company.

The General Electric Company is taking bids on the erection of an addition to their manufacturing plant. The addition will be of brick and steel construction, 280x450 feet.

Toledo, O.—Architect Mills, Rhines, Bellman & Nordhoff, is preparing plans for the manufacturing plant, which is being built for the Mathers Spring Company. The brick will be of brick concrete and steel fireproof construction, costing about $50,000.

Delaware, O.—The C. & E. Shoe Company, Columbus, O., is contemplating the erection of a shoe factory. The building will probably be of brick construction, three stories and basement, W. Va.

Norwood, O.—Frank Hill Smith, Reibold building, Dayton, has been selected architect to prepare plans for the erection of a factory building, 120x120 feet, costing $100,000, for the Boss Washing Machine Company, Harris avenue, to be of reinforced concrete and brick fireproof construction.

Cincinnati, O.—Architect Bert L. Baldwin & Company, Petrit building, has plans about completed for a factory building, to be erected for the Lunkenheimer Company. The building will be of brick and concrete fireproof construction, costing $160,000.

Cleveland, O.—Architect W. J. Carter, Illuminating building, has plans in progress for a factory building, brick, steel and timber construction, 50x106 feet, to be constructed for the Timken Steel Range Company. Cost $20,000.

Parkersburg, W. Va.—The Smooth Advertising Company has private plans for the erection of a brick factory building, costing $6,000.

Shelby, O.—Standard Manufacturing Company has private plans for a factory building, which it contemplates erecting in the near future. The building will be of brick construction, one story.

Toledo, O.—No architect has been selected to prepare plans for a factory building which the McNaull Auto Tire Company, 630 Ohio building, is contemplating erecting. The building will be of brick and steel construction.

Cleveland, O.—The general contract for the erection of a factory building for the Vlshek Tool Company has been awarded to Frank Lukas, 3735 Broadway avenue. The building will be of brick and reinforced concrete fireproof construction, two stories, 85x120 feet.

Warwood, W. Va.—Bids close April 20 on the erection of a power plant for the United States Government, care Engineer J. P. Jervay, P. O. building, Wheeling, W. Va. The plant will be located near Dam No. 12, and will be of brick fireproof construction, one story and basement, 32x90 feet.

Parkersburg, W. Va.—Architect W. H. Adair has plans under way for the erection of a brick manufacturing building for the Parkersburg Corrugated Paper Company. Cost, $10,000.

Toledo, O.—Jones, Rhines, Bellman & Nordhoff, 1234 Ohio building, have been selected architects to prepare plans for a factory building, to be erected for the McNaull Auto Tile Company. The building will be of brick and steel construction, one or two stories.
State, County and Municipal.

Bucyrus, O.—The preliminary plans are in progress for the construction of a sewerage disposal plant for the City of Bucyrus. F. L. Niederkeiser, City building, is the consulting engineer and W. J. Sherman, Neshy building, Toledo, is the consulting engineer. Cost $1,000,000. The plant will be of concrete construction. Bids will be taken about May 1.

Miami, O.—Architects Huber & Gamble, 765 Spitzer building, Toledo, O., are taking bids on the erection of an industrial training and service building, for the Board of County Commissioners, to be built of brick, concrete and steel construction, two stories and basement, 90x40 feet. Bids will close about April 21.

Moundsville, W. Va.—The supervising architects, Oscar Wendeth, Treasury Department, Washington, D. C., are taking bids on the erection of a Post Office building, costing $76,499, for the United States Government. The building will be stone facing fireproof construction, two stories and basement.

Youngstown, O.—The Board of County Commissioners has awarded the steel contract to build the bridge on the McCravy road over Lincoln park, to the Hunter Construction Company, Dollar Bank building. The bridge will be constructed of reinforced concrete or steel and will cost $30,000.

North Olmsted, O.—On account of the bids running too high, new bids are being taken on the erection of a town hall for the village of North Olmsted. The building will be of brick ordinary construction, one and two stories, and cost $120,000. William Powell, Hippodrome building, Cleveland, is the architect.

Portage County, O.—Morgan Brothers, Ravenna, O., were the low bidders on the concrete work and Andrew Colucci, Youngstown, O., on the brick work in the grading and paving job, which is to be done for the Board of County Commissioners, care W. A. Goss, auditor, court house, Ravenna, O. The work will cost $62,707.73.

The J. C. Levine Company, Alliance, O., has been awarded the general contract for the grading and paving work to be done for the Board of County Commissioners. Cost $25,240.

Society and Club Buildings.

New Philadelphia, O.—Architects Langdon & Holby, Toledo, O., will probably be ready for estimates about May 1 on the erection of a $20,000 building, for the Masonic Lodge. The building will be of brick construction, three stories, 100x44 feet.

Circleville, O.—G. N. Klingsensmith was the low bidder on the club building which the Circleville Athletic Club is erecting. The building will cost about $13,000 and will contain a gymnasium, swimming pool, billiard rooms, and auditorium with stage. It will be of brick ordinary construction, one story and basement, 90x120 feet.

St. Clairsville, O.—No architect has been selected for the erection of a country club house, costing about $20,000, for the Belmont Country Club. The building will be of brick construction, two or three stories.

Uniontown, Pa.—Sketches are being received by the Local Order of Moose for a brick lodge building, to be erected soon. The building will be of brick construction.

Newark, O.—No architect has been selected to prepare the plans for a store and lodge building which the Newark Lodge B. P. O. E. is contemplating erecting on E. Main street. The building will be of brick fireproof construction, three stories.

Parksburg, W. Va.—Architect F. L. Packard, Hayden building, Columbus, O., has plans underway for the erection of a store and office building, brick construction, to be built for the Masonic Association. Cost, $75,000.

Dayton, O.—Pretzinger & Musselman, Riebold building, have been selected architects to prepare plans for a brick and steel lodge building, to be erected for the Dayton Aerie Fraternal Order of Eagles. Cost $70,000.

New Castle, Pa.—Frank Foltz, Pearson Block, is the architect and H. M. Wirsong, Bleakley Block, the supervising architect, for a $90,000 brick and stucco lodge building, which the B. P. O. E. will build on Mill and Fall streets. Bids will be taken about April 10.

Roscoe, Pa.—Architect J. H. Harmon, First National Bank building, Uniontown, Pa., is taking bids on the erection of a brick lodge building, for the Senior Order of United American Mechanics. Cost $8,000.

Theatres.

Apollo, Pa.—The general contract for the erection of a motion picture theatre and apartment building, for Harry Wood, Warren avenue, has been awarded to Atoma Brothers. The building will be of brick and hollow tile construction, two stories, and will cost $8,000.


Tiltonville, O.—Architect Ross Heath, Martins Ferry, O., has preliminary plans under way for a new vaudeville theatre, costing $15,000, for Harry Walker, Dillon Vale. The building will be of brick construction, one story and basement, 8x110 feet.

Cleeland, O.—Bids are being taken by James Oresaki, Superior avenue, on the erection of a motion picture theatre costing $6,000. The building will be brick and will seat about 300 people.

Conneaut, O.—Architect Frank B. Hursh, Mansfield, O., will start revising plans soon for a theatre building, to be built for the Conneaut Theatre Company. The building will be of brick, steel, and reinforced construction, one story and balcony, and cost $40,000.

Fostoria, O.—Architect Charles S. King, Permanent building, Cleveland, has plans under way for the erection of a brick and stone theatre building, costing about $30,000, to be built for the Commercial Club. Bids will be taken about April 15.

Marion, O.—The general contract to build a brick and reinforced concrete fireproof vaudeville theatre building for the B. P. O. Elks, of Marion has been let to E. Elford, Hayden-Clinton building, Columbus, O. Cost $32,000.

Middleport, O.—Architect Jacob S. Goldsmith, 72 Wheeler building, Columbus, O., has plans started for the erection of a brick nickelodeon, costing $4,500, to be built for I. H. Williams. The owner will be ready for bids about April 13.

Hospitals.

DuBois, Pa.—Architects Harrington & Howard are preparing plans for a hospital, to be built for the board of directors of the General Hospital of DuBois, to be of hollow tile fireproof construction, two and three stories.

Elkins, W. Va.—No architect has been selected to prepare the plans for the hospital which the Elkins City Hospital Company is contemplating erecting. The building will cost about $15,000, and will be of brick construction, three stories and basement.

Youngstown, O.—Heller Brothers were the low bidders on the nurses' home, to be erected for the Youngstown Hospital Association, on Frances and William streets. The building will be of brick fireproof construction, 3½ stories and basement, 90x66 feet, and will cost $100,000.

Elyria, O.—The general contract has been awarded to J. B. Halpin, to build
the hospital addition on East River street, for the W. N. Gates Home for Sick and Crippled Children. The addition will be of brick and stone fireproof construction and cost $20,000.

Hotels.

Uniontown, Pa.—No architect has been selected for the rebuilding of the hotel building which George O. Rush is contemplating. The work will be of brick construction, and cost $25,000.

DuBois, Pa.—Architects Harrington & Howard will be ready for bids about April 15, on the hotel addition to be built for the Logan House. The addition will be of brick construction, three stories and basement.

Miscellaneous.

Newark, O.—Plans for erecting garage, costing $15,000, for Joseph Gergetti, 13 North Third street, will soon be announced. The building will be of brick construction, two stories and basement.

Niles, O.—The architect for the memorial building to be built for the McKinley Memorial Association, of Niles, will probably be selected about April 20. The building will be of brick and stone trim and cost about $100,000.

The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plat as illustrated.

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BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

**Contracts Awarded:**
- January 1, 1914, to date: $29,198,000
- Corresponding period 1913: $38,761,000
- Corresponding period 1912: $18,821,000
- Corresponding period 1911: $34,435,000
- Corresponding period 1910: $18,717,000
- Corresponding period 1909: $23,345,000
- Week ending April 8, 1914: $2,105,000
- Corresponding period 1913: $4,281,000
- Corresponding period 1912: $2,484,000
- Corresponding period 1911: $2,105,000
- Corresponding period 1910: $1,672,000
- Corresponding period 1909: $2,989,000
- Week ending April 1, 1914: $4,320,000

NEW PLANT IN VIEW.

Bollinger Brothers, Fulton building, Pittsburgh, have secured a site at the end of Tabor street, West End, Pittsburgh, for a new plant. The company will erect buildings covering about an acre of ground. Construction will begin early this spring. The company is drawing plans in its own engineering department, and will supervise the work.

INTERESTING BOOKLET.

The title "Waterproofing for Cement Houses," interest immediately. In this booklet, the problem of waterproofing cement stucco houses is discussed logically and interestingly. Such a careful treatment of this subject is bound to increase interest in the use of cement stucco, and in the necessity for safeguarding against dampness. The booklet is written around Ceresit waterproofing compound, which is explained by the fact that it is issued by the Ceresit Waterproofing Company, Chicago.

WRITING SCHOOL SPECIFICATIONS.

Architect F. F. Farris, Schmulbach building, Wheeling, W. Va., is preparing the specifications for a $85,000 high and grade school building, to be built in Bridgeport, O., by the Board of Education. It will be constructed of brick and fireproof material and besides the usual class rooms it will contain manual and domestic science departments, kindergarten and laboratory. Separate bids will be taken on electric lighting, heating, etc.
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Vol. 51, No. 12.
April 18, 1914

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CHAPMANS
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Wheeling, W. Va.
NEW IRWIN CHURCH.

The First Presbyterian Congregation, Irwin, Pa., have under consideration the building of a two-story brick and stone edifice, 68x120 feet, the same to have slate roofing, steam heating system, art glass, face brick exterior, etc. As yet no architect has been selected.

STRUCTURAL PLANT FOR ALLIANCE.

The Alliance Structural Company, a subsidiary organization to the Alliance Machine Company, Alliance, O., will build a brick and steel skeleton structure, 120x300 feet. The building specifications will call for brick and gravel roofings, electric fixtures, structural steel, etc.

NEW BIDS BEING ASKED.

A three-story and basement parochial school building, is to be built by the St. Mary's R. C. Congregation on Xenia avenue, Dayton, O. The building was designed by Architects Joseph G. Stein, Cuthbert Brothers Company, Bessemer building, Pittsburgh, were the low bidders for constructing a $50,000 high and grade school building, for the Board of Education of McKees Rocks, Pittsburgh. This will be of brick and fireproof construction, 68x113 feet, and will contain assembly rooms, laboratory, gymnasium, etc. The work will call for cut stone, composition flooring, structural iron, steel lintels, architectural terra cotta, face brick, composition roofing, interior mill work, sheet metal work, metal lath, fireproof partitions, plate and art glass, metal doors, etc.

POST OFFICE AT MOUNDSVILLE

Bids will be taken until May 14 for the construction of a two-story and basement stone facing fireproof post office building, to be constructed at Moundsville, W. Va., by the United States Government. Plans and specifications may be obtained from the custodian on the proposed site at Moundsville, or from the supervising architect, Oscar Winderoth, treasury department, Washington, D. C. The building will have composition roofing.

SEPARATE CONTRACTS FOR CHURCH.

Architect Karl J. Best, Hayden building, Columbus, O., will have plans ready for bidders about May 1, for constructing a two-story and basement pressed brick armory building at Hillsboro, O., for the Ohio National Guard Armory Board, Haydes building, Columbus, O. The building will measure 80x87 feet, and will have slate roofing, face brick exterior, stone trimming, hard wall plastering, plumbing, heating, and electric lighting.

AWARDING LOCAL WORK.

W. F. Trimble & Sons, Pennsylvania avenue, Northside, Pittsburgh, who have the contract to rebuild the Wood Street store building of Hanan & Sons, Pittsburgh, have awarded the steel work to the Pittsburgh Bridge & Iron Works; interior marble work to the Pennsylvania Marble & Mosaic Company, Pittsburgh; exterior marble work to William Bradley & Son, New York City; ornamental iron to the Summerville Iron & Bronze Company, Pittsburgh; bronze work to Collins & Company, New York City; steam heating, Pittsburgh Heating Company; mill and cabinet work to Stooce & Moeller, New York City.

SCHOOL ON NEVILLE ISLAND.

Bids close on the 28th inst. for constructing a brick and terra cotta semi-fireproof school, 60x99 feet, for the Board of Education of Neville Township, Allegheny county, Pa., of which C. R. Page, Coraopolis, Pa., is secretary. The building will contain six rooms and auditorium. The building specifications include composition roofing, sheet metal work, ornamental terra cotta, iron stairways, fireproof doors, reinforced concrete floor construction, stucco and plaster work, terazzo floors, face brick, metal lath, etc. Separate bids will be taken on the heating and ventilating systems.

TAKING BIDS ON CHURCH.

The Free Methodist Congregation, Martins Ferry, Ohio, is asking bids on the erection of a one-story brick and stone church building, 100x100 feet, which will be constructed from designs made by Architects Fulton & Butler, Uniontown, Pa. The building will have slate roofing and will cost $50,000.

SELECT ARCHITECT FOR SCHOOL.

Architect W. L. Jaekle, United Brethren building, Dayton, O., has just been selected by the St. Anthony's Roman Catholic Congregation, Dayton, to prepare plans for the proposed reinforced concrete fireproof school building, to be built at a cost of $60,000. The structure will measure 80x100 feet, two stories and basement and will have concrete foundation, face brick, composition roofing, patent plastering, metal lath, steam heating system, electric wiring, plumbing, etc.

AWARDING LOCAL WORK.

Architect George Schwan, Peoples Bank building, Pittsburgh, who designed the proposed Concord Presbyterian Church building, at Carrick, Pittsburgh will award separate contracts for all the work. The structure will be of brick and stone, one story and basement, measuring 70x100 feet. The building will have slate roofing, face brick exterior, stone trimming, hard wall plastering, plumbing, heating, and electric lighting.

RECEIVED 

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Rib-Truss In Theatre Building

In the new Jefferson theatre building, Philadelphia, which is just being completed, stringent building laws presented a rather difficult problem to the construction of the auditorium ceiling. In that city it is required that the structural steel of such structures be protected with three inches of concrete.

This is usually accomplished by manufactured by the Berger Manufacturing Company, Canton, O., for all spans not exceeding three feet.

The construction calls for plates resting on the flanges of angles or "T."

Over the Rib-Truss plates is placed three inches of cinder concrete, and the bottom of the plates are plastered to form the finished ceiling.

SUCCESSFUL CONTRACTING

A contractor to be successful must have a perfect system in his business, and everyone he employs must work according to that system. The successful contractor under all conditions has keen wits and is a deep thinker. He can see a perfect detail of his jobs, although he may be miles from them. This is why he can plan his work for tomorrow, for next week, and perhaps for his entire job.

To start with, a contractor gets from some source a job to give an estimate on. If he knows his business, he starts to itemize and figure the cost of every article that it will take to complete that job—and from sad experience he has learned what the labor will cost to assemble those articles into their proper places. After all sums are totaled, he adds a percentage to cover incidentals, which no man can ever foresee until the job is complete. If the estimate cost is accepted by the owner and contract for all completions signed by both parties, then at the proper time, our contractor starts operations. Right here is where real system must begin, and it is up to the contractor to know whether the respective foremen on the jobs are using good system, which means a whole lot towards success to the contractors, i.e., saving labor, material and accident expenses.

Now, let us see where we can be successful. First, don't ever take a job for your health. Successful contractors don't. They are careful buyers and rarely subcontract any part of their job, as they want the sub-man's profit. When we commence to excavate, "we'll put the dirt in a convenient place," he says, "because my common labor can get it back cheaper and my skilled mechanics can climb over it around the building, besides I have a place to put material close to the job and haulers must pile up their stuff when unloading in their respective piles, then it costs less for labor in getting certain sizes when used."

Many dollars are saved on jobs in waste material by having a good man to look after it and keep it around where men can use it instead of having it burned or carried away. There are always cuttings that can be called money if they are taken care of and used. For instance, start to rough in a flat, nine-foot ceiling with 10-foot stuff to do it. You make just what is wanted for corner blocking and save waste. Another saving in a man's time is never to clean out the cuttings, no matter how small they are, until he has finished, as he must have pieces in roughing and in finishing as well, and if he cannot pick them up at once, he must spend time to get them, perhaps from larger stuff,
Up-To-Date Mill Plant

What is said to be the largest and most complete interior wood working plant in the country is that of the Hyde-Murphy Company, Ridgway, Pa. The works cover three acres of ground and is fitted up in the most approved manner for the rapid handling of material. All the machinery is electrically driven, of the latest type. There is not an old machine of any kind to be found in the immense plant which turns out daily a vast amount of mill work for hospitals, schools, hotels, public buildings, apartments, theatres, etc.

Some of the late work taken by the company's mill work was installed in the Pittsburgh district in which the company's mill work was installed.

While an entire line of mill work is made the company makes a specialty of sanitary flush doors, bank and office fixtures, hardwood mantels, stair work, etc.

FIREPROOF PAINT.

There are many formulas for fireproof paints, and for liquids other than paints. Almost any paint is to some degree a fireproof paint, but paint is not the best that may be used. Slack some lime in a barrel, with water just enough to cause the lumps to fall down, but not enough to make a liquid. Cover the barrel, or whatever sort of a vessel you may use, with coarse bagging, or some coarse fabric, to keep in the steam. When this has become a powder, sift it with a fine sieve, and to six quarts of it add one quart of rock or coarse salt and one gallon of water, then put on fire and boil, skimming the scum as it rises to the top. To five gallons of this liquid add a pound of pulverized alum, pulverized copperas one-half pound, and while stirring add slowly three-fourths of a pound of potash powdered; also one-half pound of pulverized copperas or sulphate of iron on the green stone, so called. After this add four pounds of good wood ashes or fine sand, and any desired pigment that you choose. This paint may be applied with an ordinary brush. It is said to be as durable as slate, prevents moss and is fireproof.
Pittsburgh.

Architect R. M. Trimble, 705 Ferguson building, has plans about completed for the erection of a brick garage, costing $6,000, for Robert Hamilton, Church avenue, Ben Avon.

Henry Smith, 913 Delavan street, has been awarded the general contract to build a $10,000 apartment building, brick construction, for R. L. Forney, 414 Delavan street.

Preliminary sketches are being prepared by Architect Charles Bickel, May building, for remodeling and enlarging the First Presbyterian Church, Sixth avenue. The addition will be of stone construction and cost $40,000.

Architects Carlisle & Sharrer, Jenkins Arcade building, have plans underway for the construction of a 2 1/2-story residence, to be built on Braddock avenue, for James McCrady Brothers Company, Sixth avenue, Braddock.

The United States Government, care Engineer Col Francis R. Shunk, Farmers Bank building, will take bids about April 20 on the erection of a lockkeeper's residence at Lock No. 1 on the Monongahela river. The building will be of brick and hollow construction and cost $6,000.

Architect Charles Bickel, May building, has plans nearly completed for the erection of a brick double residence, for Mrs. Ida R. Chester, Rodgers and Bayne avenue, Bellevue.

J. A. Adams, 501 Holmes street, Wilkinsburg, received the contract to build three brick residences for the Hamilton Reality Company.

The general contract to build a $4,000 brick and tile residence for George Goodboy, Berger building, has been let to C. B. Meyers, Mt. Lebanon.

The general contract to build a brick residence for Herbert Bades, 367 Watson boulevard, Northside, has been awarded to J. H. Nicklas, 35 Kenwood avenue.

John Heck, 1938 East street, Northside, has been awarded the general contract to build a brick store and apartment building for J. F. Jackson, 2121 Perryville avenue.

R. M. Trimble, Ferguson building, is taking bids on the basement alterations in the Y. M. C. A., 394 E. Stockton avenue, for the Y. M. C. A. Association. The work consists of a new swimming pool.

On account of previous bids running too high, plans are being redrawn for a private garage, which A. Lee Wiel, Fick building, will erect. The building will be of brick fireproof construction.

Mrs. Luella Schmidt, Altoona, has private plans for the erection of two brick residences, costing $7,000 each, on Winebiddle avenue.

Architects Janssen & Abbott, Renshaw building, have been selected to prepare the plans for two stores and a warehouse which the Ft. Pitt Hotel Company is contemplating building. The building will be of brick fireproof construction, eight or ten stories, and cost $100,000.

Architect Louis Brosie, Highland building, is ready for bids on a $4,000 brick bungalow, to be built for H. Frankman, 5800 Rippey street.

Architect George Schwab, Peoples Bank building, has plans about completed for a factory building, to be erected for the Wolf Brush Company, 1805 Beaver avenue, Northside. The building will be of brick construction.

Architect George Schwab, 1307 Peoples Bank building, has plans about completed for a brick and cement plaster residence, to be built on Anderson street for Clyde Loughead, 813 Liberty avenue. Owner will take bids about April 22.

Architect David Rowland, Conestoga building, is taking bids on the erection of a brick and terra cotta semi-fireproof construction school building, costing $26,000, to be built for the Board of Education, care Finley S. Dixon, Coraopolis, R. D. No. 1.

Cuthbert Brothers Company, Bessemer building, were the low bidders for the erection of a high and grade school building, for the Board of Education, McKees Rocks. The building will be of brick fireproof construction and cost $50,000.

Architect W. Ward Williams, Magee building, is revising the plans for a brick veneer residence, for Herbert Jones, 114 Ullisses street.

W. B. Bennett, North Negley avenue, is taking sub-bids on the erection of a brick and cement plaster residence, to cost $8,000, for Dr. H. C. Updegoff, Brownsville Road, Carrick.

Architect Walter S. Cohen, 2317 Oliver building, will take bids soon on a private garage, brick construction, to be built for Charles Friend, 810 Penn avenue.

The general contract has been awarded to the Nicola Building Company, Farmers Bank building, for the erection of a factory building for the Pittsburgh Model Engine Company. The building will be of brick, concrete and steel fireproof construction, and cost $300,000.

D. T. Riffle, Keenan building, has received the general contract to build a brick factory building for the Standard Cigar Company, 4035 Liberty avenue. Cost $25,000.

The Yost Produce Company, 70 South Fifteenth street, is taking bids on the erection of a $12,000 mercantile building which they will have erected on South Bingham street. The building will be of brick semi-fireproof construction, three stories.

Architects Boyd & Stewart, Century building, have plans about completed for a brick addition to be built to the Nurses' Home on Sherman avenue, Northside, for Mrs. S. F. Hartishon.

Architect L. O. Brosie, Highland building, is taking bids on the erection of a tile and stucco hospital building, for cats and dogs, to be built for Dr. H. B. Wernitz, 222 North Negley avenue. Cost $6,500.

The low bidder on engine house No. 23, for the City of Pittsburgh, was Eisenuraun & Company, 202 Morgan street. The building will be of brick and cost $5,000.

Architect A. B. Snyder, Empire building, is taking separate bids on the erection of a block containing four residences, to be built for Aibel & Smith, Shady and Forbes streets. The building will be of brick, each residence costing $4,600.

ARCHITECTS CARLISLE & SHARRER, Jenkins Arcade building, have plans underway for the construction of a 2 1/2-story residence, to be built on Braddock avenue, for James McCrady Brothers Company, Sixth avenue, Braddock.
Architect W. E. Snaman, Empire building, is taking bids on the erection of a brick veneer bungalow, to cost $4,000 for Mrs. M. C. Swicord, 55 Rebecca street, Wilkinsburg.

Architect W. E. Snaman has plans about completed for the erection of double residences to be built for W. E. Wright, 25 McKee place. The buildings will be of brick construction and cost $6,000 each.

The general contract to build the alterations and addition to the St. John's General Hospital, Northside, has been let to Ross & Fisher, Pennsylvania avenue, Northside. The addition will be of brick and stone fireproof construction and cost $25,000.

The bond issue has been passed for a high school building to be built for the Board of Education, Belleveue. The building will be of brick fireproof construction. No architect has been selected to prepare the plans.

J. H. Lawrence, 715 Idlewood street has been awarded the general contract to build a brick veneer residence for J. J. Barabas, Monroth street. Cost $7,500.

Bids will be taken until April 21 by Architect Richard Irvin, Keystone building, for the erection of a brick and steel factory building for the United Oil Company. Cost, $15,000.

Coroopolis, Pa.—Architect George H. Truxell, Brunot building, Greensburg, Pa., has plans underway for the erection of a $12,000 brick and tile residence, 2½ stories, for C. B. Ferguson, State street.

Dayton, O.—The contract for the concrete work in the $10,000 residence to be erected for K. B. Allen, 608 U. B. building, has been awarded to Gabler Brothers, 900 E. Richard street.

Specifications are being written by Architect Paul T. Cahill, 1900 Euclid building, Cleveland, O. for the erection of a $9,000 brick residence on Oakwood avenue, for Miss Jula Pagenstecher, 19 S. Beckel street.

Glenshaw, Pa.—The general contract to erect a $6,000 hollow tile and stucco residence for Thomas Higgins, has been let to J. H. Suehr, Sharpsburg, Pa.

Huntington, Va.—R. H. Hall has been awarded the general contract to build a residence for J. C. Withers, Fourth avenue. The building will be of pressed brick construction and cost $7,000.

Lorain, O.—Architect R. C. Wurmser is taking bids on the erection of a frame residence, for William Taylor. Cost, $5,000.

Portsmouth, O.—Plans are being prepared by Architect W. A. DeVoss, Turley building, for the erection of a brick duplex apartment, costing $5,000, for Miss Beulah McDonald.

Charleston, W. Va.—Architect A. G. Higginsbotham has bids in and contract will soon be placed for the erection of a double residence for Miss M. B. Fontaine. The building will be of brick and hollow tile construction and cost $8,000.

Cincinnati, O.—The G. A. Peters Realty Company is erecting a $5,000 brick residence on Crane and Davis avenues.

Columbus, O.—A double residence is being erected for Israel Kramer. The building will be of brick construction and cost $5,000.

Huntington, W. Va.—The foundation is in for an apartment building, which Sheraden Smith, Braddock, O., general contractor, is building for F. Robinson. The building will be of brick construction and cost $8,000.

Akron, O.—The general contract for the erection of a residence and garage for Granoll Mogan has been awarded to the Patterson Building Company. The building will be of shingle construction and cost $15,000.

Cincinnati, O.—Joseph S. Steinkamp & Brother, 414 Walnut street, have been selected architect to prepare plans for the erection of a $75,000 apartment building, brick construction, three stories and basement, for C. E. Schaffner, 314 Main street.

Columbus, O.—D. W. Harkness, 187 Northwood avenue, has been awarded the general contract to erect a frame residence, for John B. Davis, 45 W. Spring street. Cost, $4,000.

Architect Bryan & Lathan, Columbus Savings & Trust building, is asking bids on a double frame residence, costing $4,000, to be built for J. L. Davis, 181 E. Oakland avenue.

Elyria, O.—Hinkson & Buttenbender, Masonic Temple, has been awarded the general contract to build a brick and frame residence, costing $5,000, for H. W. Colson, Cedar street.

Huntington, W. Va.—Architect L. I. Dean will take bids about April 16 for the erection of a $5,000 pressed brick residence, for private parties.

Indiana, Pa.—E. M. Lockard has been selected architect to prepare plans for the erection of a brick and hollow tile residence, for G. E. Simpson. Cost, $10,000.

Kittanning, Pa.—Plans are being prepared by Architects Vrydagh & Wolfe, 347 Fifth avenue, Pittsburgh, for the erection of a $12,000 residence, for Dwight C. Morgan, Post office building. The building will be of hollow tile construction.

McDonald, Pa.—Frank Coddon, Steg­geon, Pa., has been awarded the general contract to build a brick residence, costing $6,500, for D. L. Williams.

Sandusky, O.—The general contract has been let to L. Zorbach for the erection of a $20,000 brick residence for Miss A. B. Woolworth.

Canton, O.—The Zeiter Building Company has private plans for the erection of four frame residences, each to cost $7,500.

Cleveland, O.—Architect George S. King, 316 Permanent building, is taking bids on the erection of an $8,000 brick tenement house on Berg street, for Mrs. Brush.

The general contract has been awarded to Younger & Farmer, 1670 Crawford Road, to build two brick residences for Mrs. Anna A. Rider, East Sixty-fifth street.

Dayton, O.—E. F. Rench, 405 United Brethren building, is taking bids on a brick apartment building, which will be erected on Salem and Cottage avenues. The building will cost $30,000.

Greensburg, Pa.—Architect George H. Truxell, Brunot building, has plans underway for a $6,000 brick and tile residence for Miss S. Shoenaker.

Ironon, O.—The general contract has been awarded to C. Rambauscher, to build a brick residence for Mrs. Mary Berg. Cost $3,500.

Magnic Springs, O.—Dr. Jesse Conrad is taking bids on separate contract for a $6,000 brick residence, to be built in the near future.

Toledo, O.—The general contract has been awarded to O. G. Kirchenbauer, 1537 Nicholas building, to build a duplex apartment building, frame construction, for E. M. Greenwald.

Uniontown, Pa.—Architect Paul A. Bartholomew, Couter building, Greensburg, Pa., is preparing sketches for a double duplex brick residence, to be built for Thomas Lynch, Seminary avenue. The building will cost $6,000.

Westerville, O.—Ed Condis has private plans for the erection of a $4,500 brick and shingle bungalow.

Youngstown, O.—The general contract has been let to Frank Vogelbarger, to build a frame residence and garage for Philip Wick.

Alliance, O.—No architect has been selected to prepare the plans for a brick residence which Fred Donaldson, care
American Steel Foundry Company, is contemplating erecting. Cost $6,000.

J. C. Devine Company has private plans for the erection of six residences, frame construction, to cost $5,000 each.

The general contract has been awarded to Robert Mellon to build a brick residence for Frank Troy. Cost $4,200. Sub-bids will be taken at once.

Beaver, Pa. — Architects Boyd & Stewart, Century building, Pittsburgh, will prepare new plans for the erection of a residence and garage for W. L. Sutter. The building will be of brick construction and cost $5,000.

Canton, O. — Plans are being revised by Architect W. S. Epperson, Cleveland avenue, for the erection of a $12,000 brick and hollow tile apartment building, to be built for W. O. Stevens, 1200 West Tuscarawas street.

Cincinnati, O. — Architect William Stanton Robinson, Parcell avenue, is taking bids on the erection of a $6,000 brick and frame residence, for Dr. Charles D. Heisel, 308 Shilliot avenue.

CINCINNATI, O.—The general contract has been awarded to E. F. Atwell, 802 Columbia building.

Canton, O. — John Kovalon, 3218 King street. Architect A. A. De Voss, Turley building, is about ready for bids on the erection of a $4,000 brick residence for the Misses Yost.

Shields, Pa. — The general contract has been let to H. E. Beall & Company, Sewickley, for the erection of a $75,000 residence, brick fireproof construction, for William J. Crittendon, 224 Officer building, Pittsburgh.

Toledo, O. — Plans are nearly completed by Architects Langdon & Holby, Nicholas building, for the erection of a frame and brick residence, for Christopher Meyers. Cost, $8,900.

Architects Langdon & Holby, Nicholas building, will have plans ready for bids about May 1 on the erection of a $7,000 stucco residence, for Charles Bratty, Nicholas building.

**Business Buildings.**

Akron, O. — The date has not yet been set for closing bids which are being taken by Architect Frederick Baird, Bangor building, Cleveland, on the erection of a brick, steel and reinforced concrete warehouse, for the Summit Wholesale Grocery Company.

Columbus, O. — The general contract has been awarded to H. H. Evans Company, for erecting a warehouse and office building for the G. W. Bobb Company. The building will be of brick and concrete fireproof construction and cost $10,000.

Ford City, Pa. — Architect F. C. Clepper, Parc building, Pittsburgh, is refiguring plans for a mercantile building, to be built for Ike Leftacky. The building will be of brick and stone construction and cost about $12,000.

Charleston, W. Va. — W. F. Cline has been awarded the contract for the erection of a store and apartment building on Main street, for George Goetz. The building will be of brick construction, cost $6,000, and contain three stores and three apartments.

Scottdale, Pa. — Architect A. P. Cooper, First National Bank building, Uniontown, will be ready for bids about May 1, on a store and apartment building, for J. P. Brennan, 700 Broadway street, to be built of brick and steel fireproof construction.

Cincinnati, O. — Wilke & Hogg, Union Trust building, are taking sub bids on the erection of a $700,000 store and office building addition for the Union Savings & Trust Company. The building will be of steel, terra cotta above steel and hollow tile, grantie to third story, fireproof construction, 16 stories, attic, basement and sub-basement.

The contract has been awarded to Roche Bruner Building Company, Johnstown building, to erect an office building for the T. K. Harris Company, 103 Market street. The building will be of brick, steel and hollow tile construction, and cost $65,000.
for the Western & Southern Life Insurance Company. The building will be of brick and stone fireproof construction.

Circleville, O.—Architects Howard & Merriam, E. Broad street, Columbus, are preparing plans for remodeling a store building on Maia street, for William E. Crist. The work consists of new store fronts, new ceiling, changing partitions, plumbing, wiring, etc.

Fremont, O.—No architect has been selected to prepare plans for the store and left building which the German Aid Society is contemplating erecting. The building will be of brick construction and cost $10,000.

Norwalk, O.—John Parker is taking sub-bids on the erection of a store and office building for Henry W. Lais. The building will be of brick and steel, non fireproof construction, and cost $15,000.

Vandergrift Heights, Pa.—M. J. Maddigan & Company, Farmers Bank building, Indiana, Pa., were the low bidders on the erection of a store and apartment building, brick construction for Thomas L. Ambrose, Longfellow street. Cost $14,000.

Cleveland, O.—F. C. Heinrich, 3116 West Forty-third street, has been awarded the contract to build a store and apartment building, from construction, for John Belz, West Forty-fourth street.

Greensburg, Pa.—Architect E. E. Bailey Company, Chambers building, Oil City, Pa., have preliminary plans in progress for the erection of a $50,000 bank and office building for the W indmold National Bank. The building will be of brick and steel fireproof construction, six stories.

Logan, O.—Architect H. Charles Jones, Deshler building, Columbus, has plans under way for the erection of a store and office building, for Miss Rempile Logan. The building will be of brick construction and cost $10,000.

Religious.

Ashland, Ky.—Architect V. T. Ritter, Huntington, W. Va., has plans under way for a brick and terra cotta church, costing $75,000, to be built for the M. E. Church. Bids will be taken about May 10.

Farrell, Pa.—The general contract has been re-awarded to Trautman & Cristman, Sharon, Pa., to build a mission for St. Paul's Congregation.

Seaville, Pa.—D. H. Morrison has been awarded the general contract for alterations and an addition to be built to the First United Presbyterian Church. The work will cost about $12,000.

Akron, O.—Architects A. M. Allen & Company, 1900 Euclid building, Cleveland, will soon complete plans for a church and building for the North Hill Disciple Congregation. The building will be of brick and stone construction and cost $12,000.

Cincinnati, O.—Plans are being prepared by Architect Henry J. Schlicks, 10 La Salle street, Chicago, for the erection of a parochial school and chapel, costing $25,000, for the St. Elizabeths Roman Catholic Church. The building will be of brick, steel and reinforced concrete construction.

Warsaw, O.—Architect A. A. Honeywell, Speaker building, Chicago, is preparing plans for the erection of a $10,000 brick church for the Methodist Episcopal Congregation.

Beadlow, Pa.—Separate and general bids are being taken by the Sacred Heart Roman Catholic Congregation for the erection of a brick rectory, costing $15,000.

Cincinnati, O.—The general contract has been awarded to Scully Construction Company, for the erection of an $80,000 academy for the St. Joseph's Convent. The building will be of brick construction, three stories and basement.

Monongah, W. Va.—J. M. Kinser & Brother, Fairmont, W. Va., has been awarded the general contract to build a $20,000 church and parish house, brick construction, for the Consolidated Coal Company.

Wilmerding, O.—J. H. Edwards was the low bidder on the $30,000 brick church which the Methodist Episcopal Congregation will erect on Westinghouse and Clara streets.

Braddock, Pa.—The Sacred Heart Roman Catholic Congregation is taking general and separate contract on a $15,000 rectory, which will be built on Sixth street. The building will be of brick construction.

Cincinnati, O.—Architect Joseph C. Steinkamp & Brother, 414 Walnut street, will take bids shortly on the erection of a $25,000 addition to the convent and academy belonging to the St. Ursula's Convent. The addition will be of brick fireproof construction, three stories and basement.

Columbus, O.—The general contract has been awarded to E. & C. Lang, 551 S. Fifth street, to build an $8,000 brick and stone church, for the First Hungarian Hebrew Congregation.

Huntington, W. Va.—Architect L. W. Lowe has plans completed for the erection of a $10,000 brick church for the Apostolic Holiness Church.

Irwin, O.—No architect has been selected to prepare the plans for a church.

Educational.

Akron, O.—The Akron Storage & Construction Company was the low bidder on the brick and reinforced concrete school building, to be erected for the Board of Education. Cost $32,000.

Carmichael Construction Company was the low bidder on the new $75,000 school building to be erected for the Board of Education. The building will be of brick and stone, fireproof construction, two stories and basement, 89x124 feet.

Rudolph, O.—Architects Howard & Merriam, E. Broad street, Columbus, will
take bids about April 20 on the erection of a brick and concrete township grade and high school, costing $35,000, for the Board of Education of Liberty township.

Columbus, O.—D. W. McGrath, New First National Bank building, has been awarded the general contract for the erection of a forrester and horticultural building, costing $125,000, to be built for the Board of Trustees Ohio State University. The building will be of brick and terra cotta fireproof construction.

Oxford, O.—The Board of Trustees of Miami University is taking bids until May 8 on the erection of temporary chemical laboratory building, costing $3,500, of frame construction.

Percy, Pa.—Architect J. H. Harmon, First National Bank building, Uniontown, has plans underway for the erection of an $81,000 brick school building, for the Uniontown School Board.

Alliance, O.—Architect Frank L. Packard, Hayden building, Columbus, will take bids soon on the erection of a $45,000 grade school building, to be built for the Board of Education. The building will be of brick and concrete fireproof construction, two stories and basement, and contain 12 rooms.

Branch Hill, O.—Sketches are being prepared by Architects Robertson & Fuhshock, Gerie building, Cincinnati, for the erection of a school building pressed brick construction, for the Board of Education.

Charleston, W. Va.—H. R. Warne, architect, is about ready for bids on the erection of two brick high school buildings, to be built for the Board of Education. The cost will be $35,000 each.

Sebring, O.—Andersom & Kramer, New Castle, Pa., has been awarded the general contract to build a $26,000 school building, for the Board of Education. The building will be of brick and concrete fireproof construction, two stories and basement.

Alliance, O.—The Board of Education is taking bids on the erection of a grade school building. The building will be of brick fireproof construction and cost $50,000.

California, Pa.—The general contract has been awarded to John R. Powell Sons for the school building alterations for the Board of Education. The work will cost $3,000 and consists in finishing the auditorium.

Charleston, W. Va.—No architect has been selected to prepare the plans for a $30,000 library which the Board of Trustees is contemplating building. The building will be of brick and stone construction.

New Dover, O.—Architect E. H. Rickett, Twelfth avenue, Columbus, is taking bids on the erection of a township grade and high school building for the Board of Education. The building will be of brick composite construction and cost $25,000.

Spring Hill, O.—Architect E. H. Rickett, Twelfth avenue, Columbus, has plans about completed for the erection of a township grade and high school building, for the Board of Education of Harrison Township. The building will be of brick construction and cost $6,000.

Toledo, O.—Plans will be completed about April 18 by Architect Edw. McGee Franklin avenue, for a grade school building to be built for the Board of Education. It will be of brick and stone construction, two stories, 154x170 feet and will include 16 class rooms, principal's and teachers' rooms, gymnasium, auditorium and swimming pool.

Cuyahoga County, O.—Architect John Allen, Beech street, Berea, O., has plans completed for the erection of a grade school building, brick veneer construction, to be built for the Board of Education. Cost $4,500.

Mentua, O.—Bids will be taken shortly for the brick and reinforced concrete school building which the Board of Education will have erected. Paul T. Cahill, 1900 Euclid building, Cleveland, is the architect. Cost $25,000.

State, County and Municipal.

Belmont County, O.—The general contract for the Rock Hill Pike and Brooks Run Pike improvement, Putney township, for the Trustees of Putney township, has been awarded to Siegle & Wolfe Company, Toledo, O. Cost $50,000.

Cleveland, O.—The City of Cleveland is taking bids on storm sewer work to be constructed of brick and concrete. Cost, $25,000. Bids close April 23.

Cuyahoga County, O.—The Board of County Commissioners will take bids about May 2 for the grading, paving and curbing job which will be done on Clague Road.

Bids will be taken soon on the grading, paving, curbing and draining job on the Solon Richmond road, for the Board of County Commissioners.

Dayton, O.—Bids will close about April 21 on the storm sewer which the City of Dayton will have built on Lorain avenue. The work will be vitrified tile construction, to be built on Harvard street. Bids close about April 21.

Fremont, O.—City Engineer C. A. Hochmendingal will start plans soon for paviing and curbing on Clover street, for the Board of Public Service. The work will be of vitrified brick, cement or sandstone curb.

Fremont, O.—City Engineer C. A. Hochmendingal will start plans soon for a sewer on Willis street, for the Board of Public Service. It will be constructed of vitrified tile.

London, O.—The Village of London is contemplating the erection of a sewage treatment plant. Cost, $30,000. John Asher is the City Engineer.

Lorain, O.—T. P. McCourt, Jennings road, Cleveland, has been awarded the general contract for a grade crossing, costing $150,000, for the City of Lorain. The work will consist of excavation, concrete retaining wall, structural steel bridge, etc.

Lowellville, O.—T. P. McCourt, Main St., Youngstown, has received the general contract for the sewer on the Village of Lowellville.

Marengo, O.—The Village of Marengo will ask for bids on the grading, macadamizing and curbing job on Westmoreland and Noble streets.

Institute, W. Va.—Plans are being prepared by Architect H. R. Warne, Charleston, W. Va., for the erection of a brick dormitory, costing $35,000 for the State Board of Control.

Lorain, O.—The general contract for the substructure of a $10,000 bridge to be built for the City of Lorain has been awarded to P. T. McVourt, W. Fourteenth street, Cleveland. The work will be of deck girders and concrete retaining.

Westerville, O.—The Village of Westerville will probably ask bids about July 1 for the grading, paving and curbing work which will consist of 1275 feet of brick paving, 30 feet of roadway gravel base, concrete curb and gutter.

Sanlakys, O.—L. J. Wager, City Hall, has plans in progress for the construction of eight concrete culverts on Lake Shere Railroad and Hays avenue, for the City of Sandusky. The work will require about 5,500 yards of excavation.

Engineer L. J. Wager, City Hall, will have plans ready about May 1 for the building of a highway bridge for the City of Sandusky. The bridge will be of steel span, 60-foot, black flooring and have a four-foot cement sidewalk.

Alliance, O.—L. W. Thomas, Pythian building, Cleveland, has been selected architect to prepare plans for the erection of a city hall for the Board of Public Service. The building will be of brick and stone construction and cost $75,000.

Altoona, Pa.—The City of Altoona will take bids shortly on the $100,000 reservoir. It will be of reinforced concrete, surrounded by a wall 20 feet high.
Hillsboro, O.—Architect Karl F. Best, Hayden building, Columbus, O., has plans nearly completed for the erection of an $80,000 brick armory for the Ohio National Guard Armory Board.

Kenmore, O.—The general contract for water works for the town of Kenmore has been awarded to John D. Kuhn, 714 N. Main street, Greensburg, Pa. The contract for the stand pipe casing and pump house has been awarded to Wesley Kreighbaum, Barberton, O.

Madison County, O.—The Board of County Commissioners of Franklin County will advertise for bids soon on the construction of a joint bridge and approaches, costing about $40,000. The work consists of one 300-foot steel span with concrete abutments, 20-foot roadway, block floor, concrete base, 4,000 cubic yards concrete abutments.

North Olmstead, O.—The village of North Olmstead will take new bids soon on the erection of a brick town hall, costing $12,000.

Bay O.—The village of Bay is taking bids until May 5, on the erection of a brick town hall. Cost $10,000.

Bucyrus, O.—The city of Bucyrus has selected W. J. Sherman Company, 613 Nasby building, Toledo, as chief engineer, and F. L. Niederheiser, City building, city engineer, for a $150,000 water works system, to be built in the near future.

Ceina, O.—Martin A. Stewart, New Kensington, Pa., have been awarded the general contract for the erection of a $50,000 disposal plant, for the City of Ceina. The project consists of settling tanks, filter beds, pump well, covered-house, and control house.

Manufacturing.

Atcheson Station, Pa.—The Pittsburgh Coal Company may be ready for bids about May 10 on the erection of a brick and steel power house. Cost, $9,000.

Bishop, Pa.—The Pittsburgh Coal Company will probably take bids about May 10 for a power house which will be of brick construction and cost $8,000.

Sandusky, O.—The general contractors George Feick & Son are taking bids on the erection of an ice cream and candy factory, for Fred Martin. The building will be of brick mill construction.

DuBois, Pa.—The Northwestern Mining & Exchange Company is taking bids on the reinforced concrete floor for a central power plant.

Lancaster, O.—The Wilson Manufacturing Company has awarded the contract for the erection of a pressed brick manufacturing building, to cost $30,000.

Toledo, O.—Architect George B. Rheinfrank, 601 Gardner building, has plans underway for the erection of a $40,000 factory building for the Budnitz Brothers Company, 321 Perry street. The building will be of brick, steel and concrete fireproof construction, four stories.

Cleveland, O.—The general contract has been awarded to James L. Stuart, Illuminating building, Cleveland, for the erection of a factory addition on Broadway avenue, for the Cleveland Worsted Mills Company. The work will be of brick and reinforced concrete fireproof construction.

Oberlin, O.—George Quinn has been awarded the general contract to build two factory building additions for the Ohio Road Machine Company. The work will be of brick and stone construction.

Mt. Vernon, O.—The Mt. Vernon Bridge Company has private plans for the erection of an assembling plant addition, brick and steel, one to three stories, 300x100 feet.

Martinburg, W. Va.—The Perfection Garment Company may take bids this summer for the erection of a brick plant it is contemplating building. Cost $15,000.

Society and Club Buildings.

Columbus, O.—Architect Frank A. Packard, Hayden building, will complete plans soon for the erection of a home, for the Board of Trustees of the B. P. O. E. The building will be of brick, stone and concrete fireproof construction, cost $30,000 and contain rathskeller in basement, club quarters, banquet hall, lodge rooms, dining room, kitchen and sleeping apartments.

Freemont, O.—No architect has been selected to prepare plans for the erection of a lodge building for the B. P. O. Elks. The building will be of brick and stone construction.

Circleville, O.—The general contract has been awarded to G. N. Kinginsmith for the erection of a $15,000 club building for the Circleville Athletic club. The building will be of brick ordinary construction, and will contain a gymnasium, swimming pool, billiard rooms, club rooms and auditorium with stage.

Cincinnati, O.—No architect has been selected to prepare the plans for the Y. M. C. A. building, which the Y. M. C. A. is contemplating erecting. Cost $500,000.

Theatres.

Cleveland, O.—Architects Hulett Company, Lennox building, has plans underway for a motion picture theatre for the Hulett Construction Company, Rose building. The work will cost $30,000 and consists of remodeling a store room, fireproof floor and ceiling and repairing the interior.

Fostoria, O.—Architects George S. King, 316 Permanent building, Cleveland, is taking bids on the erection of a motion picture theatre for the Commercial Club. The building will be of brick and stone construction and cost $30,000.

Marion, O.—E. Elford, Hayden building, Columbus, O., has been awarded the general contract for the erection of a $20,000 vaudeville theatre building, for the B. P. O. Elks of Marion.

Akron, O.—Architects E. W. Hagloch, Flotron building, has plans underway for the erection of a brick and stone theatre for W. C. Norris. Plans will probably be ready for bids about April 20.

Columbus, O.—No architect has been selected to prepare plans for a theatre and store building, which W. J. & J. W. Dusenbury, Mann and High streets, are contemplating building. The work will cost about $100,000, and consists of remodeling an office building.

Hospitals.

Columbiana, O.—Architects Clepper & Owens, Dollar Bank building, Youngstown, are preparing plans for remodeling the sanitarium of Misses Decker & Griffith. The work will cost about $7,000 and consists of adding porches and cement walks.

Cresson, Pa.—The State of Pennsylvania, Department of Health, Harrisburg, Pa., will take bids shortly on the erection of a hospital wing and corridor, costing $200,000. The work will be of stone and asbestos shingle construction.

Cleveland, O.—Architect W. S. Lorge, 501 Marshall building, has plans completed for a hospital building, to be erected for the St. Johns Hospital. The building will be of brick and stone, reinforced concrete, fireproof construction, and cost $150,000.

Miscellaneous.

New Kensington, Pa.—The general contract has been awarded to Charles Righter for the erection of a $10,000 garage for Greenwald Benny Auto Com—
NO LIEN CONTRACTS.

Allegheny County, Pa.

The building will be of brick and steel and stone trim construction, 80x130 feet.

Akon, O.—C. E. & William Williams, have plans to erect a brick fireproof garage, one story, 50x132 feet.

Buckeye Laze, O.—Architects Dawson & Hollbrook, Outlook building, Columbus, O., have plans for the building of a dancing pavilion for Messrs. Glass and Rhodes. The building will be of frame construction, 60x229 feet.

Elyria, O.—The building contract to erect a frame grandstand for the Lorain County Agricultural Society, care Anthony Yielding, 302 Elyria block, has been awarded to Kinkson & Buttenbender, Masonic Temple. The building will cost $10,000.

Marion, O.—John Balse, 329 Vine street, has been awarded the general contract to build a garage, two stores, a livery stable, and apartments on Main street, for J. H. Hinman. The work will be of brick, and mill construction.

Sub-Contract Notes.

Cut Stone.

Ingal Stone Company, Bedford, Ind., received contract for a high and grade school building, Ellensburg, W. Va. Owner, Board of Education.

Electric Work.


Huntington Electric Company, Cleveland, O., received contract for the high school building addition, Berea, O. Owners, Board of Education, Berea.

H. B. Farmer, Greenwood, Pa., received the contract for the hospital addition, Greenville, Owner, Greenwood Hospital Association.


Lightcap Electric Company, Indiana, Pa., received contract for residence, Owner, Walter R. Graff, Blairsville.

Heating.

Schofield & Cowl Company, Wheeling, W. Va., received contract for a store and apartment building, Wheeling, Owner, E. B. Potts, Wheeling.

Columbus Heating & Ventilating Company, Columbus, O., received contract for school building, Sabing, O. Owner, Board of Education.

J. A. Krauser & Company, Greenville, Pa., received contract for hospital addition, Greenville, Owner, Greenville Hospital Association.

The McGinnis Company, Pittsburgh, Pa., received contract for church and rectory, Millvale. Owner, St. Andrew's Church, Millvale.

Marble and Tile Work.

Ait Tile & Fireplace Company, 1867 Prospect avenue, Cleveland, O., received contract for a residence, Cleveland. Owner, Charles A. Nisell, Cleveland, O. John D. Carr, Uniontown, Pa., received contract for high school building, Latrobe, Pa. Owner, the Board of Education, Latrobe.

Mill Work.

Andrew Lumber Company, Blairsville, Pa., received contract for residence, Blairsville. Owner, Walter R. Graff, Blairsville.

Owner Woodworking Company, Du Bois, Pa., received contract for parochial school, Pittsburgh, Pa. Owner, St. Peter's Italian Catholic Church, Pittsburgh.


Ornamental Iron and Steel.


Des Moines Bridge & Iron Works, Pittsburgh, Pa., received contract for the parochial school, Pittsburgh. Owner, St. Peter's Italian Catholic Church, Pittsburgh.

Painting.


Plastering.


Plumbing.


J. & A. Thomas, Cleveland, O., received contract for the high school building addition, Berea, O. Owner, Board of Education, Berea, O.

National Plumbing & Heating Company, Charleston, W. Va., received contract for high and grade school building, Ellensburg, W. Va.—Owner, Board of Education.

J. N. Dunn, Northside, Pittsburgh, received contract for the library building addition, Pittsburgh. Owner, Carnegie Library.

Roofing.


Stone Work.

James Robertson, Wilkinsburg, Pa., received contract for parochial church, Pittsburgh, Pa. Owner, St. Peter's Italian Catholic Church, Pittsburgh, Pa.

Structural Steel and Iron Work.


Star Ornamental Iron Works, Pittsburgh, received contract for the parochial building, Pittsburgh. Owner, Charles Spandau, Pittsburgh.

NO LIEN CONTRACTS.

Allegheny County, Pa.


Liens Filed for Labor and Material Furnished.

Allegheny County, Pa.


Hooper Brothers Company vs. W. P. Laufman, Jr., and Roger Kennedy Building in Fourteenth ward, Pittsburgh. Cost, $500.00.


NO LIEN CONTRACTS.

Allegheny County, Pa.


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Structural Steel and Iron Work.


BONDS IN BRICK WORK.

The most common bond, in fact, almost the only one employed during a great part of the nineteenth century, employed in exterior brick work is the running bond, in which all the courses are composed of “stretchers,” that is to say, brick laid lengthwise, the only “headers” or endwise brick visible being at the window jambs, at the starting of piers and pilasters and in straight header courses at more or less frequent intervals where their use is made obligatory by the local building laws to tie the face-wall to the backing. Each course breaks joints vertically with the courses immediately above and below. Running bond is perhaps the simplest and certainly the least interesting and artistic way of laying brick and has little to commend it except considerations of economy.

The Flemish bond, in which every course consists of alternate headers and stretchers is, after the running bond, the one we most commonly meet with, having been generally used in our brick buildings of Colonial date, in which the black header and red stretcher effect is so often noticeable. Flemish bond is constructionally honest, artistic and satisfying, and its almost universal employment in modern building of Colonial style can not be too strongly commended.

The double-stretcher Flemish bond which, as its name denotes, consists of two stretchers, followed by a single header in all courses, the headers being laid above the joints between the two stretchers in the course next below. It is coming more and more into vogue in America and has been used in some of our largest buildings with signal success.

For the vertical joints between the contiguous stretchers mortar colored to exactly match the brick is often used, thus making a blind joint and giving the effect of one double-length stretcher. The use of double-stretcher Flemish bond sets a big, broad scale and can be employed to advantage in large wall surfaces, particularly where it is desired to take off somewhat from the appearance of height, as the strongly marked horizontal lines have that effect. This feature can be further emphasized by slightly increasing the thickness of the horizontal mortar joints.

English bond and Dutch cross bond, like both the single-stretcher and double-stretcher Flemish bond, are replete with artistic feeling and deserve to be far more widely known and used than they now are in America. Not only are they essentially artistic, but they are strong and honest in structure. Both English bond and Dutch cross bond have alternate courses, the one wholly of stretchers and the next wholly of headers; but in the English bond the stretchers of all the courses come directly above each other, while in the Dutch cross bond the stretchers of the first and fifth courses break joints with the stretchers and of the third and seventh courses respectively and thus throughout, giving a diagonally disposed appearance if the mortar joints and the hue of the brick be judiciously contrasted.

The bonds mentioned are the most usual kinds, but one also meets with special adaptations of recognized types; it is, however, quite sufficient for general purposes to remember the five enumerated. In fact, many people, who are supposed to have some knowledge of such matters, have difficulty in keeping the differences clearly in mind and generally fall down in trying to describe them.

BRIDGE COMPANY ENLARGING.

The Mt. Vernon Bridge Company, Mt. Vernon, O., has in contemplation the erection of a brick and steel addition 100x20 feet, which will be used as an assembly plant. The work will be built from private plans, details for which have not been decided.

SEPARATE BIDS FOR CHURCH.

Bids will close April 25 on separate contracts for building a 1/2-story brick and stone church building, for the Church of the Holy Family, Cincinnati, O. This building will measure 125x180 feet and will have concrete foundations, hollow tile partitions, ribbon and art glass, Kalanis, doors, etc. Bids will be taken by Architect J. F. Sheddessey, Blymeyer building, Cincinnati, O.

HEAVY WORK IN LORAIN.

The City of Lorain, O., has just awarded to T. P. McCourt, Jennings road, Cleveland, the contract for grade crossings and subway. The former work will require excavating, concrete retaining wall, steel bridge, sewer, concrete and sandstone curbing. The subway will call for concrete retaining wall, 1,200 feet long, 15 feet high, with a 40-foot roadway. The work will cost $306,000.

BUILDERS MEET.

The Builders' Exchange, Pittsburgh, held an interesting meeting at the Ft Pitt Hotel on Wednesday last, being entertained by stereoptican and moving pictures illustrating the construction of concrete roads. There was close to 175 members and guests at the luncheon, which demonstrates the fact that the Builders' Exchange "has come to stay." The work of the various committees has been highly productive in increasing the membership and having the body recognized as one of the leading exchanges in the country. The committee on arbitration has had several difficult problems to solve in the way of labor disputes, and has been successful in almost every instance. The organization is now on a sound financial basis and well represented by the interests of the contracting and building supply trades.

TIFFN ELKS BUILDING.

Bids are now being taken for the erection of a $35,000 building for the B. P. O. E. No. 94, Tiffin, O., plans for which were prepared by Architect George W. Netcher, Tiffin, O. The building will be 42x100 feet, three stories, brick construction, with stone trimming. The building will contain bowling alleys, billiard and pool room, cafe, dining room, kitchen, etc.

ENLARGING UNIVERSITY BUILDING.

The Board of Trustees of the Ohio State University, Columbus, O., will take bids until the 23rd inst. for erecting a three-story and basement addition to the Physics building. The new structure will be 38x65 feet and will be of brick terra cotta and concrete construction, containing class room, offices, lecture rooms, etc. Plans for the work were made by Architect Joseph N. Bradford, Brown Hall, Columbus, O. The building specifications include structural steel, terra cotta, face and common brick, composition flooring, tile roofing, steam heating, electric lighting, plumbing, etc.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

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<th>Contracts Awarded:</th>
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<td>January 1, 1914, to date</td>
<td>$32,264,000</td>
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</table>
The Riter Conley Manufacturing Company, Pittsburgh, has been awarded the steel frame work for several new buildings to be erected at Erie, Pa., for the General Electric Company. One of these buildings will measure 75x250 feet, one story, with an additional five-story, 80x430 feet.

The Donaldson Lumber Company is a new retail concern at Butler, Pa., lately organized by R. B. Donaldson, Donald McDonald and J. C. Norris of that place.

The Highland Ornamental Iron Company, 548 Ellsworth avenue, Pittsburgh, has just been awarded the contract for the ornamental iron stairways, etc., for the new school building, being erected at McDonald, Pa., for the Board of Education.

The National Heater Company, Cleveland, has been incorporated with a capital stock of $100,000, and will place on the market a new line of heating boilers. A. L. Stowell, formerly connected with the Cleveland office of the American Radiator Company, and later with the Chafer Company heating engineer, is one of the prime movers.

The Farrell Building Company has been formed at Farrell, Pa., by M. B. Longwell, Robert Caldwell and George Munro of that place. It will deal in lumber and general building supplies.

Architects Keihnel & Elliott, announce the removal of their office on May 1 to 1005 Keenan building, Pittsburgh, Pa.

The Cranford Construction Company, Pittsburgh, has removed its offices to 307-8 Keystone building, Pittsburgh.


The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plat as illustrated.

A High-Grade Pump at a Moderate Cost.

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Special Circulars and Prices on application

Reineke-Wagner
Pump & Supply Co.
PITTSBURGH, PENN.

Veribest Asphalt Shingles
Superior in every way to wood, as they are highly ornamental.
Made in colors, red and green. Weather-proof. Guaranteed for years.

Cost no more than wood-dipped shingles. Will not Curl.

For further information or name of nearest dealer, write

McHenry-Millhouse Mfg., Co.
SOUTH BEND, IND.

Factories:—South Bend and Pittsburgh, Pa.
WE CARRY A LARGE STOCK OF STEEL FOR ALL PURPOSES.

THE J. E. MOSS IRON WORKS
Wheeling, W. Va.
Structural Steel, Ornamental Iron and Fireproofing Products
No order too small. No contract too large.

W. R. Loomis Electric Company
Electrical Contractors.
Private Telephone Systems, Inter-Communicating Telephones, Storage Batteries, Repairing of all Kinds.
Office: Wabash Building, Pittsburgh, Pa.
Phones: Bell 1027 Court, P. & A. 3087 Main

HYDE-MURPHY CO.
RIDGWAY, PA.
VENEREED DOORS
Erected Hardwood,
Interior Finish,
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Stair Building,
Hardwood Mantels,
Panel Work,
Grilles, Etc.

J. C. CROSBY, Pittsburgh Representative.
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BRICK CONSTRUCTION
STRONG—DURABLE—FIREPROOF
Economical in First-Cost and Upkeep.
Cheapest in the Long Run.

Secure an artistic finish to your brick construction by the careful selection of a Facing Brick.

"CALLERY" Rough Surface Face Brick
Covers All Requirements.
Up-to-Date—Economical.

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PITTSBURGH CALLERY BRICK CO.
MANUFACTURERS

EVANS RING JOINT-PATENTED
SHOWING REVERSE SIDE
Write for Catalog "GET INTO THE RING."
CARNAHAN MANUFACTURING CO.
LOGOOGTEE, IND.
We Make All Kinds of Veneered Doors
Interior Trim
Oak, Beech and Ash Flooring
Exterior Mill Work
Our Stock Is Large
Giving Prompt Service
Finish Assembled With Evans Ring Joints
Estimates Made from Complete Plans.
High Grade Artistic Product.

OUR EQUIPMENT WILL SAVE YOU MONEY
INDIANA OAK OF ANY WOOD SPECIFIED
WRITE FOR CATALOGS.
NO. 110 STANDARD DOORS AND MILL WORK.
NO. 111 EVANS HOLLOW DOORS.
WE HAVE A MODERN PLANT
EVERYTHING FOR ENGINEERING

CONCRETE CO-OPERATION

BARS, RIB TRUS, STEEL TILE, LATH.

We carry a large stock of Reinforcing Steel for Concrete. Hence—IMMEDIATE SHIPMENT

Our Organization contains Engineers of wide Experience in Concrete Design. Hence—SERVICE and ASSISTANCE.

Our diversified line of materials includes, RIB TRUS—The stiffest, heaviest and strongest self-centering material made. SEND US YOUR PLANS and INQUIRIES.

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HELTZEL FORMS
FOR CONCRETE CONSTRUCTION
No Bolts, Keys or Wedges—Easily set Up and Taken Down.

Forms for Sidewalks, Steps, Walls, Piles, Sewers, Bridges, Foundations, Etc.

HELTZEL STEEL FORM & IRON WORKS
MAIN OFFICE and WORKS
WARREN, OHIO.
Western Pennsylvania Representative, J. S. BECKWITH.
Office and Warehouse, 108 W. Parkway, N. S., PITTSBURGH, PA.
Stock Carried in Pittsburgh.

STANDARD SPIRAL WINDOWS

Have such exclusive features that it is worth while for the Architect or Contractor to investigate.

STANDARD SPIRAL WINDOW COMPANY
Jenkins Arcade - - - PITTSBURGH

Manufacturers of
High Grade Millwork
Built Up Trim  Stair Work
Bank and Office Fixtures
Inquiries Solicited

TO-DAY

IS THE TIME TO
SPECIFY

Our New Catalog
has just been Completed.

Write for it NOW.

PITTSBURGH HARDWOOD DOOR COMPANY
EVERYTHING IN MILL WORK.
PINE and HARDWOOD DOORS—SASH—WINDOW and DOOR FRAMES—MOULDINGS—
STAIR and PORCH MATERIAL, ETC., ETC.

Offices and Warehouses  13th and Pike Streets,  PITTSBURGH, PA.
It was waterproofed against heavy hydrostatic pressure by the use of Ceresit in the mass.

A CEMENT WATER PROOFER THAT ALWAYS GIVES SATISFACTION

Practically every structure you design or build requires waterproofing in some portion or other—usually in the basement if it is a house.

You are interested, therefore, in finding a waterproofing that is sure and reliable—that you can use with absolute certainty of the success of its application.

We can convince you that Ceresit is such a waterproofing. Give us the opportunity to lay the complete facts before you.

Write for the "Book of Evidence"

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D. J. KENNEDY COMPANY, Pittsburgh Agents.
WHEELING WALL PLASTER CO., Wheeling, W. Va.

DEALERS		CONTRACTORS		ARCHITECTS
You should investigate					REX-TILE
The Scientific Shingle.
Write for complete information or
Call at our office.

H. B. MORROW—Special Representative
TELEPHONE CONNECTION.

THE W. S. TYLER COMPANY
ORNAMENTAL IRON AND BRONZE FOR BUILDINGS

BESSEMER BUILDING
104 Sixth St., Pittsburgh, Pa.

METAL LATH CONSTRUCTION
Suspended Ceilings, Metal Lath Partitions, Steel Corner Beads, Light Iron Furring, and Metal Lathing. Estimates Furnished.

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WALL TIES.
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ESTABLISHED 1888
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Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.


SKETCHES FOR CANTON SCHOOL

The Board of Education, Canton, O., has had sketches submitted for a two-story and basement brick school building, to contain 12 rooms. No definite site has been selected but the board is expected to reach a decision in a short time. The estimated cost of the building will be $60,000.

CLUB HOUSE FOR COLUMBUS.

The Athletic Club of Columbus, Columbus, O., is having plans made by Richards, McCarty & Bulford, Hartman building, Columbus, for a six-story brick, concrete, terra cotta and steel club house, to be constructed on Broad and Lazelle streets, Columbus, at a cost of $900,000. The building will measure 90x187 feet and will contain gymnasium, club rooms, dining rooms, parlors, banquet hall, bowling alleys and billiard rooms. Bids on the work will be taken about May 15.

MATERIAL NEEDED FOR FACTORY BUILDINGS.

The Guernsey Earthenware Company, Cambridge, O., has completed foundations for three new buildings, one of which will be 200x298 feet, and the others 60x60 feet each. W. C. Handshy & Son, Zanesville, O., are doing the construction work on a percentage basis. Considerable material is still to be purchased, including 600 square feet of roofing, metal lath, skylight work, sheet metal work, etc.

LIME COMPANY TO BUILD.

Plans are about completed by the Corseley-Miller Engineering Company, Canton, O., for a steel building, 30x360 feet, to use as a hydrating plant, by the O. C. Barber Lime & Fertilizer Company, Canton, O. The new works will be erected at Howestine, O., and will cost about $100,000. The building will have plain concrete and brick foundations, corrugated roofing, etc.

LEY GETS NILES SCHOOL.

The Ley Construction Company, Park building, Pittsburgh, has been awarded the contract to construct a three story and basement brick and stone fireproof school building for the Board of Education, Niles, O. The building will have a frontage of 200 feet and a depth of 90 feet, and will contain class rooms, domestic science and manual training departments, swimming pool, etc. The heating, ventilating and electric work to be installed has been awarded to the German Heating & Ventilating Company, Erie, Pa.

TO BUILD COAL HANDLING PLANT.

The Holston Corporation, Charleston, S. C., will erect a coal handling plant to cost $1,000,000 and is having bids submitted to J. W. Frazier Company, Illuminating building, Cleveland, for the construction of docks, etc. The work will call for structural steel beams, machine mixed concrete, reinforcing steel bars, concrete and timber piling, belt conveyors, etc.

LARGE BUILDING FOR YOUNGSTOWN.

The Youngstown Hippodrome Company, Rockefeller building, Cleveland, will design building a one-story brick and reinforced concrete arcade, office and theatre building at Youngstown, O., from plans which are being made by Architects Knox & Elliott, Rockefeller building, Cleveland. The building will measure 150x160 feet and will have an arcade containing 33 store rooms, 18 of which will be remodeled in present building and 17 to be included in new structure. Bids on the work, which will cost about $450,000, will be taken about May 15.

CANTON'S NEW PLANT.

The Monarch Manufacturing Company, Canton, O., manufacturers of skylights, etc., has started work on a new plant 80x460 feet, of steel, concrete and brick construction. The steel work is being furnished by the Canton Bridge Company. The building will have steel window sash, tar and gravel roofing, etc. Most of the machinery equipment is being transferred from Kansas City, Mo., where the company was originally located.

JEANNETTE WORK AWARDED.

The Pennsylvania Rubber Company, Jeannette, Pa., has the steel work about completed on two new factory buildings and has awarded the ornamental iron work to the Summerville Iron & Bronze Company, Pittsburgh; heating system to the Bartley-Kennedy Company, Pittsburgh; elevators to the Laughton Elevator Company, Toledo, O. The composition roofing, plastering, terra cotta, fireproofing, painting, etc., will be done under the company's supervision.

PLANS FOR PITTSBURGH HOSPITAL.

Architect E. B. Lee, Peoples Bank building, Pittsburgh, has plans under way for an eight-story brick and steel frame building, 44x50 feet, and a one-story brick chapel, 34x80 feet, to be constructed at Frankstown avenue and Beechwood boulevard, for the Pittsburgh Hospital Sisters of Charity. It is expected that the plans will be completed about May 15. Material specifications in the general contract call for structural steel, iron stairways, iron and wire glass partitions, metal lath, flat tile and slate roofing, marble and tile work, low pressure steam heating system, refrigerating apparatus, electric freight and passenger elevators, electric work, plastering; combination tile and concrete flooring, tile or gypsum block partitions, skylights, ventilators, etc. The estimated cost of the work is $125,000.
Contract Awarded for Joint City Hall and Court House

The city officials of Pittsburgh, together with the Allegheny county commissioners, have decided to engage James L. Stuart, Oliver building, Pittsburgh, as constructing engineer, for the proposed $1,000,000 city hall and court house building. It is understood that an act of legislature permits the authorities to make such an agreement which carries with it the employment of union labor. Sub-contracts are to be placed for all the material by Mr. Stuart, who agrees to complete the building in two years. The county and city officials, Farmer & Jones, architects, of New York, was finally approved. Minor changes were ordered in the plans and these will be made and the altered plans submitted for final approval. The building will be of rock faced granite to correspond with the present court house building.

The design of the building is of Romanesque style. The main building will have 10 floors with principal entrance on Grant street. The approach is elevated by stone steps extending the entire width of the building, nearly 200 feet.

The plans call for space not to exceed 8,000,000 cubic feet and will require a frontage of 198 feet on Grant and 312 feet on Diamond street. The foundation will be 24 feet beneath the surface of the ground and extending across the entire front, is a small balcony of stone coping. Above this balcony are eight pillars, stretching up 50 feet and supporting the front of the roof. Between these columns are windows of the various floors.

The plans call for an equal amount of lamp black were ground with oil so as to form black paint, it would cover from 17 to 57 square miles of the air in some of our large industrial communities.

The rapidity with which buildings become unsightly is almost beyond belief until one becomes conversant with the amount of soot which finds its way into the air in some of our large industrial communities.

Soot-Fall in Different Places.

<table>
<thead>
<tr>
<th>Place</th>
<th>Tons</th>
<th>Per Square Miles Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburban resident section, Leeds</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Industrial section, Leeds</td>
<td>329</td>
<td></td>
</tr>
<tr>
<td>Center of London</td>
<td>426</td>
<td></td>
</tr>
<tr>
<td>Sutton Surrey, just outside the metropolitan area</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Glasgow</td>
<td>820</td>
<td></td>
</tr>
<tr>
<td>Roeness, a small seaside village</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>595 to 1,950</td>
<td></td>
</tr>
</tbody>
</table>

In the case of Pittsburgh the results are almost beyond belief, but as the determinations which have been made each month for the past year check very well they are beyond question. The destructive possibilities of this amount of soot are readily seen when we know that an equal amount of lamp black were ground with oil so as to form black paint, it would cover from 17 to 57 square miles with two coats.

The substances, derived from the combustion of soft coal and other fuels which are injurious to stone, may be roughly divided into two classes.

Class 1.—Those which soil and render the buildings unsightly, such as carbon, charcoal, etc.

Class 2.—Those which corrode and in general aid in the destruction and weathering, i.e., sulphuric acid (H₂SO₄), phosphoric acid (H₃PO₄), hydrogen sulphide (H₂S), hydrochloric acid (HCl), ammonia, the organic acids, etc.
THE CONSTRUCTION RECORD

The action of carbon and ash, when not associated with tar, is not extremely objectionable, as the simple process of dusting will remove either. When, however, they are associated with tar, especially in case of the soot, we have the most objectionable kind of dirt. The tar makes the soot adhere firmly to any surface with which it comes in contact, literally covering the object with a coat of black paint. This coating is not readily removed because of its adhesive properties and because it is insoluble in the usual solvents, scouring, or the use of both are frequently necessary.

While the soiling effect of soot is by far the most evident to the eye, it does not, in itself, cause the deterioration of building material. This cannot be said of the corroding agents, of which sulphuric acid is the most important. The effects of hydrochloric and sulphurous acids are of less importance in so far as the injurious effects on stone are concerned. Sulphurous acid, however, which is in itself not particularly active, is rapidly changed by oxidation in the air to the far more corrosive and injurious sulphuric acid. Ammonia and hydrogen sulphide are practically without corrosive action on stone.

In Pittsburgh we burn annually about 16,000,000 tons of coal, containing from 0.5 per cent to 3 per cent sulphur. A large part of this sulphur escapes into the air, where it exists for the most part as sulphuric and sulphurous acids. As a conservative estimate, based on analyses which have been made here and elsewhere, we can say that at least 75 per cent of the sulphur in the coal escapes into the air. This, if considered as sulphuric acid, would be equal to, say 500,000 tons, which, if it be allowed to act on limestone (CaCO₃), would destroy 500,000 tons and produce 860,000 tons of gypsum (CaSO₄ 2H₂O).

The acid escaping from the chimney takes two courses, part of it is included in the soot and part escapes in the form of gas with the other products of combustion. Of the two, that included in the soot is probably the more injurious. That which escapes with the flue gases is dissolved by the rain and coming in contact with any material on which it can act, corrodes this material, and is soon washed off. That included in the soot, especially that coming from domestic installations, which is so much higher in tar, is more injurious, as the tar causes the soot to adhere firmly to whatever it may come in contact. This acid is not readily washed away by the rain, and in all probability, if it is adhering to a corrosible material, the action is complete.

For our consideration, building stones may be divided into two classes:

1.—Stones which do not contain the carbonates of calcium and magnesium, such as granite, gneiss, and sandstone—in which the grains of sand are cemented by some substances other than the carbonates.

2.—Those containing larger or smaller amounts of the carbonates of calcium and magnesium, such as limestone, dolomites, dolomitic limestone and sandstones with a calcareous cementing material.

The stones belonging to class 1 are but little affected by the corroding agents derived from combustion. They are readily soiled by the soot when they are finished in the rough and are very hard to clean. In order that the mixture of tar and soot be removed it is ordinarily necessary to use a wire brush and acid, a sand blast, or other drastic method. These processes are objectionable for two reasons: namely, in every case it is a costly operation to clean the stone, and the stone itself is injured. All rock contains a certain amount of water, the more porous, of course, the greater percentage it contains. After removal from the quarry, this water, or that which is absorbed by the rock after quarrying and which becomes saturate with the various substances of which the rock is composed, gradually comes to the surface and is evaporated, depositing the dissolved materials in a form of a hard, compact crust. This coating protects the stone against the ravages of the weather. It is in fact, "Nature's protection," the removal of which greatly hastens the weathering of the stone. And, after all, cleaning avails but little, as the stone is as dirty as before in the course of six months or a year.

The action of sulphuric acid on the corrosible stone is, for the most part, the action of this acid on the carbonates of calcium and magnesium, which, expressed in the form of chemical equations is as follows: CaCO₃ + H₂SO₄ = CaSO₄ + CO₂ + H₂O. This chemical action involves a change in volume. The stone becomes porous, loses its cohesion and disintegrates with much greater ease under the action of the weather.

Mortar, on account of its rather porous structure and because it is in process of chemical change for some time after it is placed in the wall, is particularly subject to the action of the atmospheric acids. Dr. Angus Smith found that the mortar in one case had been so much changed that it contained 28.33 per cent sulphuric acid, which is equivalent to 48.16 per cent of gypsum. This chemical change, even though frequently not as marked as in this particular case, causes the mortar to swell and become more porous so that it weathers and falls to pieces very readily. Mortar in many of the older buildings in Pittsburgh, for example the old Arsenal building, at Forstenn and Butler streets, has disintegrated to such an extent that it has fallen out in some places to a depth of 3/4 of an inch and is quite often in other places to as much as 2/5 of an inch. This building has recently been repaired. This was shown by a number of analyses to have been in a great measure, at least, to sulphuric acid. The same can be said of the old Third Presbyterian Church, which was recently removed during the cutting of the "hump."

Buildings, as a whole, in our growing American cities, outlive their usefulness in such a comparatively short time and are then replaced by more modern structures, that the ravages of the noxious gases are not nearly as marked as in England and elsewhere abroad, where the preservation of ancient buildings has become a problem of no slight weight. The importance of the corrosion due to sulphuric acid in the atmosphere cannot be explained by citing a number of examples of historic buildings in Great Britain, which are meeting with rapid destruction.

No. 1. A building consisting of nearly pure limestone showed marked evidence of weathering. In fact it was so soft and friable that merely rubbing the surface would remove 3/4 of an inch of the decayed stone. The cause of this was easily traced by chemical examination, which showed the outer 1/4 inch from 3.2 per cent to 33.5 per cent of calcium sulphate. In some places the corrosion penetrated even to the depth of 3/4 inch, but never farther. The amount of friability is not always proportional to the amount of calcium sulphate, but depends as well upon the original character of the stone.

No. 2.—This stone is composed of granules of calcium carbonate cemented by small quantities of the silicates of calcium and aluminum. In this case, as in No. 1, scrapings from the outside and inside of various stones showed a much larger amount of calcium of sulphate on the outer surface (4.75 per cent to 15.81 per cent) as compared with the inner surface (0.25 per cent to 2.8 per cent) when the stone was not exposed to the weather. Limestone varies in the rapidity with which they are attacked by sulphuric acid, the stone under consideration being somewhat readily affected. The outer surface has undergone marked alteration in places. This has not, however, penetrated very far. The change of the carbonate to the sulphate is always associated with a change in structure. In this particular case, the granules and crystals previously held to-
together by the cementing influence of silicates, have been attacked and partially dissolved in such a way as to loosen the hold of the cementing material and render them easily displaced by the wind, rain, frost, alterations of temperature, and mechanical disturbances arising from the crystallization of calcium sulphate.

No. 3.—A sandstone in which the cementing material is mainly calcium carbonate. The amount of disintegration noticed was out of proportion to the amount of sulphate found, if we compare it with the limestones considered in cases 1 and 2, without taking account of the fact that only a very small part of the stone (the calcium carbonate holding the grains of sand together) is acted upon by the acid and that the destruction of this small amount of building material causes comparatively large amounts of the stone to fall to pieces.

No. 4.—In this case sulphuric acid was shown to be the active agent. Tests were made to ascertain the functions of hydrochloric acid in the destruction of building stones, but practically no evidence could be found that any part of it could be ascribed to this acid.

No. 5.—The effect of nitric acid on building stones is questionable. Stone from an unprotected place on a building was examined for nitric acid both outside and inside.

No. 6.—A detailed statement of some of the changes which have been discovered to have taken place in an Oolitic limestone from an English church will not here be amiss. Sample No. 1—exterior of stone where little, if any, weathering had taken place. Sample No. 2—analyses of black crast covering the stone. This covered the stone from one-half of an inch to more than 1½ inches.

### Sample 1

<table>
<thead>
<tr>
<th>Compound</th>
<th>Weight in Grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₂O (212° F)</td>
<td>6.20</td>
</tr>
<tr>
<td>H₂O of combination</td>
<td>1.10</td>
</tr>
<tr>
<td>CaSO₄</td>
<td>85.66</td>
</tr>
<tr>
<td>C₂S₀₄</td>
<td>6.40</td>
</tr>
<tr>
<td>MgO</td>
<td>0.47</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>0.54</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>6.10</td>
</tr>
<tr>
<td>Na₂O</td>
<td>0.044</td>
</tr>
<tr>
<td>K₂O</td>
<td>0.26</td>
</tr>
<tr>
<td>Insoluble silicious matter</td>
<td>1.35</td>
</tr>
</tbody>
</table>

### Sample 2

<table>
<thead>
<tr>
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<th>Weight in Grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>CaSO₄</td>
<td>51.23</td>
</tr>
<tr>
<td>MgSO₄</td>
<td>1.61</td>
</tr>
<tr>
<td>NaCl</td>
<td>0.47</td>
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<tr>
<td>H₂O of combination</td>
<td>12.66</td>
</tr>
<tr>
<td>H₂O insoluble</td>
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<tr>
<td>Organic (soil)</td>
<td>2.57</td>
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<tr>
<td>Fe₂O₃ + Al₂O₃</td>
<td>0.10</td>
</tr>
<tr>
<td>CaCO₃</td>
<td>19.03</td>
</tr>
<tr>
<td>Insoluble silicious matter</td>
<td>6.64</td>
</tr>
</tbody>
</table>

Comparing the analyses of samples 1 and 2, the following facts of general application are brought to our notice.

1.—Calcium carbonate changes to calcium sulphate by the action of sulfuric acid in the air and taking up water, forms gypsum. The 63.86 per cent gypsum which is formed, leaves only 19 per cent calcium carbonate escaping transformation.

2.—Practically all of the magnesium carbonate is changed to sulphate.

3.—The large amount of carbon (5.75 per cent) shows the intimate relation between the smoke and the destruction of the stone.

4.—The ammonium sulphate leads one to believe that the ammonium sulphate is changed by carbonate of calcium to carbonate of ammonia, which volatilizes, leaving sulphate of calcium.

### Conclusion

The smoke and associated products of combustion are injurious to stone in two ways:

1.—The soiling of the surface, so that in the course of a few months all stone takes on the same grey, grimy color. This means either the loss of all artistic effect that may have been obtained by color contrast, etc., or the frequent cleaning of the building, which is an additional expense and at the same time aids in the destruction of the stone.

2.—The actual destructive action on all stones by the acid products of the combustion of the coal. This is especially marked on any stone containing calcium or magnesium carbonates in larger or smaller quantities. Although there is some action on other constituents of the building stones, it is so slow in most cases as to be hardly noticeable.

### PROPOSED NEW BUILDING FOR THE PITTSBURGH TESTING STATION, U. S. BUREAU OF MINES.

The illustration herewith serves to give a good idea of the proposed experiment station to be built in Schenley park, Pittsburgh, by the United States Bureau of Mines. Plans for all of the work have been approved by the commission appointed by Congress and work is to be started on construction at an early date. The designs for the work are being made by Architect Henry Hornbostel, Carnegie Institute of Technology, Pittsburgh, with Oscar Wende-roth, Treasurer Department, Washington, D. C., as supervising architect.

The group consists of three main buildings, the central or mining building, having three stories, flanked by the mechanical and the chemical buildings. In the rear of these and enclosing a court will be the service building. Beyond will be two buildings, over the roofs of which will pass the roadway to the Carnegie school buildings and Schenley park. Between the main group will be the entrance to a series of mine shafts. One of these will be used as an elevator to carry heavy material and passengers from the lower level to the upper; another will be for tests of hoisting ropes and similar mining appliances; another will be an entrance to tunnels extending under the buildings and in which mining experiments, such as fighting mine fires, will be conducted.

The main or mining building will contain the administrative offices and those of the mining force. In it will be an assembly or lecture hall, a library, and smoke and other rooms for demonstrations and training in mine rescue and first aid. The mechanical building will be for experiments and tests of mining machinery and appliances and the chemical buildings for investigations and analyses of fuels, explosives, and various mineral substances.
VALUE OF WOOD BUILDING.

While brick are fairly entitled to the highest distinction so universally accorded them as a material for certain heavy construction, that of bungalows or other dwellings or any structures of a kindred character certainly cannot be included. In other words, brick—except those of a low and hence undesirable grade—are not only at a comparative and prohibitive disadvantage because of higher relative cost, but possible in even a larger measure certain other equally obvious objections, also. All structural rock products, so-called, in most common use, whether of natural or artificial creation, unless expensively vitriated, are peculiarly susceptible to the influence of moisture, heat and cold or any changing atmospheric conditions of which they by nature are harmful absorptive.

Wood, on the other hand, is of a natural physical construction, consisting of cellular formations that, speaking untechnically, spontaneously afford a quick as well as self-ventilating and peculiarly sanitary escape for all forms of absorptive effects. Brick, because of more massive qualities, absorb and retain various foreign conditions naturally creative of not only discomfort, as heat and cold but other effects more or less unsanitary. Wood construction, on the other hand, in which the ordinary modern air spaces are provided, affords a maximum of attainable immunity from all of these very serious objections by means of the self-ventilating and more health-giving characteristics already referred to. That wood is, then, not only in these important particulars decidedly preferable, but, also, cheaper than brick of a desirable quality, may be demonstrated by a little investigation and comparison.

The life of an average detached frame dwelling house or other kindred structure is, of course, largely contingent upon the means from time to time provided for its protection against the elements. A house properly painted very naturally is much more lasting as well as sightly than if left naked. In the light of these facts, one would be amazed to find that many houses, which in this regard had more or less been neglected, were after 50 or more years continued in perfect condition. All structural improvements, so-called, in most common use, whether of natural or artificial creation, unless expensively vitriated, are peculiarly susceptible to the influence of moisture, heat and cold or any changing atmospheric conditions of which they by nature are harmful absorptive.

Window-Glass and Glazing Sash.

Common window glass is a composition of silica, soda and lime, fused and in certain proportions. Crown glass is practically the same only it is differently manipulated in the blowing. It is of a higher grade than common window glass. Crown glass has finer luster, yet as only small panes can be cut from it, it is superseded by other glass. Plate glass is made from pure white sand, soda, lime, arsenic and charcoal. It is cast and rolled on a table. There is much waste in its grinding, the whole process being expensive.

Hand-blown glass is to be preferred to machine-drawn glass. The latter is a much tougher glass. In specifying quality of glass it is well to require a tank-made, hand-blown, natural gas and dipped brand. Dipped glass is that where the sheets, hot from the lehr, are dipped in hot water and acid which removes all traces of stain from sulphur. The English is the best grade of blown glass. This is rated by weights, per square foot, the 21- and 26-ounce qualities being most used. The English glass is so free from defects that it might easily pass for plate; there is occasionally a tiny blister, but very seldom a wave.

American plate is usually specified, but if a better grade is desired, then specify "silvering" quality. If something better still, then call for the best French silvering quality; this is as nearly perfect as glass can be made.

French silvering quality plate may be had in almost any desired thickness, and also nearly any size, but the usual thickness, one-fourth inch and weighs three and one-half pounds to the square foot. You will occasionally find in plate glass small bubbles and now and then a gray spot, showing that the polishing was not perfectly done. If any of these faults abound in immediate numbers, then reject it.

French glass, so called, is usually made in Belgium. It averages about 25 per cent better than the corresponding qualities in American-made glass, but it is lighter in weight. Single-thick is usually 1/10-inch thick, weighing 17 ounces to the square foot. In the small sizes the French or Belgian glass, say, up to 10x15 inches, usually sells here at the same price as the American, and the difference in price is not much up to 10x24. Added to the cost of the imported glass must be reckoned freight, breakage and tariff, which may make a difference of three or four cents a foot.

American single window glass averages about 1/10-inch in thickness and weighs about 20 ounces per square foot. It is safe to use against ordinary wind pressure up to 28x34 inches. Double thick is about 1/7-inch thick, and requires a counterbalance of 26 ounces to the square foot. It may be had in sizes up to those whose sum will make a total of 120 inches: that is, 6x60 inches, 40x30 inches, or anything within these limits.

Nothing so adds to the attractive appearance of a house as fine window glass. Whether the panes be large or small, the glass is an object almost first to be noticed when looking at a nice house. The architectural character of a house determines the size of the panes, and the cost of the building will, of course, govern the quality of the glass. Yet it is true that for selling alone, a house would pay the cost of the best glass in the selling. It is true building art to be able to keep within narrow limits of expenditure and yet secure a quality-looking building. The difference between cheap and dear window glass is not so vast. It is like the matter of varnish, whose cost on a building is a very small fraction of the total cost of the finishing, yet most builders will use the poorest grade they can well use, whereas for a few dollars more far better results would be had and a far better price for the building.

It may be said as regards glazing that all glass would be the better for being bedded in putty, but it takes more time and costs that much more. Glass and sash very seldom fit neatly, but a bedding of putty equalizes the matter and no water can get in behind the glass and putty to rot the putty within a year or less. Bedding is particularly good when the glass has much crown to it, for in fastening the glass down with points there is danger of its breaking unless there is putty beneath the glass. A sash properly glazed is easier to paint than one that is indifferently done, so that we can save or lose money. Window sash primed and glazed in the factory is an abomination.

A pound of putty is estimated to run 20 feet of rabbet on regular sash and 15 feet on large sash. A sash factory glazer will run about 120 feet of rabbet a day, equaling 60 sash, containing nine panes of 8x10. Including waste, this would require about 81 pounds of putty. In other words, the glazer would put in and putty about 520 lights a day.—National Builder.
The general contract has been awarded to O. Neugebauer, Beech Hill Avenue, to build a brick private garage for Marcus Aaron, Second National Bank building.

W. A. Roberts, 335 Fifth Avenue, is taking separate bids on the erection of a brick garage, costing $3,000.

K. M. Trumbull, Ferguson building, has been selected architect to prepare plans for a stone addition to be built to the United Presbyterian Church, Ben Avon. Cost $25,000.

The contract has been awarded to D. A. Dyche, Kirkwood Avenue, for the erection of a tile and stucco bungalow to be built for A. C. Fisher, 203 Sheridan Avenue. Cost $6,000.

D. E. Worley, First National Bank building, is taking bids on a $7,500 stone and stucco bungalow which he contemplates building at Ardmore Farms.

R. M. Trumbull, Ferguson building, has plans completed for the erection of a brick and concrete commercial garage, costing $6,000, for Robert Hamilton Church Avenue, Ben Avon.

Architect R. M. Trumbull, Ferguson building, has plans started for the erection of a brick fireproof construction high school building for the Board of Education, Ben Avon, Pa. Cost $60,000.

Architect Thomas Hannah, Keenan building, has revised plans and is asking new bids on the erection of a frame church and parish building addition, for the St. Ann's R.C. Congregation, Castle Shannon. Cost $20,000.

The general contract has been awarded to Henry Kemp, 521 Bond Street, for the erection of seven brick residences, two duplex and one single, for John Baer, McPherson Street. Cost, $31,000.

Architect E. B. Lee, Peoples Bank building, has plans under way for the erection of brick and steel frame hospital buildings, costing $125,000, for the Pittsburgh Hospital Sisters of Charity.

Rose & Fisher, Pennsylvania Avenue, Northside, have received the general contract for interior alterations in Boggs & Buhl's building, Northside. The work consists chiefly of putting in two new frame stairways and will cost about $23,000.

Sketches are being prepared by Architect John P. Brennan, Old City Hall, Northside, for the building of a $5,000 awnery for the City of Pittsburgh. The structure will be made of angle iron and wire.

Architect W. W. Williams, Magee building, is asking bids for the erection of an addition and alterations to a residence on Beechview Avenue, belonging to Battaglini Brothers.

Plans are being prepared by Architect W. Hodgen, Penn building, for alterations and an addition to the brick store and apartment building on East Diamond Street, Northside, for David Hopkins, 512 Federal Street, Northside.

New plans are being prepared for the erection of three residences, brick construction, to be built for John Sykes, 5230 Butler Street. Cost, $7,000.

Architect H. E. Mills, Aspinwall, has plans about completed for remodeling a store building for J. F. Harris Company, 513 Liberty Avenue.

Architect P. H. Giesey, Mellon Bank building, has new plans under way for the erection of a brick store and office building for the Mellon Trustees.

The Board of County Commissioners will ask for bids shortly on the erection of a road bridge over Pine Creek. The work will be of reinforced concrete construction, with cast stone facing, brick floor and approaches.

At bond issue has been passed for a $40,000 brick fireproof high school building, to be erected soon for the Board of Education of Ben Avon. Architect R. M. Trumbull, Ferguson building, has plans for the building which will contain an auditorium, public library, gymnasium and 10 rooms.

The general contract has been awarded to W. J. Williams, 35 Miller Avenue, Carrick, to build a brick residence in Edgewood, for Rev. J. J. Sutka, 212 Sarah Street, Southside. Cost $4,500.

Architects Alden & Harlow, Farmers Bank building, have preliminary plans in progress for an arcade which it is to be remodeled from a bank blrg. on Fourth Avenue, for a stock company, care D. E. Jones, Columbus, O. The work consists of new front, general interior alterations, 35 market stalls and six stores.

Architect Edward B. Lang, House building, is revising the plans which are under way for the erection of a brick and stone church for the St. Marks Congregation in McKees Rocks. Cost $30,000.

Architect J. H. Phillips, Chartiers Avenue, McKees Rocks, is taking new bids on the erection of a high and grade school building for the Board of Education of McKees Rocks. The building will be of brick, fireproof construction, and cost $50,000. The building will contain an assembly room, laboratory, locker rooms and gymnasium.

The Board of Education, Pittsburgh, has approved the change of plans which call for the addition of a swimming pool in the proposed Schenley High school building, to be built on Grant boulevard. Improvements at Clayton school, costing $10,000; Irwin Avenue school, costing $3,675, and the Columbus school, costing $5,600, recommended by the property and supplies committee were approved.

Architect H. J. Lang, Mt. Oliver, has plans completed for the erection of a brick convent, costing $18,000, to be built for the St. George Roman Catholic Congregation, on Climax street.

Architect Paul Irwin, Renshaw building, has plans completed for the erection of a stone veneer residence, for Frank Pfiordt, 217 Hillard Avenue, Ben Avon. Cost $7,000.

Sub-bids are being asked by W. D. Bennett, 742 North Negley Avenue, who has the contract to build a brick and cement plaster residence for Dr. C. A. Undergraff, Brownsville Road, Carrick.

Robert Zumbert, Hawkins Avenue, Rankin, has private plans for the erection of three brick residences in Forest Place. Cost $4,000 each.

Architect H. E. Kennedy & Company, Home Trust building, is taking bids on the erection of a brick and terra cotta theatre on Oliver Avenue, for Harry Davis Enterprise Company, Farmers Bank building. Cost $200,000.

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brick fireproof construction residence, for William J. Crittenden, Oliver building, to cost $75,000.

W. D. Blatty Company, 900 Fifth street, Northside, has been awarded the contract to remodel a mercantile building for the Hostetter Estate, 811 Liberty avenue. Plans for the work were made by Architects James T. Steen, Fulton building.

**Apartments and Dwellings.**

 Akron, O.—Architects Richardson & Yost, Rockefeller building, Cleveland, have plans completed for the erection of a $5,000 brick veneer residence for E. H. Holloway, Central Trust building. Owner will take bids.

Ambridge, Pa.—The general contract has been awarded to Louis Von Gunter to build a brick duplex residence, costing $1,000, for William Gergasch.

Aspinwall, Pa.—F. Schilling, Third street and Penn avenue, Pittsburgh, has revised plans for a $6,000 brick bungalow, which is contemplated erection.

Blairsville, Pa.—Gillis Overhoff has been awarded the general contract to build a brick and shingle residence for J. W. McCamity, Walnut street. Cost, $3,000.

Delaware, O.—Architect Charles L. Insgcho, Brunson building, Columbus, is preparing plans for the erection of a brick and shingle residence for Emil Owens. Cost, $3,000.

Huntington, W. Va.—Architect Verus T. Ritter, is taking bids on the erection of a stone and shingle residence, to be built for Dr. L. B. Guthrie. Cost $20,000.

Meadville, Pa.—Architect S. I. Storm, North street, is taking bids on a brick residence which he will have erected. Cost $12,000.

Muncie, Pa.—No architect has been selected to prepare the plans for the $6,000 brick and tile residence, which J. J. Dagan, Cherry street, is contemplating.

Canton, O.—The general contract has been awarded to R. C. Witterman, 909 Fourteenth street, W. Va., for the erection of a $5,000 frame residence, for E. E. Cline, Cleveland avenue.

Prestonburg, Ky.—Architect R. G. Gieske, Huntington, W. Va., has plans completed for the erection of a brick residence, with limestone trim, for A. J. May. Cost $7,000.

Cleveland, O.—Architect F. H. Goldberg, Reserve Trust building, will take bids soon on the erection of a $4,000 frame residence for S. Mano.

A building permit has been issued for the erection of a $2,900 frame residence on Caneva avenue for H. M. Poorbaugh, 206 Ercavood avenue.

Architect G. B. Bohn, Williamson building, is preparing separate bids on the erection of a brick residence and garage for Christian Schule, W. Twentieth street.


Eaton, O.—Architects S. W. Kaulman & Son, Kelly-Hutchins building, Richmond, Ind., have plans under way for the erection of a $8,000 brick residence for M. E. Michaels.

Findlay, O.—The general contract has been awarded to W. J. Bush, to build a $4,500 brick dwelling for Mrs. Kate Carlin.

Homestead, Pa.—S. A. Smith received the general contract to build two frame residences for L. N. Dean & W. C. Weghurst. Cost $2,500 each.

W. Stucker is taking bids on a brick block, containing 12 residences, which he is contemplated having erected. Cost $12,000.

Alliance, O.—Dr. W. F. Haines, 537 E. Market street, is contemplating the erection of a brick residence, costing $4,500. No architect has been selected.

No architect has been selected to prepare plans for a $6,000 brick residence, which W. H. Transine, 185 W. Main street, is contemplating erecting.

Dr. C. L. Morgan, 507 E. Main street, is contemplating the erection of a brick residence, to cost $5,000. No architect has been selected.

Dr. G. F. King, 537 E. Market street, is contemplating building a brick residence, costing $4,500, for which no architect has yet been selected.

Dr. J. K. Tressell, 501 E. Market street, has not yet selected an architect to prepare plans for the $5,000 brick residence which he is contemplating building.

No architect has been selected to prepare plans for the $4,500 brick dwelling, which Dr. W. C. Manchester, 317 S. Market street, is contemplating erecting.

Architect W. W. Matchett, Stark Electric building, is preparing plans for the erection of a $6,000 brick bungalow for G. H. Canfield.

No architect has yet been selected to prepare plans for the erection of a brick or frame residence which Frank Kingsburg, 32 E. High street, contemplates having erected. Cost, $4,500.

Dr. J. A. Roach, 338 E. Market street, is contemplating the erection of a $8,000 brick residence. The architect has not yet been selected.

Celina, O.—Joseph Vonder Horst is the low bidder on the $4,500 brick residence to be erected for William Unger.

Cincinnati, O.—Plans are being prepared by Architect F. H. Cordes, Union Trust building, for the erection of a brick residence for C. R. Critchell, 34 E. Third street. Cost, $15,000.

Dayton, O.—Plans are about completed by Architects Thies & Thies, Bolinger building, for the erection of a frame and stucco residence for William L. Kempner, 149 Jones street. Cost, $5,500.

Economy, Pa.—The general contract has been awarded to R. B. McDaniel Company, New Brighton, to build a brick block containing four residences for Dr. J. F. Snyder, 137 Merchant street. Cost, $3,000.

Huntington, W. Va.—Architect L. J. Dean, will take bids about April 31 on the erection of a pressed brick dwelling, for H. O. Thornburg. Cost, $5,500.

Jennette, Pa.—J. E. Myers, Penn Station, has been awarded the general contract to build four frame residences for Merrill & Bachman. Cost, $9,000.

Shenport, Pa.—Mrs. W. D. Gallup is ready for bids on the erection of an addition and alterations, costing $3,500. W. J. Shaw, Fulton building, Pittsburgh, is the architect.

Weston, O.—Architects Langdon & Holy, 1442 Nicholas building, Toledo, are preparing sketches for erection of a $8,000 brick residence for Mrs. C. M. Davis.

Shaker Lakes, O.—H. C. Turnock, Engineers building, Cleveland, is taking separate bids on the tile and stucco residence, which he is contemplated having erected soon. Cost, $15,000.

Canton, O.—T. D. Casselman, Dueber avenue, has been awarded the general contract to build a $4,000 frame residence for Mr. Workman.

Architect E. B. Herrman, Central Savings & Trust building, will be ready for bids about May 15 on the erection of a $10,000 brick and hollow tile residence, for C. L. Taylor.

Cincinnati, O.—Harry Hake and Charles Ruch, Provident Bank building, have been selected architects to prepare plans for the erection of a $5,000 brick residence, to be built for Andrew Hickman, 1308 Edwards road.
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WE HAVE A MODERN PLANT
Cleveland, O.—M. Lees, 2137 E. Fortieth street, has private plans for the erection of three apartment buildings, costing $30,000 each. The buildings will be of brick construction.

Coshocton, O.—Architect J. J. Petitt has plans underway for the erection of a frame residence for Glen Smith. Cost, $3,000.

Dayton, O.—F. J. Hughes & Company, U. B. building annex, have been selected to prepare the plans for a brick apartment building, for Theodore C. Linsky, Sr.

Johnstown, Pa.—Plans are being prepared by Architect W. S. Powell, 226 Ohio street, for a double frame residence, which will be built for George Lorch. Cost, $4,500.

Marion, O.—The general contract to build a brick veneer apartment building for Misses Katherine O. and M. E. Doc. E. Farning street, has been let to J. C. McChinn, 220 N. Seffer street.

Shaker Heights, O.—Plans are being prepared by Architect Charles Kemple, 1116 New England building, Cleveland, for the erection of a brick and stucco hollow tile residence, for C. H. Avey.

Wellington, O.—The general contract has been awarded to E. W. Phillips for the erection of a brick and shingle residence, to be built for William Fauth. Cost, $8,000.

Ambridge, Pa.—Architect R. H. Hill, 668 Maplewood avenue, has plans underway for the erection of a frame residence for Mrs. K. Lore. Cost, $2,800.

Berea, O.—Plans are nearly completed by Architects White & Shape, Citizens building, Cleveland, for the erection of a brick residence for Percy Neubrand. Cost, $7,000.

Bramwell, W. Va.—Mrs. Kate R. Hewett is asking bids for the erection of a stone residence and garage, to cost about $20,000.

Butler, Pa.—Architect M. Nindlinger, Diamond Bank building, Pittsburgh, will soon be ready for bids for a brick residence to be erected for W. S. Blakelee. Cost, $15,000.

Architects Carlisle & Sharrar, Jenkins Arcade building, Pittsburgh, have plans and specifications completed for the erection of a $3,000 country residence for Dr. W. C. Bode, Carson street, Pittsburgh. The building will be of cement, stucco, hollow tile and shingle construction. Separate contracts will be awarded.

Cleveland, O.—Architect A. F. Janowitz, 422 Permanent building, has plans completed for the erection of two brick apartments for Blakeley Cabin Company, 2366 E. Forty-sixth street. Cost, $20,000.

Coshocton, O.—F. Jacobs has been awarded the general contract for the erection of a brick residence, office and garage, for Dr. F. M. Marshall. Cost, $5,500.

The general contract to build a brick residence for Dr. G. Gayle has been awarded to R. Richardson. Cost, $8,000.

Huntington, W. Va.—J. E. Gieske has been selected architect to prepare the plans for a store and apartment building, brick construction, which H. Wild is contemplating erecting.

New Alexandria, Pa.—Architect G. W. Elgin has plans completed about May 10 for the erection of a brick and tile residence, to cost $8,000, for C. S. Patterson.

Parkersburg, W. Va.—The general contract has been let to S. M. Carter to build a brick residence for J. McManis. Cost, $3,800.


Princeton, W. Va.—Architects Frickitt & Fair, Bass Block, Ft. Wayne, Ind., has plans nearly completed for the erection of a frame and stucco bungalow and garage, for W. M. Merrill.

Pendleton, O.—Architects Des Jardins & Hayward, Packering building, for the erection of a brick, stone trim, weather observer's residence for the United States Government. The dwelling will cost about $80,000.

Cincinnati, O.—Plans are being prepared by Architects Des Jardins & Hayward, Packering building, for the erection of a brick residence for Charles Grossman. Cost, $8,000.

Cleveland, O.—Plans are completed by Architect A. F. Janowitz, Permanent building, for the erection of five brick apartment buildings, for M. Lees, 2316 E. Fortieth street.

Architect Frank B. Meade, Garfield building, has been selected to prepare plans for the erection of a residence, to be erected for Richard Ziesing, E. Seventeenth street.

Delaware, O.—Architect William R. Powell, 1106 Hippodrome building, Cleveland, has plans completed for the erection of a frame residence for James Driver, 134 X. Liberty street. Cost, $8,000.

Johnstown, Pa.—E. A. Lloyd, 111 Green street, has been awarded the contract to build a $5,000 frame residence for Sheridan Reiser.

Lima, O.—Architect Frank L. Packard, 1212 Hayden building, Columbus, has plans completed for the erection of a superintendent's residence, for the Board of Commissioners of Lima State Hospital for the Insane. The dwelling will be of brick construction and cost $12,000.

Logan, O.—Ralley & Wright are taking bids on a brick residence which they are contemplating erecting. Cost $13,000.

Muncie, Pa.—W. H. Gibson, 317 Cherry street, is taking bids on a brick apartment building which he contemplates erecting. Cost, $16,000.


Painesville, O.—Plans are being prepared by Architects Bohaard & Parson, 1000 Euclid building, Cleveland, for the erection of an addition also remodeling the residence of W. C. Harrison. The addition will be of frame construction and cost $8,000.

Prestonburg, Ky.—Architect J. R. Gieske, Huntington, W. Va., has plans completed for a pressed brick residence, with limestone trim, for A. J. May. Cost, $7,000.

Business Buildings.

Homer City, Pa.—Morris Robins, 508 Main street, Josephine, Pa., is contemplating the erection of a $10,000 brick store and office building for which an architect has not been selected.

Leechburg, Pa.—F. T. Butler, Main street, is contemplating the erection of a $25,000 mercantile building, for which the architect has not been selected. The building will be of brick semi-fireproof construction.

Martinsburg, W. Va.— Architect C. E. Kent, 712 N. Queen street, has plans about completed for the erection of an addition to the store on Queen street, for W. O. Nicklas & Company. Owner will take bids in the summer.

The Martinsburg Instalment Company expects to select an architect about May 1, to prepare the plans for the erection of a store, office and apartment building. The building will be of brick, steel, probably fireproof construction, and cost $80,000.

Berkley Buggy Company have private plans underway for the erection of a brick warehouse. Cost about $8,000.

Coshocton, O.—J. C. Pettit has been awarded the general contract to build a brick public office building for the Tribune Publishing Company. Cost, $10,000.

Duquesne, Pa.—W. E. Nelson was the low bidder on the erection of a brid
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store room and apartment building for Mrs. J. S. Irwin, Hamilton avenue.
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McKeesport, Pa.—G. M. Wilson, Wilkes Barre, Pa., is the architect for
the new mercantile building which the P. W. Woolworth Company is contemplating erecting.

Parkerburg, W. Va.—Architect E. L. Packard, Hayden building, Columbus
O., has plans well under way for the erection of a brick store and office building,
costing $75,000, for the Masonic Association.

Pittsburgh, Pa.—Savario St. Angelo and Architects S. C. Richards & Company,
Braddock, are taking bids on the erection of a brick store and apartment building,
costing $80,000.

Cleveland, O.—Architect A. F. Janowitz, 322 Permanent building, has plans
nearly completed for the erection of a brick store and apartment building for
M. Lees, 2319 E. Fortieth street. Cost, $35,000.

Plans are being prepared by Architect H. P. Kehr, Mutual Life building, Buffalo,
N. Y., for a $90,000 bakery building, for the Star Baking Company. The building will be of brick fireproof
construction, one and two stories, 112x210 feet.

Cincinnati, O.—Architect S. F. Snyder & Ennt will take bids on a brick and reinforced
concrete store and office building, which they contemplate having erected. Cost, $10,000.

Parkerburg, W. Va.—The general contract to build a $750,000 bank building,
marble front fireproof construction, for the Parkerburg National Bank, has been awarded to M. H. Vought & Company,
346 Madison avenue, New York City.

Canal Dover, O.—No architect has been selected to prepare the plans for
the erection of a store and office building, for A. J. Rans, Third street. The building will be of brick construction,
cost $25,000.

Cincinnati, O.—Architect Elser & Anderson, Ingalls building, are preparing
plans for the erection of a store and loft building for George R. Pake, Suton Hotel. The building will be of brick and reinforced concrete fireproof
construction and cost $20,000.

Witmerding, Pa.—Architect J. E. Obitz, Wilsock building, Pittsburgh, will be ready for bids May 1 on the erection of a brick store and apartment building,
for William J. Hally, 5911 Elder street, Pittsburgh, Pa. It will contain four stores and eight apartments.

Braddock, Pa.—Architect W. Ward Williams, Magee building, Pittsburgh
has plans under way for a brick store and warehouse, costing $8,000, for B Marksowitz. Bids will be taken about
next week.

Cambridge, O.—Frank C. Hanna has been awarded the contract to build a
brick store and apartment building for Carl Bernani. The building will contain two stores and two apartments and
cost $10,000.

Cleveland, O.—The Martin Baking Company, 202 E. Thirtieth street, is taking bids on erecting a brick and concrete fireproof addition to its bakery building. Cost, $46,009.

Architect A. F. Janowitz, Permanent building, is taking bids on the erection of a $20,000 brick store and apartment building for J. W. Sutton, 10114 E. 24th avenue.

Columbus, O.—Architects Dawson & Holtrock, Outlook building, have plans
completed for remodeling the store building of the Chapman Fuel Company on 3rd Street.

East Liverpool, O.—The general contract has been awarded to the Potter
Lumber Company for the erection of a store and office building, five stories and basement, for the Little Heirs Estate.
The building will be of brick and tile fireproof construction, and consist of six stories and 36 offices. Cost, $50,000.

Kenton, O.—The Kenton Savings Bank is taking separate bids on remodeling its building, the work consisting of tearing out partitions and interior alterations and decorating, new front and steel lined vault. Cost, $12,000.

Lima, O.—A contract has been awarded to the Lima Gas Stone Company to build a warehouse addition for J. M. Sealls, Ninth street. The work will be of reinforced concrete and brick fireproof construction, costing $20,000.

Newark, O.—Architect Louis Sullivan, 56 E. Congress street, Chicago, Ill., will have plans prepared shortly for the erection of a bank and office building, marble brick and terra cotta construction, to be built for the Holmes Building Association.

Duquesne, Pa.—Architect C. L. Whitaker, Dravusburg, Pa., is revising the plans for a brick store and apartment addition and alterations to be built for Samuel Wies, Duquesne, Pa.

Marion, O.—Architects Shrumen & Shrumen, Delaware O., are taking bids on separate contracts for the erection of a $8,000 store building for W. R. Denmon, 526 State street. The building will be of pressed brick semi-fireproof construction.

Massillon, O.—Architect Karl E. Wilchau has plans under way for the erection
of a brick store building, costing $12,000, to be built for Mrs. Mary Auld. The general contract will be awarded to
John Meinart.

Toledo, O.—Wacker, Beelman & Schriepher, Nicholas building, have been
selected architects to prepare plans for a terra cotta fireproof commercial building
for the Municipal Realty Company, Madison street.

Wheeling, W. Va.—The general contract has been awarded to C. D. Keiser,
Belhaire, O., for the erection of a brick and tile fireproof store building for T. A. Hoge & Company, Market street.

Cleveland, O.—Architects Decum & Beer, Avenue building, have preliminary plans under way for the erection of a brick store, apartment and bowling alley, for the Dichiolt Brewing Company. Cost $15,000.

Preliminary plans are being prepared by Architect Cohlens & Gabels, 100
Euclid building, for the erection of a store building for John E. Steveding. The building will be of brick and reinforced concrete fireproof construction.

Architect R. A. Conkey, Pierpont avenue, has plans completed for the erection of a brick store and apartment building, for the Junction Realty Company. Cost, $12,000.

Johnstown, Pa.—Berney Brothers, 433
Lincoln avenue, are contemplating having a $80,000 brick mercantile building erected for which no plans have been prepared.

The National Bank of Johnstown has private plans for remodeling its banking room. The work consists of stone front and interior remodel. Thek Construction Company has the contract for the masonry.

Meadville, Pa.—On account of the bids running too high the Tribune Publishing
Company will take new bids for the erection of printing shops and offices on S. Cottage street. The work will be of brick and steel fireproof construction and cost $17,000.

Toledo, O.—The general contract has been awarded to A. Bendley & Sons, to build a $300,000 warehouse for the Standard
Oil Company. The building will be of brick and concrete semi-fireproof construction.

Vandergrift, O.—M. J. Madigan & Company, Farmers Bank building, Indiana, O., have been awarded the general contract to build a brick store and apartment building for Thomas A. Ambrose, Longfellow street. Cost, $14,000.

Wheeling, W. Va.—The general contract has been let to Fasset & Willey,
Bridgeport, to remodel an office building for the Consolidated Telephone

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Company. The building will be of brick, granite, fireproof construction, and cost $3,000.

Alliance, O.—Stefens & Stefens, Williamson building, Cleveland, O., have been selected architects to prepare the plans for the erection of a brick, reinforced concrete storage room and the uto, to cost $60,000, for L. A. Mott and R. A. Eichhorn.

Charleston, W. Va.—Andrew Murray, Twelfth avenue, N. W., Washington, D. C., is taking sub-bids on the erection of a brick addition and alterations to the Chesapeake & Potomac Telephone Company’s building. Cost $20,000.

Religious.

Columbus, O.—Architect Charles L. Inscho, Brunson building, has plans almost completed for the erection of a brick, stone and stucco on brick church building, for the Indiana Presbyterian Church. Cost $20,000. The building will contain an auditorium, Sunday school room, class rooms and gymnasium.

Johnstown, Pa.—Architect W. R. Myton, First National Bank building, is preparing sketches for alterations and addition to the Grove Avenue M. E. Church. The work will be of brick and stone construction and cost $18,000.

Breddock, Pa.—Architect John T. Comer, Renshaw building, Pittsburgh, is ready for bids for the erection of a brick fireproof constructed parochial school building, costing $30,000, for the Sacred Heart Roman Catholic Congregation.

Martiensburg, W. Va.—Architect J. W. Woltz, Waynesboro, Pa., is taking bids on the erection of a brick school building, costing $15,000, to be built for the Roman Catholic Congregation.

Vandergrift, Pa.—The Methodist Episcopal Congregation is contemplating the erection of a brick addition to their church, costing about $10,000. No architect has been selected.

The First Presbyterian Congregation is contemplating building a brick addition to their church, costing $12,000, for which no architect has been selected.

Alliance, O.—Architect W. W. Matchett has plans completed for a brick and stone church which will be erected for the United Brethren Congregation. Cost $16,000.

Cincinnati, O.—Preliminary sketches are being prepared by Architect Henry J. Schlacks, 10 LaSalle street, Chicago, for the St. Marks R. C. Congregation, which is contemplating the erection of a $100,000 brick church.

Cleveland, O.—J. R. Jobe, 4428 Warner road, has been awarded the general contract to build a $5,000 frame church for the St. Andrews Evangelical Lutheran Church.

Ingonor, Pa.—Architect C. W. Hodgen, 810 Penn building, Pittsburgh, has plans completed for the erection of a brick and tile church, to cost about $10,000, for the Franklin M. E. Congregation.

Mt. Pleasant, Pa.—Plans are being prepared by Architect William G. Sloan, Greensburg, for the erection of a brick and stone church for the Church of God. Cost $6,000.

Celina, O.—The St. Johns Lutheran Church will take bids until May 5 for the erection of a brick church. Cost about $3,000.

St. Mary’s O.—Architect A. De Curtis, Lima, will be ready for estimates about May 1 on the plans he has prepared for the erection of a brick and stone church, costing $30,000, for the St. Paul’s Reformed Church.

Toledo, O.—Architects Mills, Rhines, Bellman & Nordhoff, Ohio building, have plans ready for bids for the erection of a stone addition to be built to the First Congregational Church on Collinwood avenue. Cost about $60,000.

Youngstown, O.—Architects Miller & Ford, Dollar Bank building, have been selected to prepare the plans for remodeling the Humrod Avenue Baptist Church. The work will be of brick and stone and cost $25,000.

Lakewood, O.—Architects Maurer & Mills, 1335 Schofield building, Cleveland, O., are taking bids on the erection of a $40,000 brick building for the United Brethren Congregation.

New Philadelphia, O.—Architects Langston & Hohy, 1442 Nicholas building, Toledo, O., have plans completed for the erection of a brick church addition for the First Reformed Church. Cost $8,000.

Trarford, O.—The St. Regis Church is taking bids on remodeling church, the work consisting largely of finishing the second story and installing a steam heating system.

Williaming, O.—George M. Hall, Homestead, Pa., was the low bidder on the erection of a brick church for the Methodist Episcopal Congregation. Cost $3,000.

Cleveland, O.—Architects Fulton & Taylor, Permanent building, have plans in progress for the erection of a cut stone church, costing $25,000, for the Second German Reformed Congregation. Cost $25,000.

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Trimbile, O.—Architect E. S. Matheny, Crooksville, O., has plans under way for the erection of a brick high school building, to be built of brick, fireproof construction and contain six class rooms, domestic science departments, offices and study hall, chemical and physical laboratories, and offices. The Board of Education has plans for the heating and ventilating system to be installed in the grade school building for the Board of Education. Cost $10,000.

Hickory, Pa.—Architect C. L. Whitaker, Dravosburg, Pa., has plans under way for the erection of a high and grade school building for the Mill Run Township School Board. The building will be of brick construction and cost $40,000.

Pomeroy. O.—The general contract has been let to John Meinhardt & Sons. The building will be of brick construction and cost $30,000.

Nashville, O.—Plans are being prepared by Architect C. E. Handshy, Zanesville, O., for the erection of a grade school building for the City of Zanesville. It will be of brick, fireproof construction and cost $15,000.

Canton, O.—Sketches are being submitted by various architects for the erection of a grade school building for the Board of Education. The building will be of brick, fireproof construction, and cost about $60,000.

Ironon, O.—Architects Howard & Herrmann, E. Broad street, Columbus, have been awarded the general contract for the erection of a high and grade school building, costing $41,000, for the Board of Education. The building will be of brick and concrete construction, contain domestic science and manual training and study hall, chemical and physical laboratories, and offices.

Massillon, O.—The general contract to build a factory building for the Massillon Aluminum Company has been let to John Meinhardt & Sons. The building will be of brick construction and cost $40,000.

New York, O.—The general contract to build a factory building for the Massillon Aluminum Company has been let to John Meinhardt & Sons. The building will be of brick construction and cost $40,000.
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Canton, O.—Architect Guy Tilden & Son, Schaffer Block, has plans under way for the erection of a brick and steel factory building, 80x130 feet, to be built for the Columbia Iron & Wire Works. Cost $25,000.

Norwood, O.—Architects Bert L. Baldwin & Co., Perkin building, Cincinnati, O., have plans nearly completed for an addition to the plant of the United States Can Co. The work will be of brick and concrete, two stories, 50x300 feet and cost $30,000.

Sandusky, O.—Preliminary plans are being prepared by Architects M. Allen & Co., C.S. Euclid building, Cleveland, for the construction of a brick and concrete factory building, 100x400 feet. Four stories, for Hinde & Daugh Paper Company. Cost, $75,000.

Cincinnati, O.—Architects Harry Hale and Charles Huy, Provident Bank building, have been selected to prepare the plans for an addition to the soap factory of Andrew Jergens Company on Spring Grove avenue. The building will be of brick, reinforced, fireproof construction and cost $75,000.

Cleveland, O.—Architect W. J. Carter, Illuminating building, has plans nearly completed for the erection of a factory building, brick, steel and timber construction, to be built for the Timken Steel Range Company. Cost, $20,000.

Hill Station, Pa.—The Pittsburgh Coal Company, Oliver building, Pittsburgh, will probably be ready for bids about May 10 on the erection of an $8,000 power house. The work is of brick and steel construction and will include a repair shop.

Youngstown, O.—The general contract has been awarded to Fred Lindenberger & Son to build a brick store for the Renner Brewing Company. Cost $5,000.

Alliance, O.—Engineer J. W. Frazier, Illuminating building, Cleveland, is ready for bids on the erection of a boiler house addition for the Stark Electric Company, Prospect building, Cleveland. The building will be of brick and reinforced concrete and steel, fireproof construction.

Cleveland, O.—Architect G. A. Mueller, Breitmeyer building, Detroit, Michigan, is revising plans for an ice manufacturing plant, to be built for the Forest City Brewing Company. It will be of brick and fireproof construction.

Marion, O.—Architect J. J. Sloan, Jefferson street, has plans under way for the erection of a brick and mill constructed factory addition, for the J. F. Lust Company.

Bucyrus, O.—The B. P. O. E. No. 156 is taking bids on the erection of an addition and also interior alterations, which will cost about $30,000.

Butler, Pa.—Architect Howard C. Frank, House building, Pittsburgh, has plans started for the erection of a store and lodge building, for the Loyal Order of Moose. The building will be of brick and terra cotta construction and cost $40,000.


Oxford, O.—The Delta Kappa Kappa Fraternity is taking bids for the erection of a brick and stucco fraternity house, costing $8,000.

Uniontown, Pa.—Harry W. Allman has been selected architect to prepare the plans for a $3,000 lodge building, which the B. P. O. E. is contemplating erecting.

Breckenridge Heights, Pa.—The Breckenridge Heights Country Club is receiving sketches for a club which they will have erected soon. It will be of frame and shingle construction and cost $1,000.

Clairton, Pa.—Architect Courtney L. Whitaker, Dravosburg, Pa., will take new bids about May 10 on the erection of a $6,000 masonic lodge, for the F. O. E. Clairton Aerie. Cost $2,000.

Massillon, O.—Architect Earl E. Whiteman, Allbright building, will take bids about May 10 on the erection of a brick and hollow tile addition to the Masonic Temple. Cost $15,000.

Youngstown, O.—The general contract has been awarded to R. H. Howes, Construction Company, W. Forth Street, New York City, for the erection of a building for the J. C. C. A. The building will be of brick fireproof construction, cost $200,000 and contain locker rooms, barber shop, laundry, bowling alleys, billiard room, music room, gymnasium, offices, kitchen, dining room, class rooms, assembly hall, mechanical drafting rooms, physical laboratory, etc.

New Brighton, Pa.—Architects Boyd & Stewart, Century building, Pittsburgh, will have plans completed about May 15 for the erection of a $30,000 brick Y. M. C. A. building, for the New Brighton Y. M. C. A.

Cleveland Heights, O.—Architects Medc & Hamilton, 1902 Garfield building, Cleveland, are taking bids on the erection of a stone club house for the Mayfield Country Club. Cost $30,000.

Jacksonville, O.—Architect E. S. Marchin, Crooksville, O., is preparing plans for the erection of a brick building for the F. O. E. No. 1034. Cost, $8,000.

Whitaker, Pa.—The general contract has been let to John Strong to build a brick club house for the F. O. E. No. 1499. Cost, $16,000.

New Philadelphia, O.—Architects Langdon & Hohly, Nicholas building, Toledo, may have plans ready for bids about May 10, for the erection of a lodge building for the Masonic Lodge. The building will be of brick and store construction and cost $30,000.

State, County and Municipal.

Canton, O.—E. B. Herman, Canton Savings Bank building, has been selected architect to prepare the plans for the erection of a stone waiting room and comfort station for the Directors of Public Service. Cost $10,000.

Delaware, O.—The general contract has been awarded to W. F. Whitter, Sandville, O., for the erection of a bridge superstructure for the Board of County Commissioners.

Findlay, O.—City Engineer Harry Outhart, has plans under way for the paving and curbing to be done on Main street, for the city of Findlay. The work will be of vitrified brick on concrete and will cost $75,700.

Franklin County, O.—T. D. & Howell, Wabash, Ind., received the general contract for a bridge roadway over Alum creek, Mifflin and Ben Idon townships, for the Board of County Commissioners. Cost $7,144,745.

Johnstown, O.—The city of Johnstown is contemplating the erection of a bridge on Horner street, for which M. Lee Masterton, City Hall, is the engineer. The work consists of one steel span, approaches, brick pavement, concrete curb, brick sidewalks, roadway, concrete piers, etc. Cost $30,000.

Canton, O.—Bids which are being taken by the City of Canton for remodeling a detention home, will close on May 4. The work will cost $5,000.

Lancaster, O.—Architect Karl L. Best, Hayden building, Columbus, will start plans at once for an armory and memorial building for the City of Lancaster. The building will be constructed of brick and will cost $36,000.

Lorain, O.—The American Bridge Company of New York, Cleveland, is the low bidder on the subway to be built for the City of Lorain, on E. Twenty-
THE GARBER-EDER COMPANY
WABASH BUILDING
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charges.

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title examiners constantly at this work and nothing
else.

Being specialists they make them accurate and
quickly.

You need property reports, order one now and be
convinced that they are just what you want.
Ham H. Gould, Court House, Toledo, is having a brick and stone armory building
of steel and concrete and cost $265,500. City of Charleston. The work will be
road bridge for the sewer system.

The Klyria Construction Company, Elyria, O., has plans completed for the erec-
tion of a new $12,000 fireproof motion picture theatre for AA. E. Best, Hayden building, Columbus, has been selected architect. Cost, $20,000.

Marion, O.—City Engineer William H. Gould, Court House, Toledo, is making plans for a new sewer system for the Board of County Commissioners.

Lucas County, O.—City Engineer William H. Gould, Court House, Toledo, is making plans for a new sewer system for the Board of County Commissioners.

Marion, O.—The general contract for a store and sanitary sewers has been awarded to Harry Kohlhrager. Cost, $20,000.

Marysville, O.—The Ohio State Reformatory for Women, State building, Columbus, James Cox, will be ready for bids about May 1, for a new $12,000 sewer system.

Charles Fath Construction Company, Illuminating building, was the low bidder on the construction of a filtration plant for the City of Cleveland. The work will be of concrete construction and cost $150,000.

Morgantown, W. Va.—The City of Morgantown and the South Morgantown Traction Company, joint owners, will advertise for bids about June 17 on the erection of a $80,000 reinforced concrete bridge, to be built over Decker creek.

Cleveland, O.—Charles Fath Construction Company, Illuminating building, was the low bidder on the construction of a filtration plant for the City of Cleveland. The work will be of concrete construction and cost $150,000.

Cleveland, O.—The general contract has been awarded to R. H. Evans Company, Columbus, to build a brick reinforced concrete addition to the power house belonging to the counties of Mahoning, Portage, Stark and Summit.

Bay, O.—The Village of Bay is taking separate bids on the erection of a brick town hall. Cost $10,000.

Cleveland, O.—Charles Fath Construction Company, Illuminating building, was the low bidder on the construction of a filtration plant for the City of Cleveland. The work will be of concrete construction and cost $1,500,000.

Morgantown, W. Va.—The City of Morgantown and the South Morgantown Traction Company, joint owners, will advertise for bids about June 17 on the erection of a $80,000 reinforced concrete bridge, to be built over Decker creek.

Cleveland, O.—C. N. Grinnell, 311 Carnegie Avenue, was the low bidder on the erection of a $35,000 market shed for the City of Cleveland. The building will be of brick, granite, and steel construction, 20x500 feet.

Curwensville, Pa.—The State Highway Department, Harrisburg, and the Boro of Curwensville are taking bids until May 3 on a $20,000 street improvement, job consisting of 6,645 feet of brick road, 16 feet wide, concrete foundation.

Lucas County, O.—City Engineer William H. Gould, Court House, Toledo, is making plans for a new sewer system for the Board of County Commissioners.

Marion, O.—The general contract for a store and sanitary sewers for the city of Marion has been awarded to Harry Kohlhrager. Cost, $20,000.

Marysville, O.—The Ohio State Reformatory for Women, State building, Columbus, James Cox, will be ready for bids about May 1, for a new $12,000 sewer system.

Charleston, W. Va.—Engineer William Farris has preliminary plans for the construction of a road bridge for the City of Charleston. The work will be of steel and concrete and cost $265,500.

Pottawattamie, O.—The general contract has been awarded to Madigan & Company, Indiana, O., for the erection of a municipal building for the Borough of Pottawattamie.

Fostoria, O.—The Ohio National Guard Armory Board, care Col. Barger, Hayden building, Columbus, O., will have a brick and stone armory building erected this summer, for which Karl I. Best, Hayden building, Columbus, has been selected architect. Cost, $20,000.

Marietta, O.—County Engineer E. F. Gates has plans completed for the erection of seven concrete and steel bridges for the Board of County Commissioners.

Rices Landing, Pa.—The United States Government will build a reinforced concrete power plant at Dam No. 6, for which preliminary sketches are being prepared. Cost, $10,000.

Hospitals.

Marysville, O.—No architect has been selected to prepare plans for the erection of a brick hospital building for the Marysville Hospital Board of Trustees which is under contemplation. Cost, $18,000.

Dixmont, Pa.—Architect Janssen & Abbott, Renshaw building, Pittsburgh, will soon complete plans for alterations to the Dixmont Hospital for the insane. Cost, $19,000.

New Brighton, Pa.—Anderson & Cook, Beaver, Pa., have been awarded the general contract to build a brick and stone fireproof addition to the Home for Aged Women on Third Avenue. Cost, $18,000.

Hotels.

Cleveland, O.—The general contract has been awarded to Jacob Sievrist, Magna- nium Avenue, to build a $7,000 store and apartment building, for J. H. Kovalon, King street. The building will be of brick construction, containing one store and apartment.

Cedar Point, O.—Architect H. C. Millot, Bliss building, Sandusky, has plans under way for the erection of a hollow tile and silicate hotel addition for the Cedar Point Resort Company, to cost $75,000.

New Kensington, Pa.—Architect W. E. Stum, Empire building, Pittsburgh, has plans under way for the erection of an addition to the Hotel Howard. The addition will be of brick construction and cost $25,000.

Theatres.

Amherst, O.—Architect H. O. Wurmser, Lorain, O., has plans completed for the erection of a brick and stone fireproof motion picture theatre for V. E. McKee.

Middleport, O.—Architect Jacob S. Goldsmith, Wheeler building, Columbus, has plans about completed for the erection of a brick nickelodeon, costing $4,500, for J. H. Williams.

Youngstown, O.—Plans are being completed by Architects Louis Bongerle & Son, Starbaugh building, for the erection of a brick picture theatre, costing $15,000 for John Leavitt.

Hickwood, Pa.—The Penn Marine Coal Company will build a brick moving picture theatre building, costing $9,000, in the near future, for which G. W. Elson, Marshall building, Indiana, Pa., has been selected architect.

Miscellaneous.

Erie, Pa.—Engineer H. T. Porter, Greenville, Pa., has plans under way for the erection of a freight station for the Besserer & Lake Erie Railroad. The building will be of steel and corrugated iron fireproof construction, and cost $100,000.

Sharon, Pa.—Architect C. W. Hopkinson, Rose building, Cleveland, is about ready for bids on the erection of a frame pavilion for T. H. Buhl, Sharon, Pa. Cost $20,000.

Elyria, O.—Glenn & Weizel, Lorain, have been awarded the contract to build an addition to the factory building of the Superior Metal Products Company.

Massillon, O.—The general contract has been awarded to John Meinert & Sons for the erection of a brick mill construction factory building, for the Massillon Aluminum Manufacturing Company.

Akron, O.—W. B. McAllister Company, 165 E. Thirty-first street, Cleveland, has been awarded the general contract to build a garage and stable for F. A. Sieberling. The work will be of brick, timber, plaster, steel and hollow tile, semi-fireproof construction.

Huntington, W. Va.—The Gwinn Milling Company has private plans for the construction of a grain elevator, office and warehouse, costing $30,000. No sub contracts have been awarded.

Shields, Pa.—Architects Rutan & Russell, Magie building, Pittsburgh, have plans completed for the erection of a private garage for William J. Crittenden, Oliver building. The building will be of brick construction and cost $10,000.

Morgantown, W. Va.—The South Morgantown Traction Company may be ready for bids about May 17 on the construction of an extension to its traction line from South Park to steel plant.
Liens Filed for Labor and Material Furnished.

Allegheny County, Pa.


NO-LIEN CONTRACTS.

Oswald Vengebauer vs. Marcus Aaron. Agreement made April 14 and filed April 17, to build and complete a garage in Winebiddle avenue, Pittsburgh. Contract price $1,532.00.

David T. Kiffe vs. Standard Cigar Company, a corporation. Agreement made April 16 and filed April 17, to alter and complete building on Liberty avenue and Fisk street, Pittsburgh. Contract price $20,000.


Joseph A. Langdon & Sons vs. Toner Institute, Rt. Rev. J. F. Regis. Agreement made March 30, and filed April 17, to install the heating apparatus. Contract price $4,295.00.

J. G. Pullman vs. J. J. Vilsack and A. A. Vilsack. Agreement made April 13 and filed April 21, to build and complete 18 houses on Jancey and Martha streets, Pittsburgh. Cost $43,179.30.

John F. Casey vs. Pennsylvania Railroad Company. Agreement made April 8, and filed April 15, to build and complete a theatre building in the Eleventh ward, Pittsburgh. Cost not given.

D. H. Morrison vs. First Presbyterian Church of Sewickley. Agreement made April 8, filed April 15, to make alterations to First Presbyterian Church of Sewickley.

Cook & Sevin vs. Sewickley U. P. Church. Agreement made April 8, filed April 15, to complete plumbing and heating for the Sewickley Presbyterian Church for $830.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded</th>
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<tr>
<td>1914</td>
<td>$8,147,000</td>
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<tr>
<td>1913</td>
<td>$8,353,000</td>
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<tr>
<td>1912</td>
<td>$8,461,000</td>
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<td>$8,450,000</td>
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<td>1904</td>
<td>$8,084,000</td>
</tr>
</tbody>
</table>

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Sub-Contract Notes.

Electric Work.
The Barber Electric Company, Cleveland, O., received contract for the store and apartment building, Cleveland, O. Owner, S. Gruss, Cleveland, O.
The Unr Waterloo Company, Columbus, O., received contract for the church, Columbus, O. Owner, the Church of the Holy Rosary, Columbus.

Fireproofing.
D. W. McCarroll, Columbus, O., received contract for church building, Columbus, O. Owner, Church of the Holy Rosary, Columbus, O.

Heating.
Cook & Seving, Sewickley, Pa., received contract for church addition, Sewickley, Pa. Owner, First United Presbyterian Congregation, Sewickley, Pa.
L. L. Lloyd, Meadville, Pa., received contract for high school building addition and remodel, Meadville, Pa. Owner, the Meadville School District, Meadville, Pa.
Barley-Kennedy Company, Pittsburgh, Pa., received contract for motion picture theatre, Pittsburgh, O. Owner, Park Estate, Pittsburgh, Pa.

Lighting Fixtures.
The Youngstown Chandelier Company, Youngstown, O., received contract for the parish house, Sharon, O. Owner, St. John's Congregation, Sharon, Pa.

Marble and Tile Work.
Hall & Barrett, Zanesville, O., received contract for store, office and lodge building, Newark, O. Owner, the Masonic Temple Company, Newark.
The Art Tile & Fireplace Company, Cleveland, O., received contract for garage and sales room, Cleveland, O. Owner, Mrs. Amanda Cardell.

Mill Work.
David Ott & Company, Johnstown, Pa., received contract for store, office and apartment building, Johnstown, Pa. Owner, Dr. L. H. Mayer, Johnstown, Pa.
L. L. Smith, Johnstown, Pa., received the contract for church building, Johnstown. Owner, Conemaugh Brethren Congregation, Johnstown.

Ornamental Iron.
Joy Brothers, Pittsburgh, Pa., received contract for grade school building addition, Johnstown. Owner, Dr. L. H. Mayer, Johnstown, Pa.
G. J. Griffith & Company, Johnstown, Pa., received contract for store, office and apartment building, Johnstown. Owner, Dr. L. H. Mayer, Johnstown, Pa.

Pittsburgh Iron Works, Pittsburgh, Pa., received contract for motion picture theatre, Pittsburgh, O. Owner, Park Estate, Pittsburgh, O.
The Champion Iron Works, Kenton, O., received contract for store, office and lodge building, Newark, O. Owner, the Masonic Temple Company, Newark.

Plastering.
J. C. Miller, Johnstown, Pa., received contract for store, office and apartment building, Johnstown. Owner, Dr. L. H. Mayer, Johnstown, Pa.
E. E. Hartzell, Canton, O., received contract for store building, Canton, O. Owner, the T. K Harris Company, Canton, O.
L. E. T. Plastering Company, Homestead, Pa., received contract for mercantile building, Pittsburgh, O. Owner, J. F. McCrorey, New York City.
J. Coburn, Fairmont, W. Va., received contract for store and apartment building, Fairmont. Owner, M. D. Orr, Fairmont.

Plumbing.

Pittsburgh Bridge & Iron Company, Pittsburgh, Pa., received contract for motion picture theatre, Pittsburgh, O. Owner, Richard A. Rowland and James D. Clark, Pittsburgh.
The Case Crane Company, Columbus, O., received the contract for the church, Columbus, O. Owner, the Church of the Holy Rosary, Columbus, O.

Roofing.
B. Wilson, Athens, O., received contract for high school building, Chauncey, O. Owner, Board of Education, Chauncey, O.
John A. Graff, Johnstown, Pa., received contract for store, office and apartment building, Johnstown, O. Owner, Dr. L. H. Mayer, Johnstown, Pa.
J. A. Graff, Johnstown, Pa., received contract for church building, Conemaugh, Pa. Owner, Conemaugh Brethren Congregation, Conemaugh, Pa.
L. P. D. Yost, Canton, O., received contract for store building, Canton, O. Owner, the T. K Harris Company, Canton, O.
W. S. Haney, Portsmouth, O., received contract for the school building, Portsmouth, O. Owner, Board of Education, Portsmouth, O.

Sheet Metal.
Joy Brothers, Johnstown, Pa., received contract for grade school building addition, Johnstown. Owner, Board of Education, Johnstown, O.
C. S. McCall & Company, Johnstown, Pa., received contract for the church building, Johnstown. Owner, Dr. L. H. Mayer, Johnstown, Pa.

Structural Steel.
The Canton Bridge Company, Canton, O., received contract for store building, Canton, O. Owner, the T. K Harris Company, Canton, O.
The Cambria Steel Company, Johnstown, Pa., received contract for the boiler house, Johnstown. Owner, Goerner & Company, Johnstown, O.

The Case Crane Company, Pittsburgh, Pa., received contract for motion picture theatre, Pittsburgh, O. Owner, Richard A. Rowland and James D. Clark, Pittsburgh.
The Case Crane Company, Columbus, O., received the contract for the church, Columbus, O. Owner, the Church of the Holy Rosary, Columbus, O.

Stone.
The Youngstown Chandelier Company, Youngstown, O., received contract for store building, Youngstown, O. Owner, the T. K Harris Company, Youngstown, O.

Terra Cotta.
C. B. Lovett Company, Northside, Pittsburgh, received contract for motion picture theatre, Pittsburgh, O. Owner, Park Estate, Pittsburgh, O.

Carpenters' New Wage Scale.
The master builders organization of Pittsburgh held a meeting on Tuesday last in the Builders' Exchange and effected a new wage agreement for carpenters. This agreement, which covers a period of three years, calls for the present rate of $4.50 a day from May 1 until November 1, from November 1 until May 1, 1915, the daily wage rate will be $4.60, and from May 1, 1915, to May 1, 1917, the new rate will be $5.00 per day.

General Items.

"Thumb Tacks" is a great little monthly just off the press by the Bernard-Glockler Company, Pittsburgh. It contains many things of interest to the architects, draftsmen and builders, specializing on the Glockler products. The first number contains several articles of merit contributed by J. F. Prestion, the company's advertising manager. "Thumb Tacks" is sent gratuitously to those interested in the purchase of such products as are made by the Glockler Company.

Charles F. Hall, for several years connected with the CONSTRUCTION RECORD, has accepted a position as traveling salesman for the McHenry-Millhouse Manufacturing Company, South Bend, Ind., manufacturers of asphalt shingles. Mr. Hall will cover West Virginia, Virginia and Maryland territory.
AWARDING BRADDOCK WORK.

The Hodder Construction Company, contractors for the Braddock, Pa., high school building, have awarded the cut stone work to the Iron City Stone Company, Wilkinsburg; ornamental iron work to the Vislack-Martins Company, Pittsburgh; roofing to the Loew-Miller Company, Braddock; interior trim to the Pittsburgh Hardware Door Company, Pittsburgh and painting to H. M. Glenn, Braddock, Pa. The marble and tile, metal ceiling work, etc., are still to be placed.

SCHOOL BIDS OPEN.

The Board of Education, Scio, O., will take bids until May 8 on the construction of a two-story brick and stone semi-fireproof school building, 72'x91 feet, which will contain class rooms, auditorium, gymnasium, chemical and physical laboratories. Plans for the structure were made by Architects Howard & Merriam, 8 East Broad street, Columbus, O. Specifications call for structural steel, reinforced concrete work, metal lath partitions, metal ceilings, cypress interior finish, maple flooring, fireproof doors and windows, composition roofing, etc. Separate bids will be taken on the plumbing, heating and lighting.

REGULATE PICTURE THEATRE BUILDINGS.

Recommendations for construction and operation of moving picture theatres were framed at a conference of persons interested and representatives of city State officials and architects, at the department of labor and industry, Harrisburg, Pa., a few days ago.

The rules will govern new places only, regulations for those now being operated to be taken up later. Theaters seating up to 500 are recommended to be made as nearly fireproof as possible and all over 500 to be absolutely fireproof. Balconies are to be prohibited and a code for exits and side and rear courts according to capacity, commencing with those seating under 200 will be submitted. All theaters must be on the ground floor.

NEW INCORPORATIONS.

True Blue Slate Company, Easton, Pa.; $5,000; quarrying and manufacturing slate, slate products. Thomas D. Danner, John H. Danner, John I. Williams, all of Easton, Pa.

Alliance Structural Company, Alliance; structural steel and iron; $100,000. C. S. Sham, N. J. Hier, C. C. King, D. Kendall and F. A. Carter.

FOR SALE by all Dealers in Pittsburgh and Allegheny.

"Truss-Loop" Standard, weighing full 5 pounds to the square yard, is rigidly, which prevents sagging when spaced on 16" centers, while "Truss-Loop" Special XXX, No. 24, which weighs 8 pounds to the square yard, is successfully used 20°

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FACTORY PRICES

We furnish the highest grade bicycles it is possible to make at one small profit above actual factory cost. You save $10 to $25 middlemen's profit by buying direct from the manufacturers and wholesale and retail prices never made by any other machine at less money than any other factory. We are satisfied with $10.00 profit on the purchase price, at the wonderful low prices we make you this year. We do not think of selling a bicycle or a pair of tires at any price more than what you can have from anyone until you send for a pair of Hedgethorn Self-healing Tires A SAMPLE PAIR $8.00

NO TROUBLE FROM PUNCTURES

Nails, Tacks or Glass will not let the air out. A SAMPLE PAIR $8.00.

DESCRIPTION

Made in all sizes. It gives a very easy riding, very durable and lined inside with a special quality of rubber, which never becomes porous and which closes up small punctures without allowing air to escape. Their weight no more than an ordinary tire, the puncture resisting qualities being given by several layers of thin, specially prepared fabric on the tread. The regular price of these tires is $4.00 per pair, but for advertising purposes we are making a special factory price to the rider of only $3.80 per pair. All orders shipped same day letter is received. We will ship C.O.D. on approval. You do not need to pay a cent until you examine and find them strictly as represented.

We will allow a cash discount of $1 per case (thereby making the price $4.50 per pair) if you send us FULL CASH ORDER and enclose this advertisement. You run no risk of sending an order as the tires may be returned at OUR expense if for any reason they are not satisfactory or as new. We wish to have the manufacturer's guarantee behind your bicycle, so we allow a full cash discount to the agent and the retail dealer is made to pay a reasonable profit. You will be sure to make a good profit on the purchase price of $10.00 on the purchase price, at the wonderful low prices we make you this year. We do not think of selling a bicycle or a pair of tires at any price more than what you can have from anyone until you send for a pair of Hedgethorn Self-healing Tires A SAMPLE PAIR $8.00

IF YOU NEED TIRES

Do not use an old tire. Send us a sample pair, or write for our full list. The regular retail price of these tires is $8.00 per pair, but for advertising purposes we are making a special factory price to those who purchase in quantities of a dozen or more. We will ship C.O.D. on approval, but you do not need to pay a cent until you examine and find them strictly as represented.

We will allow a cash discount of $1 per case (thereby making the price $4.00 per pair) if you send us FULL CASH ORDER and enclose this advertisement. You run no risk of sending an order as the tires may be returned at OUR expense if for any reason they are not satisfactory or as new. We wish to have the manufacturer's guarantee behind your bicycle, so we allow a full cash discount to the agent and the retail dealer is made to pay a reasonable profit. You will be sure to make a good profit on the purchase price, at the wonderful low prices we make you this year. We do not think of selling a bicycle or a pair of tires at any price more than what you can have from anyone until you send for a pair of Hedgethorn Self-healing Tires A SAMPLE PAIR $8.00

COASTER BRAKES. Single wheels, imported roller chains and pedal, pads, repairs and equipment for all kinds at half the regular retail price.

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#### Architectural Terra Cotta
- Scott A. White, Pittsburgh. Warren & Fieser, Oliver Building, Pittsburgh.

#### Art and Stained Glass
- Marshall Art Glass Co., S. S., Box 120, Allegheny.
- Twin Art Glass Works, 110 Sandusky St., Pittsburgh.
- George Grundy, 905 Gerrett St., Pittsburgh.
- B. K. Elliott, Bessemer Building, Pittsburgh.

#### Asbestos Shingles
- Keeney & Mattison Company, Pittsburgh, Pa.

#### Automatic Elevators

#### Bank and Office Fixtures

#### Blue Print Paper
- B. K. Elliott, Bessemer Building, Pittsburgh.

#### Brick Contractors
- Staub, George H., Woodville Ave., Nineteenth Ward, Pittsburgh.
- W. H. knotew, 540 Weiser St., Northside, Pittsburgh, Pa.

#### Brick Jeker
- George Grundy, 906 Gerrett St., Pittsburgh.

#### Builders' Supplies
- Pittsburgh Wall Plaster Co., Wheeling, W. Va.

#### Contractors' Pumps

#### Cornice Work
- Loebach, Frank, 1724 Lowrie St., Northside, Pittsburgh, Pa.

#### Electrical Contractors
- Kilinger Mfg. C, East Liverpool, O.

#### Elevators and Dumb Waiters
- Marshall Brothers, South Twenty-First and Mary Sts., Pittsburgh.

#### Elevation Doors
- Lau & Hogan, Youngstown, O.

#### Electrical Contractors
- Kilinger Mfg. C, East Liverpool, O.

#### Electrical Contractors
- Kilinger Mfg. C, East Liverpool, O.

#### Elevators and Dumb Waiters
- Marshall Brothers, South Twenty-First and Mary Sts., Pittsburgh.

#### Expansion Metal
- Pinesread Materia L Co., Pittsburgh.
- Pittsburgh Hardwood Door Co., Pittsburgh.

#### Fireproof Doors and Partitions

#### Fire escapes

#### Furnaces, Stoves and Ranges
- Weisbeek-Brown Roofing Co., 1617 Beaver Ave.

#### Gravity Carriers

#### Hardwood Doors
- Pittsburgh Hardwood Door Co., Pittsburgh.

#### Hardwood Floors
- Bald, John M., Jenkins Arcade, Pittsburgh.
- Empire Flooring Co., Jenkins Arcade, Pittsburgh.

#### House Pumps

#### Heating (Hot Water-Steam)
- Stewart, George B., 6332 Penn Ave., East End, Pittsburgh.

#### Interior Trim

#### Interior Marble Work

#### Interior Mill Work
- Pittsburgh Hardwood Door Co., Pittsburgh.

#### Iron Roofing and Siding

#### Joist Hangers
- Lau & Hogan, Youngstown, O.

#### Light Iron Furring
- J. C. Baxendell, Mt. Oliver, Pittsburgh, Pa.

#### Lighting Fixtures

#### Lintel

#### Lumber (Retail)

#### Mill Work
- Pittsburgh Hardwood Door Co., Pittsburgh.

#### Mantels and Tiles
- Pittsburgh Hardwood Door Co., Pittsburgh.

#### Metal Lathe Construction
- J. C. Baxendell, Mt. Oliver, Pittsburgh, Pa.

#### Metal Doors
- Lau & Hogan, Youngstown, O.

#### Metal Lathe
- Bostwick Steel Lath Co., Niles, Ohio.

#### Metal Lath Construction
- Pittsburgh Hardwood Door Co., Pittsburgh.
MORTAR COLORS.

NON-STAINING CEMENT.

ORNAMENTAL IRON WORK.
Hann, Chas. G., 886 North Ave., N. S.
Lau & Hogan, Youngstown, O.
Blank, Herman, 5152 Coral St., E. E, Pittsburgh, Pa.

PLASTERING.
Trier Co., The W. S., Bessemer Bldg., Pittsburgh, Pa.
Vilsack, Martin Co., Ltd, 3226-30 Penn Ave., Pittsburgh.

PARQUET FLOORS.
Bald, John M., Jenkins Bldg., Pittsburgh, Pa.
Empire Flooring Co., Jenkins Arcade, Pittsburgh.

PLASTER BOARD.
McDade Company, Alex. The, 1212 Glen St., Wilkinsburg, Pa.

PRIVATE WATER SYSTEMS.
Downe Water Well Co., Jenkins Arcade, Pittsburgh, Pa.

RAGGLE BLOCK.

REINFORCING MATERIAL.
Wetherow Steel Co., Pittsburgh, Pa.

ROOFERS (TIN AND SLATE).
Blank, Herman, 5132 Coral St., E. E., Pittsburgh, Pa.
Helt, George F., 1915 Sedgwick St., N. S., Pittsburgh, Pa.
South Hills Hardware Co., West Liberty, Pittsburgh, Pa.

ROOFING—ASBESTOS SHINGLE.
ROOFERS (GRAVEL, SLATE AND TILE).
Hahn Brothers, Pittsburgh, Pa.
Hill Top Roofing Co., 354 Jiddle Alley, Mt. Oliver.
Limbach, Frank, 1214 Lawrie St., Northside, Pittsburgh.
Scott, A. White, Pittsburgh.
South Hills Hardware Co., West Liberty, Pittsburgh.

SPRAL WINDOWS.

SAND AND GRAVEL.
Kennedy, D. J. Co., 3060 Frankstown Ave., Pittsburgh.

SEWER PIPE.
Challis, D. W. & Son, Sewickley.
Haya, Ahron E., Sewickley.

SHEATHING—ASBESTOS.
Kessel & Mattison Co., Pittsburgh.

SHEET METAL WORK.
Kennedy, D. J. Co., 3060 Frankstown Ave., Pittsburgh.

SIDEWALK LIGHTS.
Lau & Hogan, Youngstown, O.
Mullen Brothers Company, Fulton building, Pittsburgh, Pa.

STAIR WORK.
H. C. Bemis, Bradford, Pa.
Hyde-Murphy Co., Ridgway, Pa.

STAIR BUILDERS.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL WORK.
Abbott, Ell, Builders Exchange, Pittsburgh.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL PAINTING.
Lau & Hogan, Youngstown, O.
Lau & Hogan, Youngstown, O.

SUSPENDED CEILINGS.
J. C. Buskett, Mt. Oliver, Pittsburgh.

TILE (DECORATIVE).

TREASIT METAL.

VAULT LIGHTS.
Lau & Hogan, Youngstown, O.
Mullen Brothers Company, Fulton Building, Pittsburgh, Pa.

VENTILATORS.

WALL BOARD.

WALL LINING.
Empire Flooring Co., Jenkins Arcade, Pittsburgh.

WALL PLASTER.

WALL PLUGS.

WALL TIES.

WAREHOUSE DOORS.

WATERPROOFING.
Ceresit Waterproofing Co., Chicago, Ill.
Kennedy, D. J. Co., 3060 Frankstown Ave., Pittsburgh.

WATER WELL PUMPS.

WATER WELL PUMPS.

WATERPROOF SASH.
Pittsburgh Hardwood Door Co., Pittsburgh.

WEATHER STRIPS.
Chamberlin Metal Weather Strip Co., Pittsburgh.

WIRE FABRICS.
Wetherow Steel Co., Pittsburgh, Pa.

WIRE GUARDS.
Harr, Chas. G., 116 North Ave., N. S.
Lau & Hogan, Youngstown, O.
Vilseck, Martin Co., Ltd., 1226-30 Penn Ave., Pittsburgh, Pa.
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Elevator Doors and Wire Goods.
The plans of the Jones & Laughlin Steel Company, Pittsburgh, to build a concrete dock wall on the Monongahela river extending from South Twenty-fifth street to the Monongahela Connecting Railroad bridge, have been approved by the War Department at Washington. This wall will be built in sections of 1,000 feet, and will be 24 feet wide at the base, four feet wide at top. It is uncertain when the work will be started.

**MATERIAL NEEDED FOR LARGE BUILDING.**

S. C. Watkins & Company, Clarksburg, W. Va., who intend building a two- and four-story brick and concrete produce house, 100x256 feet, are in the market for various building materials, which will consist of composition roofing, fireproof doors, metal lath, skylights, reinforcing bars, face brick, Portland cement, etc. The estimated cost of the building is $80,000.

**RIVER WALL AT BRADDOCK.**

The American Steel & Wire Company, Pittsburgh, intends building 1,140 feet of reinforced concrete wall along the Monongahela river at Braddock. This wall will be 39 feet high with a width of 16 feet at base, and three feet at top. The work will be done in sections of 250 feet. The plans of the work have been approved by the Water Department at Washington, and bids will be taken about May 15.

**START SCHOOL PLANS.**

Architects Mariott, Allen & Hall, Hayden-Clinton building, Columbus, O., have started plans for the proposed grade school building, for the Board of Education, Marion, O. The structure will be built of brick and concrete and will contain 10 rooms. Specifications will call for reinforced concrete floor and roof slab construction, concrete floor and roof slab construction, concrete foundations and footings, bar plaster and metal lath, cut stone, fireproof doors, etc. Bids on the work will be asked about May 15.

**HANDLING BUILDING MATERIAL.**

J. Willis Daizell, 713 House building, Pittsburgh, has just opened up headquarters to handle a complete line of builders' specialties, which will include the Dauchy Iron Works, Chicago, ornamental iron work; Ebsary Fireproofing & Gypsum Block Company, New York City, women's socks; Gorham & Company, New York City, bronze and brass work; Willis Manufacturing Company, Galesburg, Ill., hollow metal windows, and fireproof doors, and the United States Changeable Sign Company, directory boards.

**STORE AND THEATRE BUILDING FOR CLEVELAND.**

Plans are now being made by Architects Richardson & Yost, Rockefeller building, Cleveland, for a two-story brick, steel and reinforced fireproof building, 125x157 feet, to be used for theatre, store and office purposes. This building will be erected for the Doan Square Realty Company, Rockefeller building, and will be so designed as to permit the erection of additional stories later. The construction work will call for composition roofing, concrete foundations, composition or maple flooring, metal lath partitions, etc.

**COSTLY SCHOOL BUILDING FOR PITCAIRN.**

The Board of Education, Pitcairn, Pa., intends building a $100,000 high and grade school building from plans which are now being prepared by Architects Shollar & Hersh, Altoona, Pa. The building will be either two or three stories high, brick and reinforced concrete construction, and will contain auditorium, domestic science and manual training departments, gymnasium, offices, etc. The building specifications will call for composition roofing, tile floors, terrazzo floors, concrete foundations, face brick, steam heating system, electric lighting fixtures, vacuum cleaning system, etc.
Evolution in Commercial Blue Printing

Very few people are fully aware of the tremendous development that has taken place in commercial blue printing in the last few years. Even the architects, engineers, and trade in general have not been kept fully informed on these points. There are only a few commercial blue printing concerns in the country who have been progressive enough to install the latest improved machinery for this purpose.

It has been conceded that A. H. Mathias & Company, Pittsburgh, rank among the first in this respect, not only on account of their number and unexcelled up-to-the-minute improved machinery, but also for the reason that Mr. Mathias has made a specialty of blue printing for the last 22 years. Starting in this business in 1892, and being the first one to introduce brown print or sepia paper, in this country, for negative purposes to print from instead of the tracing.

There is a great difference in methods employed between a private blue print room and a commercial blue printing establishment. In the latter the highest importance must be attached to system, equipment, quick service, and most of all, blue prints. They are the result of years of experience with all other machines.

Tracings are fed upward past a bank of arc lamps and returned into the tracing tray at the operator's hand as he stands in front of machine. With nearly all other printers it is necessary for the operator to stoop down each time below the machine or go behind to pick up the tracing. By this new method much greater care is given the valuable tracings; long ones may be rolled up as they pass into the tracing tray.

With one of these machines one operator can easily turn out 100 lineal yards of finished blue prints per hour (printed, washed and dried) delivering the prints at the end of the drier automatically wound up in a loose roll ready for the trimmers and perfectly free from wrinkles or distortion. White prints or blue prints on cloth are printed, washed and dried with equal facility, without the usual distortion, and with much less shrinkage than when washed in tanks and dried by air or a hot box, the prints being washed on one side only, and on account of the constant clear spray of running water, the prints are more thoroughly washed and more evenly dried giving the finished prints a smooth ironed out effect.

It is entirely practical where a great quantity of work is to be done, to keep this type of machine all day in constant operation, as has been demonstrated time and again by this company.

Large firms doing their own printing have found it convenient at times to take advantage of these facilities when being rushed for work, not being able to do same on account of their limited facilities, and in some cases have given up their printing department entirely, as they have found they can have it done...
quicker, better and cheaper than they could do it themselves.

It has no doubt been frequently noticed by architects and engineers, that best results possible, have a complete coating department where they sensitize all their own paper for the use of their own printing departments only; coating it fresh every day to insure the best possible results; and by years of experimenting have perfected a special dark blue solution to prevent fading after being.

blue prints being exposed to strong daylight fade in color. Years ago when prints were made in flat frames and exposed to sunlight, this was not the case; in those days a very slow printing paper was used; but when printing by electric light became general, it created a demand for fast printing paper; but it has been found that all quick printing papers are subject to fading; besides not yielding as clear or white lines on prints or as deep a blue.

This firm, in order to obtain the very
Piers must be built of hard-burned brick laid in cement mortar, or of concrete. If bonds are used in brick piers they shall consist of perforated rolled steel plates, 1⁄8 of an inch thick. Each plate shall be full size of the pier, and shall be perforated by three 15/16-inch holes to each square foot area of the plate. No holes to be nearer than three inches to the outside edge. If capstones are used, they must be protected against fire by four inches of fireproofing. If a pier exceeds in height seven times its least dimension, it shall comply with the best practice in column design.

Columns.

Columns must be constructed of steel or reinforced concrete. If of structural steel they shall be protected by at least four inches of brickwork, with the space between the brick and metal solidly filled with mortar, concrete, or masonry; or by four inches of hard-burned terra cotta tile, with spaces between tile and metal solidly filled the same as for brickwork; or the columns may be surrounded by substantial steel reinforcement and this envelop solidly filled with concrete, and protected on the outside with two inches of concrete. The total thickness of the concrete protection shall not be less than four inches. If terra cotta is used, it will be secured by substantial interior anchors or by other equivalent method. All column protection shall make close connection to the floor construction at top and bottom.

No pipes, ducts or wires shall be placed within the area of the required fireproofing of columns or beams, and plater must not be considered a part of any required fireproofing.

In reinforced concrete columns, the metal shall be protected from fire by a minimum of two inches of concrete. The effective area of such columns will be taken as the area within the hooping. The corners of the columns must be beveled or rounded.

Stair, Elevator and Other Shafts.

Floors and roof construction in the terms of these specifications shall consist of a series of steel or reinforced concrete beams, with interposed arches or slabs of such material and construction as shall meet the requirements of the fire test previously specified. All structural members must be protected at all points by at least 1½ inches of fireproofing. All parts of the girders shall be protected by at least two inches, and of beams by at least 1½ inches of fireproofing, which shall be securely attached to the girders and beams by substantial steel reinforcement, or other suitable means of anchorage. Reinforcement used in floor slab or arch construction must be protected by at least one inch of fireproofing.

All structures above the roof must be of approved fire-resistive construction. Roof coverings also shall be of approved materials.

Stair, Elevator and Other Shafts.

When the walls of shafts are self-supporting, they are required to be built of hard-burned brick laid in cement mortar, or of concrete. The thickness shall be not less than eight inches. When shaft walls are supported in each story they may be of hard-burned brick, or terra cotta, eight inches thick. Terra cotta tile shall have three cells in its thickness, with shells and webs not less than 3/4-inch thick and all wall openings shall be reinforced by structural steel members securely attached to the floor construction above and below.

Brick and tile shall be set with flush joints of cement mortar. All such shafts...
must extend at last three feet above the roof.

Stairways and Smokeproof Towers.
All stairs, landings and openings shall have an unobstructed width, throughout, of at least 44 inches, except that hand rails may project not more than 3½ inches into such width on each side. There shall be not more than 12 feet verticallly between landings. Furthermore, all stair landings shall be large enough to permit openings of the doors without interfering with traffic within the enclosure. Suitable hand rails or banisters must be provided on each side of each flight of stairs. The treads and risers shall be uniform throughout, and the treads constructed and maintained in a manner to prevent persons from slipping. No winders are allowed.

All stairways shall extend to the street level, and open on the street, or to an unobstructed passageway affording safe egress to a street. Smokeproof towers do not communicate directly with the building on any floor. Entrance to these enclosures from floors above the street level shall be either from external balconies, or through ventilated enclosures entirely open to the outer air, and from floors below the street level through ventilated covered areaways or vestibules.

Banisters must be of substantial fire-resistive construction, with solid floors properly drained. The sides of open air staircases and balconies must be protected by sheet metal, or other suitable solid material, to a height of not less than three feet. One smokeproof tower may serve two buildings if the size of the enclosure and capacity of the stairway is adequate for the number of occupants to be accommodated.

All exits shall be provided with approved self-closing fire doors, arranged to open in the direction of the traffic toward the outside of building. The doors shall be equipped with hardware that can be operated in the direction of the exit, without the use of keys. The doors of smokeproof towers must have a panel of wired glass not more than one-third of the area of the doorway. All exits shall be properly and clearly marked both day and night.

All stairway enclosures, smokeproof towers, and passageways leading to the street shall be lighted by electricity, the current for same to be obtained from a source outside the building. A vent shall be provided over each stairway or elevator shaft equal in area to at least three-quarters of the horizontal area of the shaft, and be protected with approved incombustible skylights or side windows. Vent shafts shall be protected at the top by approved ventilating skylights or louvres.

All other openings in roofs or roof structures shall be provided with approved skylights, doors or windows.

Room, Hall and Fire Exit Partitions.
Partitions, if any, subdividing allowable areas, shall be not less than four inches thick of solid or hollow brick, four inches of two-cell terra cotta, four inches of hollow or 2½ inches solid metal lath and cement plaster, or other approved incombustible material and construction. All building shall be of steel, and the lath shall be of galvanized steel. Doors and windows in such partitions must be incombustible.

Protection of Exterior Wall Openings
All openings in fire walls shall be equipped with approved automatic fire doors on each side of the wall. If an opening in a fire wall is made to serve as an emergency exit, it shall not exceed 48 square feet; in area and a self-closing door shall be substituted for one of the automatic fire doors.

Interior openings to ventilating shafts shall be protected by approved automatic trap doors or shutters. Openings in stair, elevator and other shaft enclosures shall be protected by approved self-closing fire doors. All fire doors shall be mounted with approved wrought iron or steel hardware, and shall be securely attached to the wall or partition, or to approved frames anchored thereto. Interior windows in stair or elevator shafts are prohibited.

Belt openings, and chutes for merchandise or waste are prohibited unless completely enclosed in fireproof shafts and all openings protected by approved self-closing fire doors. Openings for power shafts shall be provided preferably to fit shaft nests in wall or floor.

Drainage.
Each floor shall be impervious to water, and arranged to drain away from floor openings, provision being made for discharging water at the rate of 300 gallons per minute per each 1,000 square feet of floor area. The lowest floor of the building shall be drained to a sump chamber, which is provided with adequate facilities for removing surplus water therefrom.

The room or rooms in which boilers and all power and operating machinery are located, shall be separated from other portions of the building by an eight-inch wall, having an approved fire door at each opening; and such rooms shall not have direct communication with the floor above. All boilers shall be separated from operating machinery by eight-inch walls, with approved fire doors at openings.

The installation of standpipe and sprinkler equipment shall conform to the requirements of the standards established by this association. All electrical equipment in the ideal building must be installed in accordance with the requirements of the National Electrical Code.

NEW INCORPORATIONS.
Dawson Manufacturing Company; window frames, etc.; Barnesboro; $5,000.
C. F. Dawson, M. F. Walters and William Fennill, of Barnesboro.
Waterford Hardware & Lumber Company; Waterford; hardware and lumber at wholesale and retail; $25,000. John Mummey, M. B. Pugh, A. E. Roberts, D. B. Snodgrass and Fred Ullman.
Pittsburgh.

Architects H. E. Kennedy Company, Home Trust building, has plans under way for remodelling a brick mercantile building for the Hilton Company, Fifth and Smithfield streets.

Plans are about completed by Architect J. J. Jones, Westinghouse building, for a brick store building, which will be erected for John J. Jones, 44 California avenue, Avalon. Cost $8000.

Architects Janssen & Abbott, Century building, are preparing plans for the erection of a brick residence, to cost $30,000, for Charles Dreyfus, 5007 Baum street.

Architects Carlisle & Sharrer, Jenkins Arcade building, will soon be ready for bids for erecting a residence for James McCready Brothers Company, Sixth avenue, Braddock, Pa.

The general contract for building a brick fireproof addition to the garage on Haun and Beatty streets, for the Winton Motor Car Company, has been let to W. B. Bennett, 742 Negley avenue. Cost $10,000.

Architect E. B. Lee, Peoples Bank building, has plans under way for the erection of a brick, steel and fireproof newspaper building, costing $100,000, to be constructed for the Pittsburgh Gazette Times Company.

The general contract has been awarded to D. A. Dyche, 503 Kirkwood avenue, for the erection of a brick veneer residence in Ardmore Farms, for H. J. Peterson, 209 Third avenue. Cost $6000.

The general contract has been awarded to James X. Gibson, Edgerton avenue, for the erection of a brick residence in Ardmore Farms, for II. L. Oliver, 541 California avenue, Avalon. Cost $3,000.

Architect H. E. Kennedy, Home Trust building, is preparing plans for the erection of a brick fireproof restaurant on Diamond street for Harry Davis Enterprise Company, Farmers Bank building. Cost $10,000.

An architect is to be selected soon to prepare plans for a brick and terra cotta store building, costing $10,000, to be erected on Wood street for William Grabowsky, 707 Penn avenue.

The general contract has been awarded to Brown Brothers, Dormont, to build a frame church and parish addition and alterations at Castle Shannon, for the St. Ann's R. C. Congregation. Cost $20,000.

The general contract has been awarded to J. C. Fullman, East End Trust building, to build 18 residences, three blocks, for the Vilsack Estate. The buildings will be of brick construction.

Golden & Crick, Fifth avenue, have received the general contract to build a brick and steel factory building, costing $25,000, for the United Oil Company, Adams street, Northside.

Plans are being prepared by Architect H. E. Kennedy, Home Trust building, for the erection of a stone parish house on Howe and Aiken streets, for the First Methodist Protestant Congregation. Cost $15,000.

The general contract has been let to D. T. Rife, Kenman building, for the erection of a brick and steel fireproof addition to the boiler house of the Duquesne Light Company, Brucemont Island. The structural steel contract was awarded to the McClintic-Marshall Construction Company and the foundation to the Duquesne Contracting Company.

Architect W. N. Zortman, Bessemer building, has plans about completed for the erection of a $1,000,000 brick veneer residence near Ema, for George B. Simpson, 116 Elizabeth street, Millvale.

The general contract has been awarded to A. Friedrich & Sons, East street, Northside, to build a frame bungalow for William P. Wetzel, 238 Greentree avenue, Northside.

Architect John P. Brennan, Old City Hall, Northside, has plans about completed for the Soho Bath Settlement House, Fifth avenue, for the City of Pittsburgh. Cost $6,000.

Architect Walker S. Cohen, Oliver building, is taking bids until May 4 for the erection of a brick veneer residence costing $7,000, to be built for Robert Lewin, 14 Smithfield street.

Architect John P. Brennan, Old City Hall, Northside, has plans completed for the erection of a brick fireproof insane asylum addition at Marshalla, for the City of Pittsburgh. Cost $146,000.

A. Alberth, 106 Wary street, Carrick, has been awarded the general contract to build a frame and shingle residence for private parties on Brownsville road, Mt. Oliver. Cost $3,000.

Architects Janssen & Abbott, Century building, are taking bids for the erection of a brick, stone and cement plaster residence addition and alterations for H. Wilfred Du Puy, Empire building. Cost $25,000.


A. Hausold, 410 Federal street, Northside, will take bids about May 16 on a $15,000 brick residence and garage which he contemplates building on Dickson avenue.

A. E. Klein, 44 Southern avenue, Mt. Oliver, has been awarded the contract to build a $1,500 frame residence in Carrick for Agnes Fisher, Spring street, St. Clair borough.

S. A. Hamel, Giffen avenue, Carrick, has been awarded the contract to build a three-story brick apartment building, on Brownsville avenue, Carrick, for Edward J. Bonner. The work will cost $15,000.

Enzien & Zemler, 802 Madison avenue, Northside, were the low bidders for building the two-story and basement school building, for the Board of Education of McKees Rocks. The building will measure 68x133 feet, and will cost $55,000. Plans were made by Architect J. M. Phillips, McKees Rocks.

Bids will soon close for making alterations to the store building of the I. S. Harris Company, 713 Liberty avenue.
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PITTSBURGH, PENN.
Altoona, Pa.—Architect D. G. Puder, * Apartments and Dwellings. The work will consist of new store and the general contract to build a brick building, will start plans soon for a brick residence, for Howard McCarty, Construction Company has been awarding for remodeling a building on South avenue, Wilkinsburg, for Messrs. Newell & Wills, Berger building. Bids will be taken at once.

Architect Thomas Hannah, Keenan building, will take bids at once on building a two-story brick fireproof garage 28x43 feet, to be built on Bayard and Neville streets, for Mrs. W. S. Mackintosh 423 Ellsworth avenue.

William H. Woodward, Kenwood avenue, Northside, was awarded the contract to build a 2 1/2-story stone veneer building at S. Eighty-second avenue, near Lincoln avenue, for A. A. & K. W. Kreener, East End Trust building.

Architect Julian Millard, Hutchison building, Altoona, will start plans for a brick residence to be built for Dr. W. R. Palmer, Allegheny street. Cost $5,000.

Homestead, Pa.—Architects Wolfe & Combrung are preparing new plans for a brick veneer residence, to be erected for Mrs. E. Kennedy, Muncy.

Lancaster, O.—W. F. Corsi will take bids soon on an $8,000 brick residence, which he will have erected.

Sales, O.—Architect A. Cameron, Laundry street, is preparing sketches for a frame residence, to be erected for Dr. Hawkins. Cost, $4,500.

Wheeling, W. Va.—The general contract has been awarded to A. B. Tothoff, Pleasant Valley, Wheeling, to build a frame apartment building, costing $14,000, for Jacob Sentlinger, Jr. The masonry contract has been let to Mr. Griswell, Martins Ferry, O.

Turtle Creek, Pa.—Architect A. K. Miller, 804 Penn avenue, Pittsburgh, is preparing new plans for the erection of a $4,000 gray brick residence for Wesley M. Hale, Penn avenue, Wilkinsburg.

Woodlawn, Pa.—Plans are being prepared by Architects Alden & Harlow, Farmers Bank building, Pittsburgh, for building two brick residences for the Woodlawn Land Company. The buildings will cost $10,000 each.


Cleveland, O.—Architects Fulton & Taylor, Permanent building, are taking bids on the erection of a brick building, costing $15,000, for J. C. McClure, 915 James avenue.

Findlay, O.—Architects McLaughlin & Hinshen, Central building, Lima, O., are preparing plans for the erection of a brick and stucco residence, for M. Cook. Cost $10,000.

Lima, O.—Preliminary plans are being prepared by Architect Andrew De Carli, Opera House building, for the erection of two brick apartment buildings, for E. C. Bell, costing $10,000 each.

Architects McLaughlin & Hinshen, Central building, are preparing plans for the erection of a brick residence, costing $4,000, to be built for M. M. Kelner.

Sharon, Pa.—Architects Colton & Himan, 627 Kirk street, Syracuse, N. Y., have plans completed for the erection of a $14,000 frame residence, to be built for R. S. Heilman.

Akron, O.—Architect F. W. Hagloch, Flat Iron building, will take bids about April 29 on the erection of a brick and hollow tile bungalow, to be built for George J. Reamer, 247 N. Forge street. Cost $4,000.

Freepor, Pa.—The general contract has been awarded to J. G. Rogers, for a $6,000 apartment building for H. S. Moore. The building will be of brick mill construction.

Clarksburg, W. Va.—Architect S. W. Ford, Union Bank building, will take bids about May 15 on the erection of a brick and terra cotta tile residence for Haze Morgan. Cost $13,000.

Columbus, O.—Plans are being prepared by Architects Dawson & Holbook, Outlook building, for the erection of a $3,000 brick residence for John R. Roberts, N. High street. Cost $7,500.

Architect Monroe Heath Blake, 120 Highland avenue, has plans completed for the erection of a brick and stucco on metal lath, residence and garage, for Dr. McKendree Smith, Arlington avenue, Grandview Heights. Cost, $10,000.
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Bids will be taken on the erection of a brick and shingle residence for S. Decklbaum, E. Thirty-fourth street, received the contract to build a three-story brick apartment building for Charles Young. Second avenue. Cost $5,500.

The general contract for the erection of a brick and frame double residence, for Joseph Lachute, 66 Broadway avenue, is taking bids on a brick and shingle residence. Cost $5,500.

The general contract has been awarded to J. E. Berry, Hunt­ton, W. Va., to build a brick residence on Ontario street, for Michal Biula. Plans were made by Architect J. A. Lohman.

THE CONSTRUCTION RECORD

Business Buildings.

Akron, O. — The Akron Storage & Contracting Company has been awarded the general contract to build a brick mill constructed warehouse, for Meyers & Crummel, near Ohio Land Company. Cost $15,000.

Architect F. W. Hagloch, Flat Iron building, is preparing sketches for brick and hollow tile store and office building, to be erected for George J. Renner. Cost $9,000.

Beaver Falls, Pa. — Frank Garvin received the general contract to build a brick store and apartment building, for Vincent Sakrada. Cost $12,000.

Brackenridge, Pa. — John Cutshall, Tarentum, Pa., is preparing plans for a brick store, office and theatre building, to be built for N. Herrsokvitz, Cherry street. Cost $15,000.

Cuyahoga Falls, O. — Bids will be taken until the 10th inst. for constructing a two-story brick veneer double residence on Third street, for Mrs. Flora J. Burns. Plans were made by Architect G. W. Bovey, Sixth street.

Edgeworth, Pa. — Plans which are being prepared by Architects Allen & Harlow, Farmers Bank building, Pittsburgh, for the erection of a brick residence for Richard Jennings, Oakland Place, Sewickley, will be completed shortly and bids taken. Cost $30,000.

Middletown, O. — Architect C. J. Williams, 52 Davis building, Dayton, is ready for bids on the erection of a brick and stucco residence for M. W. Remnick. Cost $8,500.

New Kensington, Pa. — Lloyd Snyder is taking bids on a brick and stucco bungalow which he is contemplating erecting having erected. Cost $5,500.

The general contract has been awarded to William Ishman & Company, for the erection of a $4,000 brick residence for Mrs. P. Martin, 729 Fifth avenue. Cost $1,000.

Architect W. J. Laughlin is writing specifications for a frame residence to be erected for Otto Kaisen. Cost $4,000.

Springfield, O. — Architect William F. Miller, Kelly building, is preparing sketches for the erection of a frame bungalow, costing $10,000, for Ray H. Leason.

Cleveland, O. — Architect A. E. Keller, 126 Lakeview road, is preparing plans for the erection of a brick and frame double residence, for Joseph Lachute, 652 Broadway avenue. Cost $6,000.

New Kensington, Pa. — The general contract was awarded to W. S. McLaughlin, Fifth avenue, for the erection of a frame apartment building for Charles Young. Second avenue. Cost $3,500.

W. S. McLaughlin, Fifth avenue, received the general contract to build a brick veneer residence for H. C. Walling. Cost $5,000.

Lima, O. — The Granat-Darstein Company are contemplating the erection of a brick, cement and steel fireproof automobile factory addition.

Rochester, Pa. — Anderson & Cook, Beaver Falls, were the low bidders for building a two-story brick residence for Frank Woodruff. Cost $12,000.

Beaver Pa. — R. D. Hunter, Beaver, was awarded the contract to build a two-story brick residence for J. O. Hamilton. No sub-contracts have been awarded.

The general contract for the erection of a brick and frame building, is preparing sketches for brick and frame building on Third avenue, for Joseph Lachute. Cost $4,000.

Cuyahoga Falls, O. — Bids will be taken until the 20th inst. by Architect A. Sharowsky, 4005 Woodlawn avenue, for the erection of three brick apartment buildings for S. Decklbaum, E. Thirty-third street. Cost $9,000 each.

Architect A. Sharowsky, 4005 Woodlawn avenue, has plans completed for the erection of a $6,000 frame apartment building for Louis Zalkin, E. Thirty-third street.

Architect George Rudolph, 3217 Woodland avenue, has plans completed for the erection of a brick and frame residence for Mr. A. S. Gaedel, 2936 Woodhill road. Cost $7,000.

Architect George Rudolph, 3217 Woodland avenue, has plans completed for the erection of a brick and frame residence for Mr. A. S. Gaedel, 2936 Woodhill road. Cost $7,000.

Architect A. Sharowsky, 4005 Woodlawn avenue, has plans completed for the erection of an $8,000 frame apartment building for Louis Zalkin, E. Thirty-third street.

Edgeworth, Pa. — Plans which are being prepared by Architects Allen & Harlow, Farmers Bank building, Pittsburgh, for the erection of a brick residence for Richard Jennings, Lincoln Place, Sewickley, will be completed shortly and bids taken. Cost $30,000.

Marietta, O. — Levi Cowell, Second street, received the contract to build a stucco and stucco residence for E. H. Penninghaus. Cost $1,000.

Middletown, O. — Architect C. J. Williams, 52 Davis building, Dayton, is ready for bids on the erection of a brick and stucco residence for M. W. Remnick. Cost $8,500.

New Kensington, Pa. — Lloyd Snyder is taking bids on a brick and stucco bungalow which he is contemplating erecting having erected. Cost $5,500.

The general contract has been awarded to William Ishman & Company, for the erection of a $4,000 brick residence for Mrs. P. Martin, 729 Fifth avenue. Cost $1,000.

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Springfield, O. — Architect William F. Miller, Kelly building, is preparing sketches for the erection of a frame bungalow, costing $10,000, for Ray H. Leason.
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tion of a brick fireproof store and loft building. Cost $20,000.

Frank Andress, Eleventh avenue, has private plans for the erection of a brick cold storage plant on Thirtieth and Ninth streets. Cost $15,000.

Silverman Brothers, 1908 Eleventh avenue, are contemplating the erection of a brick and steel fireproof store, office and theatre building on Eleventh avenue. Cost $90,000.

Clarksburg, W. Va.—Architect S. W. Gord, Union Bank building, is preparing plans for the erection of a brick store and apartment building for C. E. Prunty. Cost $25,000.

Sidney, O.—Architect H. L. Loudon-buck, First National Bank, is revising the plans for a dry goods store for N. C. Deweese & Son, on which bids will be taken about May 8.

Springfield, O.—A Bentley & Sons Company, Toledo, O., received the general contract to build a reinforced concrete brick fireproof storage building, costing $30,000, for the Wagner Transfer & Storage Company.

Toledo, O.—A Bentley & Sons Company received the general contract to use the reinforced concrete brick fireproof storage building for the Dime Savings Bank Company, Cost $50,000.

Youngstown, O.—Architects D. H. Burnham & Company, 80 E. Jackson boulevard, Chicago, has plans completed for the erection of a brick and stone building for the Farmers Bank of Verona.

Youngstown, O.—Architects D. H. Burnham & Company, 80 E. Jackson boulevard, Chicago, has plans completed for the erection of a brick, steel, concrete, fireproof general office building for the Youngstown Sheet & Tube Company. Cost $50,000.

Architect C. F. Owlesley, Mahoning Bank building, has plans ready for the erection of a brick, steel, concrete fireproof laboratory building for the Youngstown Sheet & Tube Company. Cost $50,000.


Akron, O.—Architect M. C. Peck, Second National Bank building, has plans under way for the erection of a brick and stone mission building, for the Johnson Street Reformed Congregation. Cost $60,000.

Dayton, O.—Architect Joseph C. Stein Kamp & Brothers, 414 Walnut street, Cincinnati, is revising plans for the brick and concrete parochial school building, for the St. Mary's Roman Catholic Congregation. Cost $40,000.

Rawson, O.—Architect B. F. Mathews, Opera House building, Lima, will take bids about May 15 for the erection of a brick church for the Methodist Episcopal Congregation, of Rawson. Cost $15,000.

Athens, O.—Architect E. E. Pratt, Hartman building, Columbus, has plans completed for a $40,000 brick and stone church, to be built for the Church of Christ.

Chillicothe, O.—Architect John Schweitzer, Court House, has about completed plans for the erection of a brick church, costing about $10,000, for the High Street United Brethren Church.

Cincinnati, O.—The general contract was awarded to Harry Dunhoff, Oliver C. W. Schneider, Linwood avenue, was the low bidder on the erection of a brick and concrete heifer house, and milking house, to be built for the Standard Oil Company. Cost $37,000.

Connelsville, Pa.—The Connellsville Construction Company received the general contract to build the brick and tile store and office building for Florence Smuzt, W. Main street. Cost $12,000.

Plemington, W. Va.—Plans are being prepared by Architect J. Sidley, Main street, Grafton, W. Va., for the erection of a brick and concrete fireproof bank and office building for the Bank of Plemington. Cost $16,000.

Jeanette, Pa.—The general contract has been awarded to Edwin K. Snively, Greensburg, for the erection of a warehouse for Shuster & Gormly, Fourth street. The building will be of brick, fireproof construction and cost $10,000.

Mansfield, O.—John C. Kemble, E. Parker street, received the general contract to build a brick fireproof addition to the business building on Walnut street belonging to the Bird Estate. Cost $25,000.

Toledo, O.—The general contract has been awarded to G. H. Kindler, 320 Field street, to build a brick store and apartment building, costing $8,000, for Edward Hassman, Erie street.

Wooster, O.—Architects Dawson & Hollbrook, Outlook building, are preparing plans for the erection of a brick and concrete creamery experimental building, to cost $12,000, for the Ohio Experimental Station, for the Ohio State Board of Agriculture.

Akron, O.—Architects Gary & Golton are revising the plans for a dry cleaning plant, which the Read-Benzen Company contemplates erecting. The building will be of brick and steel construction and cost $10,000.


Sidney, O.—Architects McLaughlin & Hulseon, Central building, Lima, have preliminary plans under way for the erection of a reinforced concrete and terra cotta department store, to be built for the Martin Bakery Company, on E. Thirtieth street. Cost $40,000.

Du Bois, Pa.—Work will be started at once on the interior alterations on the Deposit National Bank building, on Main street. The rough work including the building of the vault has been awarded to Clyde Hatten.

Akron, O.—The general contract has been awarded to F. Griffin, Lincoln street, Kent, for the erection of a brick business building for L. F. Loomis and Merrill Whitehead. Cost $7,500.

Cincinnati, O.—Plans are being prepared by Architect John Graham, Woodward avenue, Highland Park, Mich., for the erection of a terra cotta fireproof sales room and assembly plant for the Ford Motor Car Company.

Clarksburg, W. Va.—Architect S. W. Ford, Union Bank building, will take bids at once on building a seven-story store and office building on Main street, for C. E. Prunty. The building will measure 40x95 feet and cost $55,000.

Altoona, Pa.—J. K. Isenberg, Fourth avenue, will take sub-bids for building a three-story brick store and apartment building for the John O'Toole Heirs. Work will be started at once.

Religious.

A Akron, O.—Architect M. C. Peck, Second National Bank building, has plans under way for the erection of a brick and stone mission building, for the Johnson Street Reformed Congregation. Cost $60,000.

Dayton, O.—Architect Joseph G. Stein Kamp & Brothers, 414 Walnut street, Cincinnati, is revising plans for the brick and concrete parochial school building, for the St. Mary's Roman Catholic Congregation. Cost $40,000.

Rawson, O.—Architect B. F. Mathews, Opera House building, Lima, will take bids about May 15 for the erection of a brick church for the Methodist Episcopal Congregation, of Rawson. Cost $15,000.

Athens, O.—Architect E. E. Pratt, Hartman building, Columbus, has plans completed for a $40,000 brick and stone church, to be built for the Church of Christ.

Chillicothe, O.—Architect John Schweitzer, Court House, has about completed plans for the erection of a brick church, costing about $10,000, for the High Street United Brethren Church.

Cincinnati, O.—The general contract was awarded to Harry Dunhoff, Oliver
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Chase, Florida, March 28th, 1914.

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Covington, Ky., for the erection of a brick fireproof addition, to the convent and academy belonging to the St. Ursula's Convent. Cost $25,000.

Columbus, O.—Architect Wilbur T. Mills, McCune building, has plans in progress for the erection of a brick church, costing $10,000, for the St. Paul's Evangelical Congregation.

Gallitzin, Pa.—Architect D. G. Puderbaugh, Hutchinson building, Altoona, has plans in progress for the erection of a brick semi-fireproof parochial school for the St. Mary's Roman Catholic Congregation. Cost $20,000.

Christian Church. Cost $12,000.

Craig street, Pittsburgh, for the erection of a brick, semi-fireproof parochial school for the St. Philip's Roman Catholic Congregation. Cost $60,000.

Erbaugh, Hutchinson building, Altoona, has plans in preparation for the erection of a brick and stone church and Sunday school room, for the Mentor Christian Church. Cost $12,000.

Columbus, O.—Preliminary plans are being prepared by Architects Stribling & Lunn, 540 Ewing Park building, for the erection of a brick, mill construction addition to the Neil Avenue M. E. Church. Cost $15,000.

Crafton, Pa.—Plans are being prepared by Architect A. E. Link, 407 N. Craig street, Pittsburgh, for the erection of a brick, fireproof parochial school for the St. Philips Roman Catholic Congregation. Cost $60,000.

Morgantown, W. Va.—Architect Elmer P. Jacobs, Fleming building, has plans under way for the erection of a brick church, stone trimming, for the Jones Methodist Episcopal Church. Cost $5,000.

Richfield Center, O.—General contractors, the Percentum Company, Nicholas building, Toledo, O., are taking bids on the erection of a brick, steel and reinforced concrete parochial school and chapel, for the St. Elizabeth's Roman Catholic Congregation. Cost $25,000.

Sharpsville, Pa.—Architects Carlisle & Sharer, Jeaneal Arcade building, have plans completed for the erection of a brick addition to the First Baptist Church. Cost $6,000.

St. Mary's, O.—Plans are being prepared by Architect A. D. Curtiss, Lima, O., for the erection of a brick and stone church, for the St. Paul's Reformed Congregation. Cost $30,000.

Toldeo, O.—Architects Walter Beelmon & Schrieber, Nicholas building, are preparing plans for the erection of a brick and stone church and Sunday School for the Zion Evangelical Church on Detroit avenue.

Zanesville, O.—Architect A. A. Honeywell, Kokomo, Ind., is revising plans for the erection of a brick and stone, probably semi-fireproof construction, church and Sunday school, for the Park Street M. E. Church of Christ. Cost $20,000.

Warren, Pa.—The general contract was awarded to the Warren Construction Company, Jamestown, N. Y., to build a brick church for the Pentecostal Nazarene Congregation. Cost $120,000.

Akron, O.—Charles Connell, 321 N. Howard street, has been awarded the general contract to build a frame church building for the Polish Catholic Congregation. Cost $10,000.

Cincinnati, O.—Architect Alfred Grindle, Central avenue, Indianapolis, Ind., has plans under way for the erection of a brick and stone parish house for the Episcopal Mission of the Redeemer.

Cleveland, O.—Mauer & Mills, School building, have been selected architects to prepare plans for a brick church, which will be erected for the First Church. Cost $25,000.

Sharon, Pa.—Troostman & Christian have been awarded the general contract to build a $5,000 brick viceroy parsonage for the St. Adelbert's Rectory.

Erie, Pa.—Plans are nearly completed by Architect W. P. Ginther, Everett building, Akron, O., for the erection of a brick and tile parish house, costing $35,000, for the St. Patrick's Roman Catholic church.

Lorain, O.—Architect W. P. Ginther, Everett building, Akron, has plans nearly completed for the erection of a brick and stone trim church for the Church of the Nativity Roman Catholic Congregation. Cost $54,000.

St. Marys, O.—Architect A. De Curtins, Opera House building, Lima, will be ready for bids about May 10 on the erection of a $30,000 brick and stone church building for the St. Paul's Reformed Church.

Akron, O.—Architects Fichter & Brooks, Second National Bank building, have plans for a one-story brick and stone trim church building, 45x65 feet, for the Independent Branch Christian Missionary Alliance. Cost $120,000.

**Educational.**

Alliance, O.—The Board of Education Alliance, O., and Architect Frank L. Packard, Hayden building, Columbus, are taking bids on the erection of a brick, concrete fireproof addition to the grade school building. The addition will include an assembly hall, recreation rooms, domestic and manual training rooms, domestic and general training rooms, and a new gymnasium. Cost $41,000.

Marion, O.—Architects Mariott, Allen & Hall, Hayden-Clinton building, Columbus, are making plans for the erection of a grade school building for the Board of Education. The building will be of brick and concrete, fireproof construction, and cost about $90,000.

Martinsburg, W. Va.—Architect J. W. Wolfs, Waynesboro, Pa., has plans completed for the erection of a brick school building, for the Roman Catholic Congregation. Cost $150,000. S. A. Westenhaver will probably be awarded the contract.

Phillipsburg, Pa.—Steinheil Sons, Lewiston, Pa., was the low bidder on the...
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erection of a high and grade school building for the Board of Education. The building will be of brick, semi-fireproof construction and cost $25,000.

Pitcairn, Pa. — Architects Shollar & Hersh, Altoona Trust building, Altoona, have plans under way for the erection of a high and grade school building for the Board of Education. The building will be of brick, reinforced concrete fireproof construction and cost $100,000.

Rossville, O. — Taylor & Showers, Crooksville, O., have been awarded the general contract to build a brick, fireproof, high school building for the Board of Education. Cost $25,000.

Berea, O. — Plans are being prepared by the National Engineering Company, for the erection of a brick school building for the Board of Education. Cost $6,000.

Mansfield, O. — J. C. DeLute, Toledo, O., was the first low bidder on the erection of a brick stone and concrete addition, to be built for the Board of Education. Cost $25,000.

Marion, O. — Architects Marriott, Allen & Hall, Hayden-Clinton bank building, Columbus, have started plans for the erection of a $40,000 brick and concrete grade school building, for the Board of Education.

Berlin, Pa. — The general contract has been awarded to Samuel G. Boucher, Somerset, Pa., to build a grade and high school building, for the Board of Education. The building will be of solid brick construction, and cost $30,000.

Grafton, W. Va. — Frank L. Packard, Hayden building, Columbus, O., has bid $10 per day for plans for the erection of a high school building for the Board of Education. The building will be of brick construction and cost $60,000.

Strasburg, O. — The general contract has been awarded to Wilson & Winters, Knoxville, O., for the erection of a $40,000 brick and concrete high and grade school building, for the Board of Education.

Akron, O. — Bids which were being taken by the Board of Education for the erection of a brick and stone fireproof school building, were rejected and plans are in abeyance until after September. The building will cost about $75,000.

Branch Hill, O. — Plans are being prepared by Architects Robertson & Fahnline, Gardner-Dunlap, Cincinnati, for the erection of a $15,000 pressed brick public grade school building, for the Board of Education.

Columbus, O. — The Board of Education will select a site soon for the erection of a $500,000 high school building.
THE CONSTRUCTION RECORD

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Is just as much of an innovation—economically—as the Gas Range, the Welsbach Mantle or Tungsten Lamp in Cooking and Lighting.
It effects a saving of 20 to 30 per cent in gas bills. Costs less than a coal boiler of equal rating. Ask for descriptive catalogue.

Heating Engineers Supply Company
Telephone Court 1453. 421 Wood Street, Pittsburgh.
dale, Pa., was the low bidder on the erection of a concrete storage dam for the Boro of Springdale. Cost $10,000.

Urbana, O.—Cooke & Cooke, Clintonville, Columbus, have been awarded the general contract for the construction of a sewage disposal plant for the City of Urbana. Cost $37,017.15.

Tyrone, Pa.—County Engineer H. G. Hinkle, Central Trust building, Altoona, has plans under way for the rehoofing of the Twelfth street bridge for the Blair County Commissioners. The work consists of two spans, 156x16 feet, new beams, and creosote block floor.

Hollidaysburg, Pa.—The Blair County Commissioners will take bids next week on rehoofing bridges at Loop Station, McCune Mills and Tyrone, also for sidewalk construction on a Tyrone bridge. Creosote wood blocks will be used.

Society and Club Buildings.

Ford City, Pa. — No architect has been selected to prepare the plans for a lodge building which the Eagles’ Lodge is contemplating having erected. It will be of brick construction and cost $10,000.

New Philadelphia, O. — Architects Langdon & Hohly, Nicholas building, Toledo, are preparing plans for the erection of a brick lodge building for the Masonic Lodge. Cost $20,000.

Erie, Pa. — Architect W. H. Zawadski, Fillmore avenue, Buffalo, N.Y., is preparing sketches for the erection of a brick fireproof club house, for the Polish Falcons, of Erie. Cost $24,000.

Findlay, O. — Plans are being prepared by Architects McLaughlin & Helken, Lima, O., for the erection of an Elks’ house on East Hardin street, for the B. P. O. E. Findlay Lodge. The building will be of brick and stone construction, and cost $60,000.

Elyria, O. — Paul Rissman has been selected architect to prepare plans for the erection of a brick fireproof club house, costing $25,000, to be built for the Elyria Eagles’ Club.

Freeport, Pa. — The Old Fellow’s Lodge is taking bids on the erection of a brick and tile store and lodge building on Fifth avenue. Cost $8,500. J. E. Meyers will probably be awarded the general contract without competition.

St. Mary’s, Pa. — Architect A. P. Mount & Son, Cerry, Pa., is taking bids on the erection of a $25,000 brick lodge building for the P. P. O. E. Lodge.

Cincinnati, O. — The trustees of the Y. M. C. A. have selected a site at 626-641 W. Ninth street, on which to build their new building, which is to cost about $100,000. No architect selected.

Theatres.

Columbus, O. — Dawson & Holbrook, Outlook building, have been selected architects to prepare the plans for the erection of a theatre, store and office building remodel, for W. J. & W. J. Dussenburg, Main and High streets. The work will cost $18,000 and consists of new plays and the building to be of stucco on hollow tile, stone, fireproof interior remodel, new entrance, etc.

Marion, O. — Architect J. Lewis Ellis, Ackerman building, has started plans for a theatre building, remodeling from a store building on N. Center street. The work will be of brick semi-fireproof construction and cost $18,000.

Akron, O. — Architect Fred W. Haggloch, Flat iron building, has plans almost completed for the erection of a brick fireproof vaudeville theatre, for the Akron Theatre Company. The building will cost $60,000 and contain the theatre and two store rooms.

Ford City, Pa. — Architect C. H. Bailey, Fourth avenue, has plans under way for the erection of a brick opera house for Harvey Lifelman. Cost $8,000.

Wellington, O. — The general contract has been awarded to E. W. Phillips for the erection of a moving picture theatre, brick construction, for Garrett Brothers.

New Kensington, Pa. — Architect W. J. Langhlin, New Kensington, has completed plans for a brick or cement block fireproof theatre building, 35x115 feet, to be constructed for C. E. Kingensmith. Bids will be taken as soon as the plans are approved by State officials.

Miscellaneous.

Lima, O. — The general contract has been awarded to Smith & Sherrick to build a brick public garage for J. C. Thompson, 513 Opera House building.

Cleveland, O. — The Burrell Engineering Company, Chamber of Commerce, Cleveland, has plans under way for the erection of a grain elevator and storage, costing $40,000, for the Standard Cereal Company. The work will be of brick and reinforced concrete.

Blair County, Pa. — Engineer H. H. Quinn, Altoona Trust building, Altoona, has plans under way for the construction of a street railroad for the Wossmanack Railroad Company, Altoona. Cost $90,000.

Springfield, O. — Architect Frank L. Packard, 16 E. Broad street, Columbus, has plans under way for the erection of a brick, reinforced concrete, fireproof building, costing $275,000, for the Clarke County Memorial Building Committee.

Cleveland, O. — The Greenwood Construction & Supply Company, Pittsburgh, was awarded the refrigeration contract for the new cold storage system, to be built for the City of Cleveland. The concrete work will be done by C. N. Griffin, Carnegie avenue, Cleveland.
THE GARBER-EDER COMPANY
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Concrete Foundations, Steel Erection.

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THE CONSTRUCTION RECORD
Liens Filed for Labor and Material Furnished.

Allegheny County, Pa.


NO LIEN CONTRACTS.


James Rachel vs. Francesco Liberatore.

Allegheny County, Pa.

in Fourteenth ward. Price not given.

$72,975.

Liens Filed for Labor and Material Furnished.

THE CONSTRUCTION RECORD

Lighting Fixtures.


Weldon & Kelly, Pittsburgh, received contract for duplex residence, Dormont, Owner, Dr. Grant J. A. Neely, Pittsburgh.

Enterprise Electric Construction & Picture Company, Cleveland, Ohio, received contract for building, Cleveland. Owners, Henry and Felix Guenther, Cleveland.

Heating.

William H. Contlin, Columbus, Ohio, received contract for physical building, repair and addition, Columbus. Owner, Board of Trustees of Ohio State University, Columbus.


Iron Work.

C. G. Henry, North avenue, Northside, Pittsburgh, received contract for the miscellaneous iron work in the department store, Pittsburgh. Owner, Rosenbaum Company, Pittsburgh.

Marble and Tile Work.

The Norcross Company, Cleveland, Ohio, received contract for marble work on store building, Cleveland. Owners, Henry & Felix Guenther, Cleveland.

The Eric Mantel & Tile Company, Eric, received contract for repair work in the Reed House, Erie.

Clarence F. Collins Company, Cleveland, received contract for bathroom and partition, Cleveland. Owner, Citizens of Cleveland.

Akron Hardwood Floor Company, Akron, Ohio, received contract for tile work in residence alteration and addition, Akron, O. Owner, W. W. Litchfield, Akron.

The Eric Mantel & Tile Company, Eric, received contract for the Brin Brin Orphans, Fairview, Pa.

Mill Work.


The Marion Lumber Company, Marion, Ohio, received contract for trimming garage, stores, live-in stable and apartments, Marion. Owner, J. J. Homan, Marion.

Massillon Lumber Company, Massillon, O., received contract for residence, Massillon. Owner, Felix Shepley, Massillon.

Bennett Lumber Company, Pittsburgh, Pa., received contract for store building, Pittsburgh. Owner, O'Leary Estate, Pittsburgh.

Mantle and Tile Work.

The Eric Mantel & Tile Company, Erie, received contract for residence, Erie. Owner, Mrs. Louisa De Witt, Erie.

The Eric Mantel & Tile Company, Erie, received contract for hospital building, Erie. Owner, New Hamott Hospital, Erie.

The Eric Mantel & Tile Company, Erie, received contract for the residence, Mercer. Owner, S. S. Meredith, Mercer.

Ornamental Iron Work.


Plastering.

E. S. Girard, Johnstown, Pa., received contract for banking room remodeling, Johnstown. Owner, National Bank of Johnstown, Johnstown.

James Reed, Johnstown, Pa., received contract for church, Johnstown. Owner, St. Columba Catholic Church, Johnstown.

Jos Schuchert, Pittsburgh, Pa., received contract for the hospital addition and alterations, Pittsburgh. Owner, St. John's General Hospital, Pittsburgh.

Roofing.


J. W. Morgan & Brothers, Fairmont, W. Va., received contract for church and parish house, Monongah, W. Va. Owner, Consolidated Coal Company, Fairmont.

Sheet Metal Work.

Scarborough Roofing Company, Pittsburgh, received contract for the store building, Pittsburgh. Owner, O'Leary Estate, Pittsburgh.

Structural Steel.

The John Eichleay, Jr., Company, Pittsburgh, received contract for residence, Shielde. Owner, William J. Crittenden, Pittsburgh.


Stone Work.

Hafner & Veder, Pittsburgh, received contract for the hospital addition and alteration, Pittsburgh. Owner, St. John's General Hospital, Northside, Pittsburgh.


The plumbing and heating work for the new post office building at Grafton, W. Va., has been awarded to C. F. Cooke, 30 Church street, New York City.
WANTED—SCHOOL BIDS

The School District of Pitcairn, Pa., will ask for sealed bids until 7:30 p.m., May 15, 1914, for the erection and completion of a two-story and basement brick school building. A certified check for $500 must accompany each bid. The successful bidder will be required to furnish a satisfactory bond, 50 per cent of amount of contract.

Bids will also be received for a hot air heating system. Certified check for $30 must accompany each bid, the successful bidder to furnish satisfactory bond for 50 per cent of amount of contract.

Also bids for electric lighting work. Certified check for $75 must accompany each bid with a satisfactory bond for 50 per cent of the amount of contract. Also bids on plumbing. Certified check for $50 must accompany each bid with satisfactory bond; 50 per cent of amount of contract.

Certified checks to be made payable to the secretary of School District, Pitcairn, Pa., Mr. A. F. Huey. All bids must be in hands of secretary on or before date mentioned.

Plans and specifications may be secured at the office of Shollar & Hersh, Altoona Trust Building, Altoona, Pa., upon the deposit of $5; 50 per cent of the deposit for plans and specifications will be refunded upon the return of same to the architects.

Sheet Metal Work

Send us Your Plans for Estimate.

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LIGHT IRON WORK

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PITTSBURGH
THE CONSTRUCTION RECORD

Theatre Work to Be Awarded.

It is thought that the general contract for the erection of a five-story brick, stone and ornamental terra cotta theatre building for the Harry Davis Enterprise Company will be awarded on the 6th inst. Plans for the work which have been completed by the H. E. Kennedy Company, Home Trust building, Pittsburgh, call for a structure 96x50 feet, to occupy a site at Oliver avenue and Cherry alley. Building specifications will include structural steel, ornamental terra cotta, face brick, metal window frames and sash, pre-fabricated stairways, hollow tile fireproofing, reinforced concrete floors, cut stone, ornamental plaster and stucco marble and tile work, terrazzo floors, waterproofing, store fronts, steel rolling shutters, etc.

Building Conditions.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded</th>
<th>Week ending April 22, 1910</th>
<th>Corresponding Period 1910</th>
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<td>1908</td>
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<td>2,985,000</td>
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<td>1909</td>
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<td>2,250,000</td>
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</tbody>
</table>

Importance of Good Chimney Construction.

Many of the chimneys with which heating apparatus are connected are apparently as good as any other chimney to the unsophisticated, but to the expert they are poor chimneys indeed. In the mild weather of early fall almost any kind of a chimney will carry away the products of combustion from a fire of sufficient intensity to warm the air, circulate the water or generate the steam required to keep a residence, church or hall at a comfortable temperature. When severe weather comes and a chimney must carry away the products of combustion from twice as much fuel as was burned earlier in the season the lack of draft becomes apparent and the heater fails to do the work which is required of it. The owner seldom knows anything beyond the fact that he suffers from cold and that the heater is not doing what it ought to do. He does not follow along to find out the cause, but complains to the man who sold him the heater and insinuates that he has been misled and that the heating apparatus he bought is entirely too small.

When it is explained that the chimney is doing as well as it can with a sore throat or faulty flue, the heating contractor is told that he is shrinking his responsibility. In many cases it is necessary to resort to a good deal of persuasion to get the owner to realize that the mortar in the chimney has been eaten away by the gases, leaving the bricks with little to hold them in place or to prevent air from entering the chimney from the outside. He does not seem to understand even when told that instead of drawing the smoke away from the fire the chimney draws air in through all of these cracks and kills the draft that a chimney of its dimensions and height should have.

The middle of the winter is a poor time to rebuild a chimney, and a poor chimney will prevent the satisfactory operation of any heating apparatus, whether it be one of the best that could be devised or a competition job for a building contractor. Many people who have good chimneys and good hearers complain of insufficient heat and investigation will demonstrate that the fire is being run at about the same rate in the middle of the winter, as it was in the early fall and there will be ashes to fill up more than half of the fireplace and only a little fire on the top.

When the expert makes a visit and rates out all of the ashes he has to be a bit careful or he will not leave a sufficient amount of live coals in the fire chamber to start a good charge of fuel, and it may take him an hour or two to get the right kind of a fire going. Then instead of being thanked for his courtesy in showing what was wrong and how to right it, he is likely to be told that the family cannot afford to have him come up every time the house gets cold to build up a fire, nor can it afford to waste fuel as he has done to get a good fire in the heater when two or three shovels full ought to be enough.

Business for Sale.

Electric contracting and repair business in town of 6,500; four miles from Pittsburgh. Must be sold at once, owing to sickness. Invoice $2,250. Excellent opportunity for right party. Address "Electric," care Construction Record, Pittsburgh, Pa.
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No Bolts, Keys or Wedges—Easily set Up and Taken Down.

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- South Hills Hardware Co., West Liberty, Pittsburgh, Pa.
- Blank, Herman, 5152 Coral St., E. E., Pittsburgh, Pa.

#### Roofing (Gravel, Slate and Tile)
- Hahn Brothers, Pittsburgh, Pa.
- Hill Top Roofing Co., 160 Middle Alley, Mt. Oliver, Pittsburgh, Pa.
- Linskey, Frank, 1724 Lawrie St., Northside, Pittsburgh, Pa.
- Scott A. White, Pittsburgh, Pa.
- South Hills Hardware Co., West Liberty, Pittsburgh, Pa.

#### Roofing Materials
- Hahn Brothers, Pittsburgh, Pa.
- Kennedy, D. J., 6366 Frankstown Ave., Pittsburgh, Pa.
- Pittsburgh Hardware Door Co., Pittsburgh, Pa.
- Scott A. White, Pittsburgh, Pa.
- South Hills Hardware Co., West Liberty, Pittsburgh, Pa.

#### Spiral Windows

#### Safety Treads
- Lau & Hogan, Youngstown, Ohio.

#### Sand and Gravel
- Kennedy, D. J., 6366 Frankstown Ave., Pittsburgh, Pa.

#### Sash and Doors
- Kennedy, D. J., 6366 Frankstown Ave., Pittsburgh, Pa.

#### Sheathing—Asbestos

#### Sheet Metal Work
- Limbach, Frank, 724 Lawrie St., Northside, Pittsburgh, Pa.
- W. H. Knodell, 509 Weiser St., Northside, Pittsburgh, Pa.

#### Sidewalk Lights
- Lau & Hogan, Youngstown, Ohio.
- Mullen Brothers Company, Fulton Building, Pittsburgh, Pa.

#### Skylights and Ventilators
- W. H. Knodell, 509 Weiser St., Northside, Pittsburgh, Pa.

#### Stone Dealers and Contractors
- McCarthy, H. C., Elizabethtown St., Pittsburgh, Pa.
- Storch & Sons, V. R., Pittsburgh, Pa.

#### Stone Masons

#### Stair Work
- Other Woodworking Co., Johnstown, Pa.

#### Stair Builders
- Lau & Hogan, Youngstown, Ohio.

#### Structural Steel Work
- Lau & Hogan, Youngstown, Ohio.

#### Structural Steel Painting
- Lau & Hogan, Youngstown, Ohio.

#### Suspended Ceilings
- J. C. Baxendell, M. Oliver, Pittsburgh, Pa.

#### Tile (Decorative)

#### Trussit Metal

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- Mullen Brothers Company, Fulton Building, Pittsburgh, Pa.

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Chas. G. Hanny & Co.

ORNAMENTAL
IRON and WIRE WORK
IRON STAIRWAYS and PORCHES
FIRE ESCAPES, ELEVATOR ENCLOSURE
ARTISTIC GRILLE WORK, IRON FENCING.
The Board of Education, Portsmouth, O., has just selected Architect W. A. DeVoe, First National Bank building, Portsmouth, to prepare plans for the proposed school building, 64x125 feet, two stories high, to be constructed of brick and reinforced concrete, with concrete sub-floors, concrete stairways, hollow tile partitions, face brick exterior, etc. The building will cost $80,000.

**BIDS ASKED ON FACTORY WORK.**

The Belmont Stamping & Enamel Company, New Philadelphia, O., is having plans made by Architect James Lindsay, Bridgeport, O., for a one-story brick, steel and concrete factory building, 102x211 feet. Bids are now being taken on the construction of the building, which will have composition roofing, concrete foundations, structural steel frame, cut stone, window silts, concrete and wood floors, sheet metal work, etc.

**ASK BIDS ON STATE COTTAGES.**

Bids are to close May 23 for the erection of a three-story brick and concrete structure, 66x138 feet, for the Ohio Board of Administration, Columbus, O. This building will contain a dormitory, dining room, hospital, etc., and was designed by Architects Richards, McCarry & Bulford, Hartman building, Columbus, O. Among the various materials specified for the work are cut stone, face brick, terra cotta, hollow tile, tile work, fireproof interior doors, composition flooring, hard plastering, Kalamine doors, maple flooring, etc.

**NEW COURT HOUSE FOR CINCINNATI.**

It is expected that the plans and specifications for the new $2,500,000 Court House and jail structure for the Board of County Commissioners, Cincinnati, O., will be completed June 15, by Architects Rankin, Kellog and Crane, 1012 Walnut street, Philadelphia. The proposed structure will be six stories high, measuring 366x300 feet, and will be constructed of brick and steel. R. L. Baldwin Company, Perin building, Cincinnati, will be the engineers in charge of heating, ventilating, refrigerating, power and lighting systems.

**FORD BUILDING AWARDED.**

The Ford Motor Company's assembling plant, which is to build on Center, Morewood and Atkinson avenues, Pittsburgh, will be constructed by the F. W. Mark Construction Company, Leader building, Cleveland, which has just been awarded the general contract. As stated previously in these columns, the building will be two and five stories high, 134x229 feet, the construction work to be of brick and reinforced concrete. The various materials specified include structural steel, face brick, hollow tile, cork tile, ornamental iron railing, stairways, sted sash, tile roofing, Kalamine doors, fire doors, interior wood work of white oak, etc.

**ASKING BIDS ON WOODVILLE HOSPITAL.**

The Allegheny County Poor Directors, A. S. Miller, Pittsburgh, secretary, are asking bids on the erection of a tuberculosi hospital at Woodville Station. Plans for the work were made by Architects Andrew McMaster and F. McK. Crooks, Curry building, Pittsburgh, which calls for an administration and dining room building, 42x210 feet, two stories; seven cottages, 5x136 feet, with several small connecting cottages and an one-story power house, 36x50 feet. The Bartley-Kennedy Company, Pittsburgh, has the heating plans; Weldon & Kelly Company, Pittsburgh, the plumbing plans; Dunshee Electric Company, McKeesport, the electric plans; separate bids will be taken on steam heating, plumbing and electrical work.

**NEW WORK FOR YOUNGSTOWN.**

The Youngstown Sheet & Tube Company, Youngstown, O., has in contemplation the erection of a laboratory building and a general office structure, the former to measure 98x125 feet, two stories high, and the latter to have 15,000 square feet of floor space. Both buildings will be of brick, steel and concrete construction. Architect C. F. Owse, Mahoning Bank building, Youngstown, has the plans for the laboratory building, while H. Burnham & Company, Jackson Boulevard, Chicago, are preparing plans for the office building. The laboratory building will have reinforced concrete floors, concrete foundations, structural steel and ornamental iron, ornamental terra cotta, pressed and enameled brick, cut stone, plumbing, heating and electric lighting, maple flooring, etc., while the office building will have composition roofing, ornamental terra cotta, copper skylights, ventilators, hollow tile flooring and partitions, sheet metal work, etc.
Decorative Value of Tile Flooring.

Tile floors have a practical value; they also have great decorative value, and it is with the latter that we are at present concerned. Owing to the peculiar limitations of the material and the methods of manufacture, tiles are necessarily small units. To cover a large surface with these units, obviously require joints. Therefore, the joints, as well as the tiles, should be given importance in the design. From a designer's point of view, the limitations of a material are its greatest asset, each material requiring its own peculiar treatment.

Not many years ago, all the tiles that were available for floors were of the machine-made variety, so perfect in workmanship that they could be laid in a floor with joints of a hair's breadth. Conditions have since changed, and we have come to realize the value of the joints. It is seldom necessary to lay a floor of plain tiles with joints less than one-quarter of an inch in width. Whether these joints are left the natural color of cement, or are colored, they will always count in the design, and the slight unevenness of the tiles themselves will give a texture that is not as hard and uninteresting as the floors of mechanical perfection.

The character of the building and the location of furniture and rugs affect the design of the floor. If the floor is an important room of a monumental building and is free from large pieces of furniture, it may well be treated so as to be in accord with the architectural treatment of the walls, but if there is much furniture and many rugs on the floor, it is better treated as a whole. This is a point that is often lost sight of in railway waiting rooms and restaurants.

Church floors afford as great an opportunity for tile work as the windows do for stained glass. Much could be said on this subject alone, but it is sufficient here to make the following observation: The nave aisles should be simple, the choir somewhat more elaborate, and the sanctuary very rich in pattern, symbols and color. In short, the elaboration increases as the altar is approached.

It is not necessary to use large tiles in a large room to get scale, as the tiles can be arranged so that the unit is composed of several small tiles, and the scale of the pattern increased or reduced at will.

It is not essential that all the tiles in a floor come from one factory. Herein has the tile setter great advantage, especially in colored tiles. In the matter of shapes and designs, clay is so easily moulded that there is almost no limit to the variety that the smallest joints, as well as the tiles, necessarily require, offer. It is seldom necessary to lay a floor with joints of a hair's breadth.

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pattern in individual tiles, there is almost no limit to the richness and elaboration possible for tile floors, but on the other hand, it is also possible to make an interesting floor of plain tiles in one color by taking advantage of the joints. The diagrams will serve as reminders that the joints are of equal importance with the tiles.

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**Electrical Specifications.**

Owing to the strongly competitive nature of electrical installations and the tendency of many electrical contractors to slight the workmanship or install inferior material, it is absolutely necessary to have definite, detailed and complete plans and specifications (if the client and architect are to be protected against future troubles) covering the electrical and mechanical equipment of a modern building. This frequently applies to a small residence, owing to the owner's desire to have an exceptionally convenient or elaborate installation of labor-saving appliances.

In buildings of more pretentious size it is often necessary to sub-divide the specifications to cover lighting, heating, fixtures, alarm systems, telephones, elevators, power appliances or other related parts of the complete electrical and mechanical equipment, but in each case the specifications should be full and complete and the man who writes them should know the details of the entire installation.

An electrical contractor, in a degree, loses respect for an architect when he finds electrical specifications loosely written and with the earmarks of one who knows little or nothing of the practical details of such work. When so much is left unwritten and such an amount of useless verbiage covers the few points noted in the specifications, the contractor is at sea. If he be honorably bent on using the best material and labor his figure usually proves too high and the contract goes to a less honorable competitor who uses the cheapest of everything that the loosely written specifications will allow, to the detriment of the client and indirectly the architect.

The writer has seen specifications so worded that there could be 300 per cent disintegration caused, usually, by climatic changes. The result is shown in checks and cracking of the stucco, and eventually the stucco is apt to fall off in large patches. If Ceresit will protect cement stucco in the four ways mentioned above, there is every reason for using it for this class of work. That Ceresit is efficient is proven by the number of buildings where it has been used in cement stucco.

Elevator pits, boiler pits, coal pits, and other underground structures can be made absolutely water-tight by the use of Ceresit. There are two ways of doing this. Use the material in the entire concrete mass of the walls and in the one-inch top dressing of the floor; or a ½-inch Ceresitized cement mortar coating can be applied on the inside or outside of the walls, and Ceresit used in the one-inch top dressing on the floor. The former method is recommended and in both cases the floor should be properly reinforced. Each pit, however, has its own individual problem.

When water pressure is discussed, it is doubtless true that not one person out of 10 realizes what it means. In the first place, water pressure is the same when it is ground water pressure as if the concrete to be waterproofed was surrounded by nothing but water. This is rather startling because most people believe that the fact that because the water is in the ground, the pressure is somewhat relieved. The pressure of water is .43 pound per square inch per foot high; in other words, the pressure of a column of water one foot high with a base of one square inch is .43 pound. A column of water with a base of one square foot and one foot in height exerts a pressure of about 62 ½ pounds. As an example, suppose you wish to waterproof a basement 20 feet square with a 6-foot head of water. The floor of that basement would be sustaining a pressure of 375 pounds for every square foot, or a total pressure of 150,000 pounds. These remarkable figures give some idea of the problem that confronts waterproofing engineers in sub-structure work.

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**WHY "CERESIT" IS NEEDED.**

The "Ceresit Waterproofer," a monthly pamphlet issued by the Ceresit Waterproofing Company, Chicago, made its initial appearance recently. It is brimming with facts relating to the use of this well-known waterproofing material.

In waterproofing cement stucco, there are four very good reasons for the use of Ceresit:

1.—To prevent the penetration of dampness and thus keep the house dry, sanitary and habitable.

2.—Ceresit protects the metal lath from corrosion, and corrosion means destruction to the lath unless it is protected in some such manner as this.

3.—Efflorescence destroys the beautiful and artistic effects produced by the use of cement stucco Ceresit prevents efflorescence.

4.—Ceresit in cement stucco prevents disintegration caused, usually, by climatic changes. The result is shown in...
Concrete Mixers For Pittsburgh Work.

Samuel W. Hay's Sons, Keenan building, Pittsburgh, have secured contract from City of Pittsburgh for two senior "B" U. S. standard portable concrete mixers, capacity 10 cubic yards per hour each, equipped with 4-horsepower gasoline engines, for use of Allegheny Asphalt plant in mixing materials and making concrete for road work.

The measuring and proportioning device for cement, sand and gravel allows only a given number of cubic inches of material to feed into the mixing trough at a time, in exactly the proportions desired. The size of the measuring boxes is regulated by a screw at either end of the carriage, and in accordance with a scale marker on the edge of the adjustable plates. After the device is set for a certain proportioned mix, it can be locked to prevent accidental change.

The carriage travels under the supply-hoppers—is filled and on the reverse stroke the charge is dropped into the mixing trough. The feed is forced, and the measure is stroked off level full so that the feed is absolutely uniform.

The material is thoroughly mixed dry as it is conveyed to the point in the trough where the water is supplied, and the wet mixing continued until the material is delivered at the end of the trough—a thoroughly mixed, uniform concrete.

The senior "B" mixer is a general contractor's machine and will handle cement, sand, gravel or crushed stone up to 2½ inches. The attachment for hand-laying gravel or stone is very low and is a great saver of labor. This machine has the ideal conditions for good mixing. The cement and sand are mixed dry without the stone which is added to the mixing trough at the same time the water is supplied. The stone is thoroughly coated with cement mortar.

The portable machines are built on four-wheel trucks for road work. The engine is enclosed in a steel housing and steel sprons protect the working parts.

All mixers have 1½-inch paddle shafts for laying sidewalks, curbing, small foundations, etc., where only a small amount of material is required, and is designed to feed cement and sand, bank run gravel or limestone screenings. They can be charged from either side or both sides at the same time, to distribute material to the best advantage and laborers to work without interfering with each other. These have a capacity of five tons per hour and are equipped with a 2½-horsepower engine. Stationary machines may be equipped with tight and loose pulleys.

SO-CALLED COMPETITION.

Competition, so called, among contractors is comparatively a modern innovation. The words "so called" are used intentionally, for under the prevailing conditions, competition intelligently and conservatively conducted is the exception and not the rule. Our methods today are largely wasteful when it comes to ascertaining the quantities of materials which go to make up a structure and which must of course be accurately determined before an accurate and satisfactory bid can be made. So true it is this, that it is now a matter of common knowledge that a large percentage of contracts are the result of error. Further that the more capable and careful a bidder is, to get in all his items, the less chance he has of securing a contract, profitable or otherwise.

The lowest bid, the one generally accepted, is usually anything but the most accurate. We are well aware that these facts are obvious to progressive people who think, but there are others in the world so busy still following old time, wasteful methods that they have no time for anything else. It does no harm, therefore, to remind these people occasionally, so that in time they will become as well posted as their neighbors.
THE FUTURE FOR THE BRICK MASON.

The man who works with his hands must also be able to work with his brain. This has always been true in certain lines of endeavor, but now its application and practice has become very much in evidence. For instance, the brick mason is no longer looked upon as a mere laborer; his occupation has risen as the development of the building lines has advanced, and the intricacies of the work demanded more artistic workers.

It was formerly only necessary to be able to place brick in a wall, or to build a chimney or to do any other ordinary work that involved the brick portions of any structure. There were few structures that demanded what we might term artistic work, and many of the larger buildings that demanded the best workmanship were built of stone, granite or marble. To-day there is a far greater call for brick for all kinds of structural work, and the increase has likewise brought about a desire for work that will make possible the highest artistically for home and business buildings.

There has been a craving for the more artistic architectural effects. Bonds of varying style. These include Flemish, English, Dutch, running double stretchers, Flemish, and other joints (interior) of varying thickness between the brick, and newer ideas; fancy effects in face brick construction; these are only a few of the more particular needs that have placed the mason on a higher plane, and that has made of the earnest worker a seeker after greater glory. But this is not all. The entire building industry has undergone a change. The bricklayer, to be a man of value to his employer, should have at least a fair knowledge of the important details that are demanded of the thinking man who plans and brings about the highest in this kind of work.

Technical knowledge is now an important adjunct that every progressive brick mason should possess to a fair degree. He should be able to know something as to the laws and rules for carrying capacity. He should be able to tell without hesitation what width and strength of wall will be capable of a certain load. David Warfield in the National Builder, writes that he is not merely an automaton that works with the hands and does not use his brain. He is not a creature that permits the architect or the contractor to do his planning and thinking for him. He should understand the finer points of his trade, and be able to judge where there is a possible error, and to progress with intelligence in his work.

What knowledge has he of mortars and their ingredients? How best can he tell what effects will be gained by any given mixture, not alone as to the artistic phases, but also as to the durability of the material he uses and what will be its carrying capacity. He should be a man of value to his employer, should have at least a fair knowledge of the important adjunct that every progressive mason should possess to a fair degree. He should be able to tell without hesitation what width and strength of wall will be capable of a certain load. David Warfield in the National Builder, writes that he is not merely an automaton that works with the hands and does not use his brain. He is not a creature that permits the architect or the contractor to do his planning and thinking for him. He should understand the finer points of his trade, and be able to judge where there is a possible error, and to progress with intelligence in his work.

There is a place in the industrial world for the ordinary worker. His position can be filled, however, so large a number of these are being built today and destroyed tomorrow in the United States as they are in every country. Architects have an opportunity for expression of such a nature that they will rise to the top. They have a place in the world, and it is with great satisfaction that we say this to them.

There is another phase to the business that should not be overlooked. We are building up to-day and destroying to-morrow that which we have built to-day. This is one of the new world methods. It is now common to see fine structures, only a few years old, dismantled to make place for a newer and larger building. The newer ideas must be met, and the newer work calls for men who are workers with brains and who have kept abreast of the advances that have been made in the newer work. Every building constructed that replaces the older one, where the latter has not outgrown its usefulness, is sure to call for work that is out of the ordinary. As many of these are built of burned clay there will be newer work for the artistic worker in these products.

A little study of many buildings will prove this to be true in its broadest sense. One sees many instances of work that is remarkable for its beauty. It might be argued that the instances of this kind are too few to interest many workers. There is a continual increase in this way, and the skilled men are those who will be in demand and who can ask and receive a higher wage. The ordinary bricklayer may be a union man and demand the scale, but there is something higher to be sought for and earned than the lowest that any one may gain for his labor.

There are many self-satisfied workers in all fields. There are many brick masons who never rise higher than a certain level, and who simply rest upon the bases as long as they can. Wherever there is a job of work demanded of a man, the selection is made from among those who have proven themselves capable in this way. These are the men who, from their ambition to rise, become the contractors themselves, and who even in this newer field rise to the places that are so much coveted by the ambitious men.

There is a place in the industrial world for the ordinary worker. His position can be filled, however, by so large a number of those who are always on the lookout for such help. It is the man who is above the ordinary capacity that is so much more in demand. The mason who can simply lay brick will continue to do so until the end of time. Does his knowledge of geometrical problems entitle him to rise? What does he understand of tensile strength? What study has he made of comparative stresses? Has his sense of artistic study been developed along lines that will make him a capable man for such work?

The increase in the use of brick, the greater demand for architectural terra cotta, and the requirements that this change is daily bringing about, is the golden opportunity for the man who is alive to the situation to rise with wonderful rapidity. There was never so golden an opportunity for the bricklayer as to-day. His time for scaling the heights is here, and unless he sees fit to cope with it and to rise he has no one but himself to blame.

But there is demanded a keen insight into the intricacies that our duties will require of the worker. Within 10 years his wages have advanced. This has been due in great part to the natural advance all along the line of industrial activity. It has been advanced over a hundred per cent for ordinary work. But there has been a much greater advance for the men with skill and so will there continue to be in the next few years. It will be the man who has proven his ability that will advance, not alone in a monetary way, but also in an artistic way and thus be fitting himself for a master position—an employer and a director instead of a follower.

SUBSTITUTE FOR COMPOSITION BOARD.

Architects have an opportunity for specifying something new in decorative and finishing materials, according to advice received from the lumber trade. It is a genuine built-up wood that is cut into very thin veneers and then, under great hydraulic pressure, practically made into a solid piece of wood by the employment of a patented mica cement. This is shown in a secret formula. It is being put on the market in stock sizes up to 7x15 feet without joints and in practically any kind of wood that architects are accustomed to work with.
Pittsburgh.

E. F. Schollenberg & Company, Oliver building, received the general contract for the brick shop building addition and alterations for the Philadelphia Company. Cost $18,000.

The general contract has been awarded to Charles Opperman, Castle Shannon, to build a $7,000 cement and stucco residence in Summit Park, for A. Morgan Smith, Mt. Lebanon.

Architect Edward B. Lang, 804 Penn avenue, is revising plans for the erection of a brick and stone church building on Munson avenue, McKees Rocks, for the St. Marks R. C. Congregation. Cost $30,000.

J. H. Nicholas, 35 Kenwood avenue, received the general contract to build a $4,000 brick and frame bungalow on Dunlap avenue, Northside, for Paul A. Schmidt, Marshall avenue, Northside.

Brown Brothers, Potomac avenue, Dormont, are taking sub-bids on the erection of a frame church and parish house addition and alterations, in Castle Shannon, for the St. Ann's Roman Catholic Congregation. Cost $20,000.

Preliminary sketches are being prepared for the erection of a hollow tile building on Grant street, for G. Sack & Son.

The general contract has been awarded to Roeper Brothers, Fourth and Market streets, for remodeling the mercantile building on Grant street, for G. Sack & Son.

The general contract has been awarded to the Nicola Building Company, to build a reinforced concrete fireproof garage addition and alteration for E. J. Thompson & Company, Forbes Field. The work will cost $75,000.

Architect W. A. Thomas, Park building, has plans under way for the brick church, interior completion, for the Rodman Street Baptist Congregation. Cost $8,000.

The general contract has been awarded to George Bauerlein, Millvale, to build a brick residence for W. A. Young, 327 Williams street, Millvale.

Architect A. L. Miller, 924 Chislett street, has preliminary plans for 14 brick residences costing $4,000 each, to be built on Friendship and Gross streets, for John Bueu.

Adam Phillips, Brighton avenue, Bellevue, received the general contract for the frame residence addition and alterations for Rev. S. J. Glass, 3433 California avenue, Northside. Cost $3,000.

Theo. Schleid, 500 Lincoln avenue, Bellevue, has private plans for the erection of a brick veneer duplex residence in Bellevue. Cost $6,000.

McGinnis Brothers, 202 Millvale avenue, received the general contract to build a brick duplex residence, costing $6,000, for Patrick S. Mulechey, Broad street.

Martin Hardzog, South avenue, Northside, is contemplating the erection of a brick, steel and corrugated iron warehouse. Cost $10,000.

Philip Rogers, Moultrie street, has been awarded the general contract to build a $7,000 brick residence on Stratford avenue, for John Novak, 612 Wood street.

Architects Ingham & Boyd, Vandergrift building, have plans for the erection of a $25,000 stone church on Biddle and Hays streets, Wilkinsburg, for the Second United Presbyterian Congregation, Wilkinsburg.

The City of Pittsburgh is taking bids on the erection of the $30,000 market house on Diamond street.

Architect M. Nirdinger, Diamond Bank building, will have plans completed next week for the erection of a brick and terra cotta building on Wood street, for William Grabousky, 767 Penn avenue. Cost $10,000.

Architect W. A. Thomas, Park building, is asking bids for the construction of a brick addition to the Calvary Baptist Church on Wylie avenue. Cost $18,000.

Trustin & Wilson, Bissell Block, were the low bidder for remodeling the frame bath house for the city of Pittsburgh.

Architect Thomas Hannah, Keenan building, will take bids until May 12 on the erection of a brick orphanage and home in Mt. Lebanon township, for the Baptist Orphanage. Cost $25,000.

The Board of County Commissioners is taking bids on county road work near Homestead, costing $30,000, consisting of 2½ miles brick work.

Architect A. R. Douglass, 311 Penn avenue, Wilkinsburg, will take bids for the erection of a brick and steel frame fireproof warehouse and office building on Lincoln avenue, for the East Liberty Wholesale Grocery Company. Cost $30,000.

H. E. Begg & Company, Sewickley, were awarded the contract to build a private garage in Shields, for William J. Crittenden, Oliver building. The building will be 35x59 feet, brick construction.

Howard Hager Company, 6101 Penn avenue, was awarded the contract to build an addition to the church building of the Sewickley Presbyterian Congregation, Beaver avenue, Sewickley. It will be of stone construction, 63x80 feet and cost $60,000.

A. V. Purnell, 507 Jackson street, Northside, secured the contract to build a state road in Turtle Creek borough, the work calling for 1,890 linear feet of brick paving block.

Bids will close on the 14th inst. for building a two-story brick battery and store room for the Duquesne Light Company, Sixth avenue. The building is designed by the company's engineer.

The City of Pittsburgh will ask for bids until the 11th inst. for ornamental stone work and brick sidewalk construction on the Haight's Run bridge.

Edward Barnes, 408 Giffen street, Mt. Oliver, was awarded the contract to build a two-story frame residence on Birmingham avenue, Carrick, for Rev. P. Brandt, 235 Carick blvd.

Golden & Crick, 3512 Fifth avenue, were the successful bidders for constructing the moving picture theatre building on Homewood avenue, for James L. Clark, Empire building. The building will be three stories, 40x120 feet and will contain stores, offices, photographic studio and theater.

Architect L. O. Brosie, Highland building, will soon close bids on building...
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PITTSBURGH, PENN.
Cincinnati, O.—E. M. Costello, Mercantile Library building, was awarded the general contract to build a brick residence for E. F. Cathall. Cost $3,500.

The general contract has been awarded to William Hoffmeister, 3426 Linden avenue, Oakley, to build a brick residence for Thomas Lutz, 142 McMicken avenue. Cost $4,000.

The Laudt Building Company, 1812 Vine street, received the general contract to build a brick residence for Thomas Fried, 2147 loft street. Cost: $3,500.

Cleveland Heights, O.—Architect Reynold H. Hinsdale, Osburn building, Osburn building, Cleveland, has plans under way for the erection of a brick and frame residence for Mr. McDermott. Cost $11,000.

Columbus, O.—Architects Dawson & Holbrook, Outlook building, will be ready for bids about May 9, for the erection of a stucco on metal lath residence on Wilson avenue, for Dr. Harry F. Meyers, Wilson avenue.

Sidney, O.—Architect John N. Uhl, Waabaketa, is preparing plans for the erection of a brick residence, costing $5,000, for Dr. C. R. Ethelman, Crescent street.

Charleston, W. Va.—Stark & Allen have been awarded the general contract to build a $25,000 brick apartment building, for Dr. A. C. Ray, Quarrier street.

DuBois, Pa.—Architect W. H. Overdorf has plans completed for the erection of a frame and stucco addition and alterations to the residence of E. W. Webster, 24 East Long avenue.

Newark, O.—O. J. Hawkins, Newark Trust building, has private plans for the erection of a stucco on interlocking tile residence.

Lakewood, O.—Architect William Koehl, Park building, Cleveland, has plans in progress for the erection of a brick residence and garage on Detroit avenue, for J. A. Spitzig, 4008 Bridge avenue.

Cincinnati, O.—No architect has been selected to prepare the plans for the erection of a brick building for Mrs. Jacob Pfeifer, 520 Howell avenue, is contemplating having erected. Cost $11,000.

Architect G. C. Burroughs, 831 Union Trust building, is preparing sketches for the erection of two brick residences, costing $15,000 total, on Evanswood Place, for Mrs. Josephine Simrell, Hedge Row Lane, Clifton.

The Braham Building Company, 208 Union Central building, has private plans for the erection of a row containing about 30 brick houses. Cost: $175,000 total.

Architects Bieker & Lang, First National Bank building, is taking bids on the erection of a brick building for Joseph Steinmetz. Cost: $5,000.

Columbus, O.—Henry Meser, North Park street, is taking bids on separate contracts for the erection of a terrace, containing five brick houses, on Wurlur avenue, and costing $19,000.

Architects Stroh & Lum, Denig Ferguson building, are preparing plans for the erection of a terrace containing four brick houses for W. F. Huntington, 1028 Mt. Vernon avenue. Cost: $6,000.

Huntington, W. Va.—Architect L. J. Dean, Foster building, will be ready for bids about May 15 on the erection of a brick residence for H. O. Thornburg. Cost: $5,500.

Lakewood, O.—Architects Bohmard & Parson, 1900 Euclid building, Cleveland, have preliminary plans under way for the erection of a plaster on hollow tile residence, for C. C. Berry, Warren Road. Cost: $7,000.

Logan, W. Va.—The general contract has been awarded to E. Willis & Company, to build an $8000 brick residence, for N. Jackson.

E. Willis & Company received the general contract to build the $5,500 brick residence for F. S. Martin.

Newark, O.—Charles F. Green, Gibler avenue, has been awarded the general contract to build a brick residence for George Herrmann. Cost: $7,500.

New Paris, O.—Irvin Kimmel, R. F. D., New Paris, is taking bids on the erection of a $6,000 brick frame residence.

Norwood, O.—Ames & Lesch, 461 Main avenue, have private plans for the erection of a $40,000 apartment building on Floral avenue.

Wellington, O.—Architect William Koehl, 905 Park building, Cleveland, is preparing plans for a frame residence, remodel and addition, for E. E. Waters. Cost: $5,000.

Ashland, O.—Architect Vernon Redding, Bird building, Mansfield, will be ready for bids about June 12 on the erection of a $7,500 brick, stone and marble fireproof residence, for P. A. Meyers.

Barberton, O.—Architects Henry & Murphy, Doyle Block, Akron, will take bids shortly on the erection of a brick terrace, costing $12,000, for A. A. Moore.

Butler, Pa.—Bids will be taken at once by W. S. Blakelock, Butler, and Architect M. Nirdlinger, Diamond Bank building, Pittsburgh, for the erection of a $15,000 brick residence.

Cincinnati, O.—The general contract has been awarded to Moorman & John, 965 W. Ninth street, to build a $7,500 brick apartment building for Mari E. Ander.

C. E. Fox, 2017 Highland avenue, has been awarded the general contract to build a $11,000 pressed brick bungalow on Marion avenue, for Mrs. Clara F. Stahl, 615 Staple avenue.

Du Bois, Pa.—Architect W. H. Overdorff is ready for bids on the erection of a brick residence for Mrs. R. H. Weaver, Bassan street. Cost: $4,000.

Huntington, W. Va.—The Alesea Harvey Company, Eighth street, has private plans for the erection of four brick residences.

Mantua, O.—Architects Peterson & Clark will soon close bids for the erection of a double frame residence for Harry Wehner, Fourth avenue. Cost: $3,000.

Steubenville, O.—Architects Peterson & Clark will soon close bids for the erection of a double frame residence for Harry Wehner, Fourth avenue. Cost: $3,000.

Willsburg, W. Va.—Brady & Wells have received the contract to build a frame residence for W. R. Miller. Cost: $4,500.

Wellsville, O.—G. F. Murdock has been awarded the general contract to build a $5,500 frame residence, for J. H. Murdock, Wilmerding, Pa.

Akron, O.—I. S. Warrick, 342 West
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Chestnut street, having the general contract for the erection of a frame residence for A. Sanford, will take sub-bids at once. Cost $3,500.

Beckley, W. Va. — Architect H. M. Miller, Campbell avenue, Roanoke, Va., will take bids about May II, for the erection of a $35,000 stone and office building, for the Raleigh County Bank.

Cleveland, O. — Architects Walker & Weeks, 190 Euclid building, have plans under way for the erection of a brick and reinforced concrete fireproof wholesale hardware building, for the Bingham Company.

Herman, Pa. — Architect J. C. Haggard, Renshaw building, Pittsburgh, has plans under way for the erection of a brick fireproof laundry building, costing $10,000, for the St. Mary's Monastery.

Parkersburg, W. Va. — The Martin Nelly Company has private plans completed for the erection of a wholesale grocery building. The building will be of brick and cost $60,000.

Springsfield, O. — A. Bentley & Sons, Dayton, O., have been awarded the general contract to build a reinforced concrete and brick fireproof storage building, costing $80,000, for the Wagner Transfer & Storage Company.

Akron, O. — Architects Fichter & Brooker, Second National Bank building, have plans under way for the erection of a brick, tile, and reinforced concrete store and apartment building, costing $15,000, to be built for J. T. Enright. C. J. Snyder, 391 South Main street, has not yet selected an architect to prepare the plans for the brick fireproof store and apartment building, to be erected on Market street. Cost $15,000.

Bluefield, W. Va. — Architects Hoggson Brothers, 7 East Thirty-fourth street, New York city, will take sub-bids about May 15, on the erection of a stone and terra cotta bank and office building for the Flat Top National Bank. Cost $50,000.

Cleveland, O. — Mettler Gloyd, 713 Prospect avenue, is taking bids on the erection of a two-story brick and concrete fireproof bakery building addition, for the Martin Baking Company, on East Thirtieth street. Cost $40,000.

Ironton, O. — Architect Frank L. Packard, Hayden building, Columbus, O., has plans under way for the erection of a brick and stone bank building, for the Citizens' National Bank building. Cost $35,000.

Piqua, O. — The Structural Concrete Company, Dayton, O., has been awarded the general contract to build a brick and concrete wholesale grocery building for the S. Zollinger Company. Cost $35,000.

Parkersburg, W. Va. — S. M. Carper received the general contract to build a brick store room for T. J. Garry, costing $4,500.

Newark, O. — Architect W. B. Patton, 28 Pearl street, will be ready for bids about May 15, for the erection of a brick and stone apartment building, for C. C. Metz. Cost $10,000.

Akron, O. — The Permanent Savings & Trust Company is contemplating the erection of a brick fireproof bank and office building, costing $75,000, to be built on Mill and High streets.

Mannington, W. Va. — Architect Edward Wood, Clarksburg, has plans under way for the erection of a concrete brick and store and apartment building, for S. E. Phillips. Cost $12,000.

Akron, O. — H. C. Sanford, 356 South Main street, has private plans for an $86,000 brick and hollow tile store and apartment building, which he is contemplating having erected.


Clarksburg, W. Va. — A contract has been awarded to James Cain, to build a brick and steel fireproof laundry building, for the Empire Laundry Company. Cost $13,000.

Cleveland, O. — Architects Dercum & Beer, Avenue building, have plans under way for the erection of a brick store and apartment building, costing $5,000, for the Diebolt Brewing Company.

DuBois, Pa. — A. L. Lukehart, Falls Creek, Pa., has been selected to prepare plans for the addition to the store building of the Robinson Furniture Company. It will be of brick construction and cost $20,000.

The Buffalo, Rochester & Pittsburgh Railway Company contemplates the erection of a brick and steel fireproof pattern shop. W. J. Knox is mechanical engineer, and W. F. Robinson, Rochester, N. Y., chief engineer.

Jeanette, Pa. — The contract has been awarded to E. B. Strickel, to build an $8,000 store and apartment building for J. F. Mann, Clay avenue. The building will be of brick ordinary construction.

Mansfield, O. — General Contractor John C. Kemble, East Park avenue, is taking sub-bids on the erection of a brick semi-fireproof addition, to the business building on Walnut street, for The Bird Estate. Cost $25,000.

Portsmouth, O. — Pfeiffer & Carson were the low bidders on the erection of a brick and concrete wholesale produce house for Leisher & Jordan. Cost $14,000.

Steubenville, O. — A contract has been awarded to L. L. Metcalf, Toronto, Ohio.
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O, to build a brick addition to the Hubbard Clothing Company Store building, on Market street. Cost $30,000.

Akron, O.—Carnichael Construction Company, Hamilton building, received the general contract to build a brick and hollow tile apartment building for the Akron Brewing Company.

Canal Dover, O.—Frederick Baird, Bangor building, Cleveland, will take bids shortly for the erection of a brick store and apartment building for A. J. Kansh, Third street. Cost $25,000.

Cleveland, O.—The Superior Architectural Company has plans about ready for bids on the erection of a brick store and apartment building for John Fox, 1600 Madison avenue. Cost $10,000.

Architect E. F. Gibbons, 1900 Euclid building, has plans under way for the erection of a brick and reinforced concrete mercantile building for the Belmont Building Company. Cost $60,000.

Columbus, O.—Architects Julian & Julian, Park Savings & Loan building, are taking bids on the erection of an $8,000 brick store and apartment building for Harley M. Snyder, Harrison building.

Huntington, W. Va.—Architect L. J. Dean, Fostor building, has plans completed for the erection of a brick, concrete and steel semi-fireproof department store building on Fourth avenue, for O. J. Morris & Company. Cost $45,000.

Middleton, O.—The general contract has been awarded to Cullen & Vangia for the erection of a frame and metal siding warehouse building for the Miami Cycle & Manufacturing Company.

Steubenville, O.—The general contract has been awarded to J. L. Metcalf, Toronto, O., for the store and office building remodeling for J. Schulzebacker, Market street. Cost $10,000.

St. Marys, Pa.—Architect A. C. Brehm has plans about completed for the erection of a brick store and apartment building on Chestnut street, for John Koenig. Cost $6,000.

Cleveland, O.—F. H. Vogel, Ridge Road, received the contract to build a store and apartment building on Euclid avenue and East Seventy-ninth street, for the Madison Square Realty Company, Plain Dealer building.

Ambridge, Pa.—Peter Loedding, 146 Park Road, was awarded the contract to construct a store and apartment building, 22x85 feet, brick and hollow tile, for Dyson Brothers, Ambridge.

Rices Landing, Pa.—The South Penn Building Company, Uniontown, Pa., secured the contract to build the bank building of the Rices Landing National Bank. It will be one story and basement, brick and hollow tile construction.

Religious.

Ebensburg, Pa.—Architects Fulton & Butler, Uniontown, Pa., have plans under way for the erection of a brick and stone church, for the Presbyterian Church. Cost $25,000.

Charleston, W. Va.—Isaac Brothers have been awarded the general contract to build a $25,000 marble and Bedford stone church, for the First South M. E. Congregation.

Asheville, Ky.—Architects Veras T. Ritter, Union Bank building, Huntington, W. Va., is preparing plans for the erection of a brick and terra cotta church and school, costing $25,000, to be built for the M. E. Church.

Cincinnati, O.—Architect A. J. Huesman, 1317 Main street, is taking bids on the erection of a pressed brick parsonage, costing $10,000, to be built in Deer Park for the St. John's R. C. Congregation.

Dayton, O.—Architect J. N. Campbell, 341 Penn building, Cincinnati, is taking bids on a brick addition and alterations to the First Presbyterian Church on Prospect avenue.

Lakewood, O.—The Church of the Assumption will select an architect soon to prepare plans for a stone church which will be erected soon.

Lancaster, O.—Architects David Revel & Sons, First National Bank building, Columbus, O., are preparing sketches for the erection of a brick addition to the Emmanuel Lutheran Church.

Toledo, O.—Architects Mills, Rhines, Bellman & Nordhoff, Ohio building, have plans completed for the erection of a $80,000 stone addition to the First Congregational Church.

Wooster, O.—No architect has been selected to prepare the plans for the brick and stone church building which the St. Mary's Roman Catholic Congregation is contemplating erecting. Cost about $30,000.

Bellevue, Ky.—The general contract has been awarded to Ayler & Osborne, Ludlow, Ky., to build a brick, fireproof parochial school, costing $50,000, for the Sacred Heart of Jesus Congregation.

Cincinnati, O.—Architect George W. Kramer, 1 Madison avenue, New York City, is preparing sketches for the erection of a stone church addition for the Presbyterian Congregation of the Convention. The addition will cost $30,000.

Dayton, O.—Architects Joseph G. Steinback & Brothers, 414 Walnut street, Cincinnati, are writing revised specifications for the erection of a brick and concrete parochial school building.

for the St. Marys R. C. Congregation. The building will contain five class rooms and an auditorium. Cost $40,000.

Vandergrift, Pa.—H. C. Clepper, Park building, Pittsburgh, has been selected to prepare the plans for remodeling the First Presbyterian Church. Cost $12,000.

Architect H. C. Clepper, Park building, Pittsburgh, is preparing plans for an addition and remodeling of the Methodist Episcopal Church. Cost $8,000.

Altoona, Pa.—Specifications are being written for the proposed building of the First Baptist Congregation, which has been designed by Architect W. H. Nielson, 1900 Euclid building, Cleveland. The building will measure 90x30 feet, stone and steel construction and will cost $60,000.

Charleston, W. Va.—Architect A. G. Higenbotham, Charleston, will ask bids shortly for constructing a two-story brick gymnasium, 50x70 feet for the Breane Memorial Church. Cost $30,000.

Newark, O.—Plans are being completed by Architect W. B. Patton for a two-story brick addition to the church building of the St. Johns Evangelical Congregation. Bids will be taken about May 20 by the owners.

Warsaw, O.—Architect A. A. Honeywell, Kokomo, Ind., will soon complete plans for a one-story brick and stone church building and $95,000, for the First M. E. Congregation. This will be 1½ stories, brick and stone construction.

Weston, W. Va.—James Cain, Clarksburg, received the contract to build a one-story brick veneer and stone church building for the First Presbyterian Church. Cost $30,000.

Zanesville, O.—Dunsbwiler Brothers were awarded the contract to build the new church and school building 70x100 feet, for the Park Street M. E. Congregation. This will be 1½ stories, brick and stone construction.

Weston, W. Va.—James Cain, Clarksburg, received the contract to build a one-story brick veneer and stone church building for the St. Patrick's R. C. Congregation.

Cincinnati, O.—Architects W. W. Franklin & Son, 528 Walnut street, have been selected to make plans for a $25,000 church building, for the Evangelical Lutheran Congregation. The work may mature in the near future.

Ironwood, O.—Plans will be completed about June 1 by Architects W. A. Devis, Portsmouth, for a 2½-story brick parsonage, for the Trinity M. E. Congregation, who will purchase all materials.

Wellsville, O.—The M. E. Congregation will soon select an architect to make plans for a stone or brick church building, to be erected at a cost of $80,000.
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The tank mentioned is an 80,000-gallon concrete cistern at Sugar Loaf Key, Florida. Ceresit was used in the concrete and also in the cement mortar coating on the inside of the cistern. The foundation of the cistern is several feet below the tide level. There has been neither leakage nor seepage of sea water into the cistern.

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Beverly, W. Va.—The Nelson Contracting Company was awarded the general contract to build a brick addition to the grade school building for the Board of Education. Bids are requested on all sub-contracts and materials. Cost $15,000.

Bluffton, O.—The general contract has been awarded to F. E. Wood, Lima, O., to build a brick semi-fireproof dormitory for the Bluffton College. Cost $20,000.

Columbus, O.—Architect Wilbur T. Mills, McCune building, has plans completed for the erection of a brick and concrete township school building for the Board of Education, Marion township. Cost $18,000.

Ironon, O.—The bond issue has been carried for a $40,000 grade school building to be erected for the Board of Education, for which Architects Howard & Merriman, Columbus, are preparing plans. The building will be of brick and concrete construction.

La Carne, O.—The Board of Education is taking bids on the erection of a pressed brick school building, costing $30,000.

Portage Township, O.—John Crisp & Son, Akron, O., have been awarded the general contract to build a $15,000 brick semi-fireproof school building, for the Township Trustees.

Stowe Corners, O.—Architects Harpster & Bliss, Nannicket building, Akron, has started plans for the erection of a brick semi-fireproof township school addition. Cost $20,000.

Westmoreland City, Pa.—The North Huntington Township Board of Education is taking bids until May 12 for the erection of a grade school building. It will be of red face brick, non-fireproof construction, and cost $12,000.

Bradford, Pa.—The Board of Education is taking bids on the erection of a brick concrete and steel semi-fireproof high school building addition and alteration. Cost $35,000.

The Board of Education is taking bids on the erection of a $30,000 brick concrete and steel fireproof grade school building.

Midland, Pa. — The Board of Education is taking bids on the erection of a brick and steel grade school building.

New Dover, O.—The general contract has been awarded to L. D. Hetrick & Brothers, South Ohio avenue, Columbus, for the erection of a brick composite constructed township grade and high school building, for the Board of Education, of Dover Township. Cost $15,000.

Bowerstown, O.—The general contract has been awarded to W. C. Handry & Sons, Zanesville, O., for the erection of a brick high and grade school building for the Board of Education. Cost $10,974.

Branch Hill, O.—Architects Robertson & Pahnstein, Gerke building, Cincinnati, is writing specifications for a pressed brick public grade school building, to be erected for the Board of Education. Cost $15,000.

Huntington, W. Va.—Architect Veras T. Ritter, Union Bank building, has preliminary plans in progress for the erection of a brick and terra cotta grade school building, for the Board of Education. Cost $35,000.

Collinsville, Pa.—The Board of Education of Milford township is taking bids on the erection of a $6,000 brick school building addition and remodel.

Fairhaven, O.—Architect George W. Barkman, Reilly building, Hamilton, O., has preliminary plans in progress for the erection of a $10,000 brick school building, for the Board of Education.

Jacksonboro, O.—Architect William D. Lingler, Frickling building, Hamilton, O., has specifications prepared for the erection of a $20,000 high school building, for the Board of Education of Wayne township.

Mansfield, O.—J. C. LeDuke, Toledo, O., who has the general contract to build a brick and stone school addition on East Fourth street for the Board of Education, is asking for sub-bids. The building will cost $35,000.

Painesville, O.—Architect F. N. Danner, City Hall, will take bids about June 1 on the erection of a brick fireproof school building, for the City of Painesville, costing $7,000.

Architect Abram Garfield, Garfield building, Cleveland, is preparing sketches for the erection of a $30,000 gymnasium for the Lake Erie College. It will contain a gymnasium, swimming pool, bowling alley, and locker rooms.

Salen, O.—The Board of Education is taking bids on the heating and ventilating of the new high school building which cost $85,000.

St. Marys, Pa.—H. C. Park, Ridgway National Bank building, Ridgway, has been selected architect to prepare the plans for remodeling of the school building for the Board of Education. Cost $8,000.

Steubenville, O.—Architects Peterson & Clark will take bids until May 21 on the erection of a grade school building, for the Board of Education. The building will be of brick and steel, fireproof construction, and cost $35,000.

West Toledo, O.—The Board of Education is taking bids on the erection of a brick and stone high school building, costing about $40,000.

Alliance, O.—E. Converse, McCollin, O., was the low bidder for building the addition to the Freedom school building, for the Board of Education. The work will cost $15,000.

Follansbee, W. Va.—Bids will close on the 16th for constructing a two-story brick school building for the Board of Education. Architect M. L. Wells, Wellsburg, W. Va., prepared the plans. Cost $20,000.

Portsmouth, O.—The Board of Education has selected Architect W. A. De Voss, First National Bank building, to prepare plans for a two-story brick and reinforced concrete grade school building. Plans will be ready for bids about July 1.

Saybrook, O.—The National Engineering Company, Marshall building, Cleveland, has plans well under way for the proposed school building to contain four rooms for the Village of Saybrook. Bids will be taken on the 18th inst.

York, O.—The Board of Education, York township, has selected Architect Paul Cahill, 1900 Euclid building, Cleveland, to prepare plans for a two-story brick school building, to contain six rooms. The estimated cost is $15,000.

Portsmouth, O.—Div Engineer C. F. Losh, First National Bank building, has plans under way for the building of an overhead railroad crossing for the N. & W. R. R. Company. The work will be of steel and concrete.

Pleasant Grove, O.—C. A. Medicus, Lora avenue, Youngstown, was the low bidder for building a brick and stone trim school building, for the Board of Education of Bordman township.

Smethport, Pa.—The contract for building a brick school building for the Smethport School District, will probably be awarded late this week. Estimates cost is $11,000.

Bradford, Pa. — M. J. Benjamin, Bradford, having the contract to build a brick and stone library for the Carnegie Library Board, is asking sub-bids on the work.
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Niagara Falls, N. Y. — Architect D. A. Crane, Oliver building, Pittsburgh, has plans completed for the erection of a brick, concrete, and steel fireproof manufacturing plant for the Stanton Rubber Company, Oliver building, Pitts­burgh.

Springfield, O. — The general contract has been awarded to W. W. Lindsay & Company, Harrison building, Philadel­phia, Pa., to build a power house addition and car barn shops for the Ameri­can Railway Company. The work will be of brick and steel reinforced concrete fireproof construction and cost $30,000.

Cincinnati, O. — Architects Shipley & Rasinsky, Union Trust building, have plans under way for the erection of a brick and concrete composite constructed factory building for the Belmead Stamping & Enamel Company.

The general contract has been awarded to the Lawrence Steel Construction Company, Penn avenue, Pittsburgh, for the erection of a steel and corrugated iron hot mill building, for the American Sheet & Tin Plate Company. The structural steel contract has been let to the American Bridge Company, brick build­ing, Pittsburgh.

Sandusky, O. — Architect and Engineer Albert M. Allen, 1900 Euclid build­ing, Cleveland, has preliminary plans under way for the erection of a brick and concrete factory building for the Hinde & Dauch Paper Company.


Penn Station, Pa. — The Hockensmith Wheel & Mine Car Company has plans for the erection of a brick and steel factory addition, costing $90,000.

Oil City, Pa. — Dresser Engine Works, R. A. Dresser, Bradford, Pa., have private plans for the erection of a $16,000 brick and steel fireproof manufacturing plant. Owner will take bids May 16.

Society and Club Buildings.

Bluefield, W. Va. — Architect A. B. Mahood, Law building, will take bids about May 14, for the erection of a brick and frame club house for the Bluefield Country Club.

Newark, O. — Architect Charles Hegolheimer, Ross McCafferty building, Colum­bus, O., has plans under way for the erection of a brick lodge building for the Fraternal Order of Eagles.

Du Bois, Pa. — The B. P. O. E. Lodge is contemplating the erection of a $30,000 brick lodge building for which they have not selected the architect.

Ford City, Pa. — H. C. Clepper, Park building, Pittsburgh, has been selected architect to prepare the plans for the erection of a $100,000 brick lodge building for the F. O. O. E. Lodge.

Bradford, Pa. — Architect George F. Eichenlaub, State street, Erie, Pa., will have plans completed about June 1, for the erection of a brick, stone and steel fireproof club house for the Bradford Council Knights of Columbus. Cost $35,000.

Hamilton, O. — Architect F. G. Muller, 725 Rentschler building, is preparing sketches for the erection of a reinforced concrete fireproof Elks Temple, for the Hamilton Lodge, No. 93, B. P. O. E. Cost $100,000.

Youngstown, O. — The Security Con­struction Company, Stambaugh build­ing, was awarded the contract to build a one-story stucco on hollow tile coun­try club house for the Poland Country Club.

Hospitals.

Cleveland, O. — George B. Post & Sons, 101 Park avenue, New York city, have been selected architects to prepare the plans for the erection of a Jewish hospital, costing $300,000, for the Cleveland Jewish Hospital Company.

Cresson, Pa. — Architects Harris & Richards, Drexel building, Philadelphia, have plans under way for the erection of a stone hospital addition, costing $300,000, for the State of Pennsylvania Health Department.

Wooster, O. — Dr. J. J. Kinney is con­templating the erection of a brick private hospital, costing $18,000, for which the architect has not been selected.

Charleston, W. Va. — Architect A. E. Shellet & Company, Union Trust build­ing, Washington, D. C., has plans in progress for the addition and remodel­ing of the Charleston General Hospital building. Cost $8,000.

Du Bois, Pa. — Architects Harrington & Howard, Deposit National Bank build­ing, have plans under way for the erec­tion of a hollow tile fireproof hospital building, for the General Hospital Board of Directors.

Mansfield, O. — The City of Mansfield is contemplating the erection of a brick and steel, fireproof emergency hospital building, for which they have not se­lected the architect. Cost $60,000.

State, County and Municipal.

Akron, O. — City Engineer J. A. Gei­rens, City Building, has plans completed for the construction of a reinforced con­crete retaining wall for the Board of Public Service. Bids will be taken about May 15. Cost $9,000.

Cincinnati, O. — Architects Dei Ja­dins & Hayward, Pickering building, has plans for the erection of a weather ob­server’s residence, for the United States Government Chief Clerk Weather Bu­reau, Washington, D. C. The building will cost $30,000.

Parkersburg, W. Va. — Engineer He­man Laub, Keystone building, Pitts­burgh, is taking separate bids on the erection of a $500,000 steel, stone and concrete bridge, for Parkersburg-Ohio Bridge Company.

Youngstown, O. — The general con­tract has been awarded to Hé­ler Brothers, to build a brick and terr­otta pumping station and boiler house for the City of Youngstown. Cost $150,000.

Butler County, O. — The Pan American Bridge Company, New Castle, Ind., was the low bidder on the erection of a $20,000 steel superstructure bridge on Seven Mile creek, for the Board of County Commissioners.

Centerburg, O. — The village of Ce­nterburg will be ready for bids about June 15 on the grading, paving and curl­ing work on Main street. The work consists of 13,500 square yards brick paving, concrete foundation, stone curb and cement filler.

Edgeworth, Pa. — Architects Ratan & Russell, 354 Fourth avenue, Pittsburgh, are taking bids on the erection of a brick, frame and steel, partly fireproof boro hall for the Boro of Edgeworth. Cost $15,000.

Hamilton, O. — The general contract has been awarded to A. J. Yawger, In­dianapolis, Ind., to build a reinforced concrete bridge on High street for the Board of County Commissioners. Cost $150,000.

Hamilton County, O. — Burke & Win­chell, Moler street, Columbus, O., were the low bidders on the grading and macadamizing work on Springfield road. Cost $38,298.

Middletown, O. — The general contract has been awarded to Hills Backerdon,
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See this new ERIE SASH VENTILATOR and become one of the ever-growing army of boosters.

The simplest, neatest, most attractive and most economical sash Ventilator ever offered to the building trade.

Write for the name of our representative in your territory.

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Erie, Pa.

“The Wise Gas Boiler System of Steam and Hot Water Heating”

Is just as much of an innovation—economically—as the Gas Range, the Welsbach Mantle or Tungsten Lamp in Cooking and Lighting.

It effects a saving of 20 to 30 per cent in gas bills.

Costs less than a coal boiler of equal rating. Ask for descriptive catalogue.

Heating Engineers Supply Company

Telephone Court 1453. 421 Wood Street. Pittsburgh.
Indianapolis, Ind., for the erection of three reinforced concrete bridges and viaducts costing $256,000, on Levee road, for the Board of County Commissioners.

Newcomerstown, O.—Engineer H. L. Maddocks, Newark Trust building, Newark, O., has preliminary plans in progress for the erection of a sewer system and sewage treatment plant for the Village of Newcomerstown. Cost $61,000.

Philadelphia, plans for same having been awarded to the Farris Bridge Company. The contract for the foundation was awarded to D. Minnotti. Cost $265,500.

Cleveland, O.—The city of Cleveland is taking bids on the erection of a $35,000 brick, granite and steel shed market in the West Side Market house.

Conneaut, O.—W. Winthrop Fratt, Hippodrome building, Cleveland, has been selected engineer for the construction of a sewage disposal plant for the Cleveland Estate Company.

Mantua, O.—J. C. Devine Company, Alliance, O., was the low bidder on the erection of a $90,000 sewage disposal plant for the village of Mantua. The contract for sewerage has been let to Thomas Chapman, Lorain, O.

Meadville, Pa.—The Harper Lumber & Building Company has new plans for a brick central fire station for the city of Meadville. Cost $8,000.

Wooster, O.—The Board of Public Service is contemplating a water works improvement costing $150,000, for which Chester & Fleming, Union Bank building, Pittsburgh, are the consulting engineers.

Ashtabula Harbor, O.—The United States Lighthouse Inspector, Federal building, Buffalo, N. Y., will take bids about May 30 on the erection of a keepers' residence, towers and apparatus, costing $45,000. The work will be of reinforced concrete and steel.

Cincinnati, O.—The Ohio Building & Construction Company, 1434 Main street, was the low bidder on the remodeling of a loft building for the Board of County Commissioners. Cost $16,000.

Jefferson County, O.—The Board of County Commissioners will take new bids on the construction of a reinforced concrete retaining wall 150 feet long, 15 feet high. Contract will probably be awarded June 2.

New Philadelphia, O.—Bids will close on the 21st inst., for building a sewage disposal plant for the City of New Philadelphia, plans for which have not been made by George Arnold, city engineer.

North Olmstead, O.—John Kaiser & Brothers, Elyria, O., were the low bidders for constructing a town hall 50x80 feet, one and two stories high, for the Village of North Olmstead.

Springdale, Pa.—John T. Dick secured the contract to build a storage dam for the Borough of Springdale. It will be of concrete construction and will cost $10,000.

Midland, Pa.—A. Wishart & Sons Company, Sharon, secured the contract to build the municipal building for the Borough of Midland. Cost $14,000.

North Olmstead, O.—Rowe & Giles, Chagrin Falls, O., secured the work of building a town hall building for the Village of North Olmstead, at a cost of $12,000.

Charleston, W. Va.—The contract to build a steel and concrete bridge for the Charleston Interurban Railroad Company, has been awarded to the America Bridge Company, Frick building, Pittsburgh.

Sykesville, Pa.—The Buffalo, Rochester & Pittsburgh Railroad Company have been awarded the general contract to build a highway and traction bridge, costing $220,000, for the Charleston Traction Company.

Covington, Ky.—The America Bridge Company, Pittsburgh, received the general contract to build a steel bridge costing $170,000, for the South Covington & Cincinnati Street Railway Company.

Proctorville, O.—The Lawrence County Agriculture and Horticultural Society, Ironton, O., contemplates the erection of a $5,000 grandstand seating about 1,400.

Charleston, W. Va.—The general contract for the building of the electric railway from Charleston to Montgomery for the Charleston Interurban Railroad Company, has been let to the America Bridge Company, Frick building, Pittsburgh. The work will consist of 2 miles rock ballast, steel and concrete bridge with concrete floor and double track.

Hillsboro, O.—The Cincinnati & Hillsboro Electric Railroad Company, Fourth National Bank building, Cincinnati, O., is requesting sketches for an electric railway which it will construct from Hillsboro to Columbus, via Washington Court House. Cost $100,000.

Morgantown, W. Va.—The Morgan town & Wheeling Railroad is taking bids on the building of an electric rail way, to cost $350,000 from Morgantown W. Va., to Wheeling, W. Va. The work will consist of grading, masonry, steel bridges, culverts, etc.

Rivesville, W. Va.—Rinehart & Dennis, Charlestonville, Va., has the general contract for the grading and masonry work for the steam railway extension from Rivesville, W. Va., to Fairmont, W. Va., for the Buckhannon Northern Railroad Company. The grading work has been let to Gilmon & Weaver, Morgantown, W. Va.; concrete work to Legon & Zerley, Morgantown, W. Va.; five steel bridges and viaduct over Nickman Run to McClintic-Marshall Construction Company; the waterproofing for bridges, and the bridge ties have not been let. Cost $1,000,000.
THE CONSTRUCTION RECORD

THE GARBER-EDER COMPANY
WABASH BUILDING     Phone 2275 Court.
Engineers and Contractors,
Concrete Foundations, Steel Erection.

ESTIMATES

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BUILDERS EXCHANGE
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Roofing, Siding, Etc. Painting of Stacks, Steel
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Porch Lamps and Burners.
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Contractor to investigate.

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charges.

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else.

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quickly.

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convinced that they are just what you want.
Liens Filed for Labor and Material Furnished.

**ALLEGHENY COUNTY, PA.**


**NO-LIEN CONTRACTS.**


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**Sub-Contract Notes.**

**Ornamental Iron.**


**Structural Steel.**

Riverside Bridge Company, Martins Ferry, O., received contract for the post office building, Piqua, O. Owner, United States Government.


Photo Brothers, Steubenville, O., received contract for sash and frames in residence and garage, Cleveland Heights, O. Owner, Arthur Jones, Cleveland, O.

**Sheet Metal.**


Charles Wenschert Company, Dayton, O., received contract for the post office building, Piqua, O. Owner, United States Government.

**Heating.**

F. S. Tierney, Altoona, Pa., received contract for apartment building, Altoona. Owner, T. C. Canty, Altoona.

**Plastering.**


John Fink, Rochester, Pa., received contract for home addition, New Brighton, Pa. Owner, Home for Aged Women, Beaver Falls, Pa.

A. K. Masselman, Dayton, O., received contract for high school building, Greensfield, O. Owner, E. L. McClain, Greensfield.

John Schmidt, Pittsburgh, received contract for a residence, Pittsburgh. Owner, John Schmidt, care Knoxville Land Improvement Company, Knoxville, Pittsburgh.

Kissler & Burford, New Kensington, Pa., received contract for residence, Arnold, Pa. Owner, Elmer Bushnell, Arnold.

**Stone Work.**

Haffner & Veder, Pittsburgh, received contract for the hospital addition and alterations, Pittsburgh. Owner, St. John's General Hospital, Northside, Pittsburgh.

James W. Melville, Pittsburgh, received contract for the factory building, Pittsburgh. Owner, Standard Cigar Company, Pittsburgh.

Hoadley Stone Company, Bloomington, Ind., received contract for the office building, Cincinnati, O. Owner, Western & Southern Life Insurance Company, Cincinnati.

Haffner & Veder, Pittsburgh, received contract for a warehouse and storage building, Northside, Pittsburgh. Owner, H. J. Heinz, Northside, Pittsburgh.

**Plumbing.**

W. T. McKissack, Northside, Pittsburgh, received contract for the residence, Northside, Pittsburgh. Owner, Rev. S. J. Glass, Northside, Pittsburgh.

Deer & Ober, Pittsburgh, received contract for the power plant, Pittsburgh. Owner, H. J. Heinz, Northside, Pittsburgh.

**Electric Work.**

W. H. Ochilree, Pittsburgh, received contract for residence, Northside, Pittsburgh. Owner, Rev. S. J. Glass, Northside, Pittsburgh.


Wolf Electric Company, Beaver Falls, Pa., received the contract for the grade school building in Beaver Falls. Owner, Board of Education, Beaver Falls.

**Mill Work.**


Punxsutawney Planing Mill Company, Punxsutawney, Pa., received contract for store and apartment remodel, Punxsutawney. Owner, Tony Anarina, Punxsutawney.

Ebensburg Planing Mill Company, Ebensburg, Pa., received contract for church alterations, Ebensburg. Owner, Holy Name Catholic Church, Ebensburg.


**Roofing.**

Leo Hogenuni, Climax street, Pittsburgh, received contract for convent, Pittsburgh. Owner, St. Henry’s Roman Catholic Congregation, Pittsburgh.


Heidell & Schnell, Piqua, O., received contract for parochial residence, Piqua. Owner, St. Mary’s Roman Catholic Congregation, Piqua.

Union Roofing Company, Altoona, Pa., received contract for the apartment building, Altoona. Owner, T. C. Canty, Altoona.

The Orner Woodworking Company, Dubois, Pa., has been awarded the mill work for the new building of the Grace Methodist Episcopal Church, Altoona.

The F. F. Schellenberg Company, Oliver building, Pittsburgh, is taking bids on the steam heating, plumbing, brick work, etc., for the new post office building, Bellehair, O.

**BUILDING CONDITIONS.**

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
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<th>Year</th>
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<th>Week Ending May 6, 1914</th>
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THE CONSTRUCTION RECORD

THE W. S. TYLER COMPANY

ORNAMENTAL IRON AND BRONZE FOR BUILDINGS

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LUMBER

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ASPHALT,

TAR PRODUCTS,

ASPHALT PAINTS,

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S. B. RUBBER ROOFING,

S. B. DEFENDER ROOFING
MONONGAHELA TWO AND
THREE PLY ROOFING
CLIMAX ROOFING
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NEW ALL FLASHED MIXTURES
IN
"CALLERY"
ROUGH SURFACE
FACE BRICK

NUT BROWN — AMETHYST
BLUE BLACK

In addition to our Red Shades and Standard Mixture.
WE RECOMMEND OUR NEW
ALL FLASHED BRICK IN SINGLE
SHADES, OR MIXED WHERE AN
UNUSUAL EFFECT IS DESIRED.

PITTSBURG CALLERY BRICK COMPANY
631 WABASH BUILDING, - PITTSBURG, PA.
NEW WAGE AGREEMENT.

During the past week the painters and plasterers wage scales have been signed for three years.

Painters will receive $4.50 per day from March 15, 1914, to March 14, 1915, and $4.65 per day from March 15, 1915, to March 1, 1917.

Plasterers will receive $5.50 per day from May 1, 1914, to May 1, 1915, $5.75 per day from May 1, 1915, to May 1, 1916, and $6.00 per day from May 1, 1916, to May 1, 1917.

METHOD OF DETERMINING APPROXIMATE QUANTITIES AND PRICES ON METAL CEILINGS.

The unit of measure of metal ceilings is 100 square feet—called a "square." To determine the approximate amount of material required for a room, add to the length and add to the width twice the distance the cornice is to finish down the walls and then include the lap of filler. For instance: If the room measures 20'x40' and a cornice finishing 12 inches down the walls is to be used, it is necessary to add 24 inches to each dimension for the cornice and six inches should be added to each for lap filler. The cornice extends four inches on all four sides of the room, making the ceiling measurements 24 inches wider than the actual room measurements; the six inches allowed for lap of filler is to take up any unevenness that may be in the walls or construction of the building. Example:

- Size of room: 20'-0"x40'-0"
- Add for 12" cornice: 2'-0"x2'-0"
- Lap of filler: 0'-6"x0'-6"
- Total: 22'-6"x42'-6"

22'-6"x42'-6" equals 9.57 squares.

This illustrates the fact that room measurements do not represent true metal ceiling measurements.

To determine the total approximate price of material, multiply the number of squares by the price per square of the design selected, using the price of the room nearest approaching in size the one on which you are figuring. If it is desired to use cornice mitres instead of cutting mitres on the job, the price of the total number of mitres to be used should be added. Example:

- Number of squares: 9.57
- Price of design, per square: $9.10
- Total price: $87.92
- Add for 4 mitres at 60c: $2.40
- Total: $90.32

The above figures are based on a perfectly rectangular room measuring 20'x40' without the beams in the ceilings, any offsets, or any other irregularities affecting the quantity or price of material.

A beam 12 inches deep running the length of the room would add two feet more to the width and would make necessary four additional cornice mitres, the effect being that of two rooms 10'x40', necessitating the use of a correspondingly higher price per square. Additional beams would increase the quantity of material, number of cornice mitres and price per square.

While the above method of figuring will give reasonably accurate results, it is always advisable, when possible, to send a diagram or plan with measurement, so a layout of the ceiling may be prepared together with an exact bill and price of material.—Wheeling Corrugating Company.

NEW SCREEN PLANT.

The new plant of the American Window Screen Company, Ridgway, Pa., will probably be completed within a few weeks, and placed in operation. The company, which was recently organized by John Larson, C. A. Newburg and others, has a plant 40'x70', brick and hollow tile construction.

PAPER MILL PLANNED.

The preliminary plans for a brick and concrete factory building for the Hinde and Bauch Paper Company, Sandusky, O., are made by the A. M. Allen & Company, 1901 Euclid building, Cleveland. The main building will be 100x150', four stories high. The time is indefinite for taking bids.

PLANT MOVED TO INDIANA.

American Three-Way Prism Company, which is moving its plant from Chicago to Laporte, Ind., has begun fitting up a three-story brick and reinforced concrete memorial building for the Clark County Memorial Building Commission, Springfield, O. The front part of the structure will be 40'x100', with an exhibit auditorium 160'x100', one story and basement. Specifications for the work will include concrete foundations, reinforced concrete floor and roof, masonry construction, structural steel, composition and copper roofing, metal laths, marble and tile work, etc. The estimated cost of the work is $275,000.

AWARDING POST OFFICE WORK.

W. H. Fissell & Company, 1150 Broadway, New York City, who have the general contract to build the post office building at Grafton, W. Va., have awarded the tile roofing, sheet metal and skylight work to W. F. Overly, Greensburg, Pa.; electric work to Herman Andra, Milwaukee, Wis.; marble interior to the Vermont Marble Company, Cleveland, Ohio; tile to the Whites Fireproofing Company, Pittsburgh; ornamental work to Alice-Godfrey Company, N. Y. City.

MEMORIAL BUILDING UP FOR BIDS.

Architect F. L. Packard, 16 Broad street, Columbus, O., will be ready for bids next week on the erection of a three-story brick and reinforced concrete memorial building for the Clark County Memorial Building Commission, Springfield, O. The front part of the structure will be 40'x100', with an exhibit auditorium 160'x100', one story and basement. Specifications for the work will include concrete foundations, reinforced concrete floor and roof, masonry construction, structural steel, composition and copper roofing, metal laths, marble and tile work, etc. The estimated cost of the work is $275,000.

AWARDING STEUBENVILLE WORK.

The Guy Johnson Contracting Company, Toronto, O., which has the general contract to build a $100,000 hospital structure for the Ohio Valley Hospital Association has awarded the brick work to James Coyne, Fourth and Market streets, Steubenville, and fireproofing work to the Frito Construction Company, Steubenville, O. The building will be constructed of brick, steel and reinforced concrete and will measure 55'x153', with a four-story building 52'x24'. The iron work, composition roofing, window frames and sash, will be done by the general contractor.

HANNY’S BUSY PLANT.

Charles G. Hanny & Company, 866 West North avenue, Northside, Pittsburgh, have recently completed all the iron work on the William Penn theatre. Federal street, Northside, Pittsburgh; iron work on the Imperial theatre, Beaver avenue, Northside, Pittsburgh, and...
the iron work for the Volk building, Fifth avenue, Pittsburgh. Late contracts taken include miscellaneous iron work on the Rosenbaum building, Pittsburgh; iron work on the Presbytery of the Church, Ben Avon, and the Duquesne brewery, Pittsburgh.

**GENERAL NEWS.**

The New Kensington Fiber Plaster Company, New Kensington, Pa., has secured the services of George V. Gardner, Pittsburgh, who is one of the best known salesmen in the building supply trade in Western Pennsylvania. It is the intention of the New Kensington Company to handle a complete line of building material in addition to its well-known brand of wall plaster.

* * *

Earl R. Kyler, Cleveland, formerly connected with the Cleveland City Forge & Iron Company as steam engineer, has become associated with the Factory Engineering Company, 1420 Illuminating building, Cleveland. The company will make a specialty of designing and supervising the construction of power plants, installation of machinery, steam and hot water heating systems, etc.

* * *

Henry J. Conrat and A. A. Tuttle, both of whom were for many years connected with the Henry Schenk Company, Erie, Pa., have become identified with the Liebel-Binney Construction Company, with general offices in the Liebel block, Erie, Pa.

The Liebel-Binney Company now has under construction the new 12-story block for the Palace Hardware House; the new N'ai B'Rith Orphanage, at Fairview, Pa., and is also remodeling the upper floors of the Baker block.

The heating, ventilating and plumbing work for the new school building under course of construction at Meadville, Pa., for the Meadville School District, was awarded to the L. Lord Company, Meadville, Pa.
Classified Index of Advertisers, Arranged for Ready Reference
THE CONSTRUCTION RECORD
Classified Index of Advertisers, Continued

MORTAR COLORS.

NON-STAINING CEMENT.

ORNAMENTAL IRON WORK.
Hann, Chas. G., 836 North Ave., N. S.
Lau & Hogan, Youngstown, O.
W. H. Knodell, 510 Weiser St., Northside, Pittsburgh.

SHEATHING—ASBESTOS.

METAL WORK.
Krater & Co., W. N. Smallman St., Pittsburgh.
Lau & Hogan, Youngstown, O.
Mullen Brothers Company, Fulton Building, Pittsburgh.

STONE DEALERS AND CONTRACTORS.
Challis, D. W. & Sons, Sewickley.
McCabe, H. C., Elizabeth St., Pittsburgh.
W. H. Knodell, 510 Weiser St., Northside, Pittsburgh.

STONE MAGNOS.
Navarro, P., 1240 Grotto St., Pittsburgh, Pa.

STAIR WORK.

WALL TIES.
Challis, D. W. & Son, Sewickley.
McCabe, H. C., Elizabeth St., Pittsburgh.
W. H. Knodell, 510 Weiser St., Northside, Pittsburgh.

WATER WELL PUMPS.

WATERPROOFING.
Crescent Waterproofing Co., Chicago, Ill.

WEATHER STRIPS.
Chamberlin Metal Weather Strip Co., Pittsburgh.

WEATHER GUARDS.

WIRE FABRICS.

WIRE STRIPS.

WIRE GUARDS.

WIRE STRIPS.
Chamberlin Metal Weather Strip Co., Pittsburgh.

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WIRE GUARDS.
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Night Connection.

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The One That Does Good Work

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Levels

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“F. M.” Concrete Floor Hardner

Water Proof
Wear Proof
Dust Proof
Non-Slip

Concrete Floors.

Fireproof Materials Co.
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Phone Court 2196
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LOWER PRICES
FOR TILE

Owing to the growing volume of business, due to the increasing popularity of tile work, the manufacturers have made reductions ranging from two to three cents a square foot on tile.

We shall be pleased to quote you for tile on the floor based on the new figures.

CHAPMANS
1218 Main Street.
Sash and Door Dept., 48 Eighteenth Street,
Wheeling, W. Va.

“F. M.” Concrete Floor Hardner

Insures

Water Proof
Wear Proof
Dust Proof
Non-Slip

Concrete Floors.

Fireproof Materials Co.
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Pittsburgh, Pa.
THE CONSTRUCTION RECORD

ESTABLISHED 1888
THE CONSTRUCTION RECORD
PUBLISHED EVERY SATURDAY BY
CONSTRUCTION RECORD PUBLISHING COMPANY
All Communications Should Be Addressed to the Company.
504 Bessemer Bldg., Pittsburgh.

Telephones:
Bell 1357-1358 Court. P. & A. 2754 Main.

Subscription price 80 per year in advance.
Advertising Rates on Application.

Papers are not stopped at the end of subscription unless the subscribers order them so and pay up the arrearages.

Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.

PUBLISHED EVERY SATURDAY BY
PUBLISHING COMPANY
To the Company,
All Communications Should Be Addressed

May 16, 1914.
No. 16.

PLANNING GIRLS' DORMITORY.

A two-story brick and stone trim building, 140x190 feet, is to be built at Keyser, W. Va., for the State Board of Control, Charleston, W. Va. The plans for same are being made by Architect H. R. Warne, Charleston, and call for a structure to contain kitchen, store room, domestic science department, etc. It is planned to have slate roofing, vacuum cleaning, clothes drying system, etc.

COLUMBUS MASON'S TO BUILD.

Architects Stribling & Lum, Denison, have preliminary plans for a three-story brick and concrete Masonic Temple, to be built on N. High street for the York Lodge, No. 563, F. & A. M., which will be built at a cost of $30,000. Besides containing lodge rooms, the building will contain billiard room, bowling allies, bank rooms, etc. Composition roofing will be used.

TWO SCHOOL BUILDINGS FOR CHARLESTON.

Plans are being prepared and bids will soon be taken for erecting two brick school buildings for the Board of Education, Charleston, W. Va. These will be three stories high and built from designs of Architect H. R. Warne, Capital street, Charleston. The buildings will have reinforced concrete floor construction, composition roofing, 235mm block partitions, etc. Separate bids will be taken on the heating, plumbing and lighting work.

TAKING BIDS ON HOME.

The new building for the Baptist Orphanage, to be built in Mt. Lebanon, Pittsburgh, plans for which were made by Architect Thomas Hannah, Keenan building, Pittsburgh will be a three-story and basement brick structure, 36x105 feet. It is expected that the contract for erecting same will be awarded shortly. Material specifications will include structural steel, concrete foundations, cut stone work, face brick, composition roofing, sheet metal work, concrete porch floors, interior finish of yellow pine, low pressure steam heating system, plumbing, lighting fixtures, etc.

BUILDING PARKERSBURG BANK.

Excavations have been started by H. H. Vollage, 346 Madison avenue, New York City, who have the general contract to construct a 2½-story bank building having marble exterior face, for the Parkersburg National Bank. This building will have steel frame with combination reinforced concrete floor beams filled in with terra cotta blocks, fireproof doors, metal or bronze bank fixtures, ornamental plastering, marble and tile work, composition roofing, low pressure steam heating system, etc. The estimated cost of the work is $75,000.

TOLEDO SCHOOL UP FOR BIDS.

The contract for erecting the Cherry Street school building for the Board of Education, Toledo, O., will likely be awarded on the 18th inst. This building will be 154x170 feet, two stories high, and will be constructed of brick and steel. It will contain 16 classrooms, together with auditorium, gymnasium and swimming pool. Architect Edward McGee, 1952 Franklin avenue, Toledo, prepared the plans and specifications and roofing, cut stone, hollow and face brick, metal window frames and sash, composition roofing, water-proofing, ornamental iron, reinforcing steel bars, plumbing, lighting and heating, etc. The building will cost $130,000.

HIGH SCHOOL BUILDING FOR HUNTINGTON.

The Board of Education, Huntington, W. Va., is having plans prepared by Architect V. T. Ritter, Union Bank building, Huntington, for a two-story and basement brick and steel reinforced concrete high school building, which will be constructed at a cost of $300,000. The work will call for a considerable amount of structural steel and ornamental iron together with fireproofing material. A mechanical heating and ventilating system is to be installed.

PLANNING ASHTABULA SCHOOL BUILDING.

Architect F. L. Packard, Hayden Institute, Ashtabula, is preparing plans for the proposed $125,000 high school building at Ashtabula, O., for the Board of Education. This building will be of brick and reinforced concrete construction and will contain 40 rooms, which will include the manual training, domestic science, laboratories, 20 recitation rooms, gymnasium, offices, study hall, etc. Material specifications will call for structural steel, cut stone, hollow tile partitions, reinforced concrete floor and roof construction, fireproof doors, marble and tile work, etc. The estimated cost of the work is $125,000.

SUB-CONTRACTS FOR POLK INSTITUITE.

Meals & Johnston, Oil City, Pa., have the contract to build a number of institutional buildings for the Board of Trustees of the State Institute for Feeble Minded, Polk, Pa., have placed the structural steel contract with W. N. Kratzer, Pittsburgh; ornamental iron, W. S. Tyler, Cleveland; fireproofing, Expanded Metal Fireproofing Company, Pittsburgh; sheet metal work, W. F. Overly, Greensburg, Pa.; cut stone, Columbia Stone Company, Cleveland; mill work, Oil City Woodworking Company, Reno, Pa.; tile roofing, Scott A. White, Pittsburgh. Messrs. Meals & Johnston are taking bids on the brick work, marble and tile, plastering, etc.
Well Designed Factory Structure

In the design of a factory building for Gray & Davis, Cambridge, Mass., manufacturers of electric starting and lighting devices for automobiles, the architects, Monks & Johnson, of Boston, were given the problem of producing as fine a structure for the purpose as could possibly be built. Expense was not stinted to the detriment of any feature of advantage, either from the manufacturing standpoint or the aesthetic.

The building is five stories in height, with an unusually large amount of window area, the treatment of the exterior has been such as to produce a most pleasing impression by the careful use of tapestry brick. The material of construction is reinforced concrete, a fact which is not disguised in the building itself, but the treatment of this concrete in conjunction with the brick has been done in a particularly happy manner. All of the pilasters or wall columns are of concrete. The ornamental end bays of the building have been faced with brick, while the sub-structure is concrete. Those portions of the wall between pilasters which are not occupied with the steel sash windows are of concrete panelled with tapestry brick inserted in the concrete.

The main building measures 381 feet six inches in length, with a width of 81 feet in the first story and 61 feet in the other four. The total floor area is 134,258 square feet, or a trifle more than three acres. An ell in the rear center measures 36 by 62 feet. This runs through the full height of the building and contains elevator tower, stair tower, tool and store rooms, locker rooms, wash rooms and toilets. For the last three uses mezzanine floors are interposed above the first floor. This portion of the structure is framed in steel on account of the very low head room which would otherwise result.

The one story portion at the rear of the building, and representing the difference between the 81-foot width of the first floor and the 61-foot width of upper floors, is used in the western end as a stock room for raw materials as brought in from the railroad spur adjoining the rear of the building. The eastern end of this story is the garage and minor repair shop for cars belonging to the officials of the company. In the central portion, under the ell or rear tower, is the shipping room in direct connection with the railroad by means of the customary platforms.

Skylights, over almost the entire area of the one story portion, give ample light for all purposes.

The building has no basement. The main floor, of reinforced concrete, was laid directly upon the fill without the use of forms. It is thus practically a part of the solid earth. Piers were carried down to a solid footing at a depth of about 12 feet, where hard shale and gravel were encountered. These piers vary from 28 inches to 48 inches square, the footings being from five feet to seven feet three inches square. In a few cases regular Gow footings were used, but expediency demanded in the case of most of the piers a construction which was more rapid with the facilities at hand. This first floor, as well as all the floors above, was figured for a load of 150 pounds per square foot.

All the columns in the building have mushroom tops. The columns are cylindrical, giving a particularly effective appearance, and of course, the maximum of strength for a given weight of material. The columns are reinforced concrete, whereas the piers below them, being supported longitudinally by the hard fill and thus subject to compression only, are plain concrete without steel reinforcement. The columns in the wall are rectangular in section, each carrying under each floor a corbel for giving the floor slab that local support which it receives from the mushroom heads of the interior columns.

All floors above the first are of reinforced concrete, 8½ inches thick, these slabs measuring 20 feet square to centers of columns and being built without beams or girders of any kind. The top layer is about one inch of granolithic mottled appearance in the ceiling.

Between the wall columns or pilasters, a reinforced concrete beam, 36 by eight inches, was cast in each bay. This is cast into slots left in the pilasters, thus making an expansion joint at each end of the beam. These beams form a portion of the outside wall of the building. As the lower edge of the beam is in the same plane as the ceiling, it will be noted that this beam extends well above the floor level and that the floor is dependent from it. By this means the windows are run clear up to the ceiling level and an absolute maximum of lighting is obtained. As a matter of fact, the window area is 64 per cent of the entire wall area of the building.

Steel sash is used throughout, in each case being so arranged that 33 per cent
of the window area is adjustable for ventilation, etc. In the case of the office, which is on the second floor, the operating portion of the sash is double hung so that it may be handled as ordinary windows. In the manufacturing part of the building each ventilator sash is pivoted at the center. The area available for ventilation thus figures out at 21 per cent of the entire wall area of the building. Natural ventilation alone produces towards both appearance and freedom from trouble. Power outlets, with suitable plugs, are located in both ceil-
ing and floors at convenient intervals, so that power will be available for any machine within an easy distance and with a minimum of trouble. A somewhat similar arrangement is the location of inserts in the concrete, four feet apart in both directions, over the entire area of the ceilings in the manufacturing department. This makes it possible to attach shaft hangers or other pendant devices at any place where they may be needed.

As would be expected in a building of these characteristics, Monks & Johnson have worked out details fully in keeping with the general scheme. To the observer, one of the most prominent of these details is the method in which tapestry has been used for the embellishment of the exterior. A splendid treatment was obtained with the use of 82,000 brick at a cost which amounted to about 14 per cent of the total cost of the structure.

Not only in the decorative sense has this thoughtfulness been shown, however. Many features of practical use have been worked out with the same care and attention to detail. A single instance is afforded by the way in which all pipe sleeves are arranged through the different floors. Instead of using a tin sleeve or one of galvanized iron, wrought iron pipe has been used in every case. These have been left three inches high above the floor as a precaution against the leakage of water into a lower floor at any time when water may lie upon any operating floor, either from the breakage of a sprinkler head, from water thrown on a fire, or from washing down the floor.

All conduits for the electric service, including both lighting and power, are concealed in the concrete floors. This leaves no loose wires anywhere and conducts towards both appearance and freedom from trouble. Power outlets, with suitable plugs, are located in both ceilings and floors at convenient intervals, so that power will be available for any machine within an easy distance and with a minimum of trouble. A somewhat similar arrangement is the location of inserts in the concrete, four feet apart in both directions, over the entire area of the ceilings in the manufacturing department. This makes it possible to attach shaft hangers or other pendant devices at any place where they may be needed.

The system of heating has been worked out very ingeniously, this being one of only three buildings in the United States in which the peculiar combination to be described has been installed. The unusual window area made it necessary to use a large amount of radiation surface for heating the building. To have provided this in the form of coils and radiators along the walls would have involved a great many large units, decidedly concentrated in the area occupied. It was decided, therefore, to use the sprinkler piping in the ceding as an auxiliary heating surface. This, of course, necessitated the use of hot water as a heating medium, with its ready control and adaptability to changing climatic conditions.

To guard the Grinnell sprinkler heads from the heat in the water and prevent the fusing of their solder links, with consequent leakage, the heads were placed on offsets about a foot long. The water in these offsets is, of course, not in circulation, whereas the system of piping is so arranged that continuous circulation is kept up from the riser on one side of the building to the return on the other in each of several sections. In this way the distribution of heat is kept uniform all over the building, while at the same time the pipes, being continually traversed by moving water, cannot become clogged in any place, as sometimes happens with pipes in which the water is stationary. The water in the offsets to the sprinklers is relatively cool and insulates the heads. At the same time, it has been found in two other installations of this character that after a time a gas is formed under the sprinkler head which still further insulates it.

In working out the locker rooms, in order that the columns might not interfere in any way with free use of the locker rooms it was arranged to use small columns, each made of two steel angles back to back, these being located in each case at the end of a row of lockers where they are completely out of the way and do not block the alley space. This provides a somewhat narrower column and beam spacing than might otherwise have been chosen, but worked very well in connection with small I-beams as the basis for the floor structure.

The office end of the building is naturally the one in which the greatest attention has been paid to finish, although the outside of the structure gives no indication of this, aside from the entrance panel and the marquise. The office partitions are all of solid mahogany and glass, reaching a height of about 8 feet above the floor. The windows in this section have double hung sash in place of the pivoted sash in the manufacturing end. The radiators are of a very pleasing pattern, taking the place of the coils of piping in the factory.

At the four corners of the main building wrought iron balconies have been added on the second floor as a touch of ornamentation, which is particularly pleasing. Painted a bronze green, they add a touch of color which blends well with the gray of the concrete and the moulded red and purple of the varicolored tapestry brick. The marquise has the same color scheme as the balconies and adds a further touch of ornamentation to the east end of the structure.
NEED OF SKILLED WORKMEN.

The American architect is handicapped almost fatally by the lack of good artisans to work out the details of his plans, is the opinion held by Ralph Adams Cram, a well-known consulting architect of New York City. The blame is placed largely upon the school system, which does not educate craftsmen and upon those labor unions that discourage the spirit of emulation. Mr. Cram's views are expressed in a paper which was read by him before the fourth annual convention of the American Federation of Arts.

"Nearly all our expert labor in the artistic trades," says Mr. Cram, "is imported from Europe. We pay large wages to foreign workmen but refuse to educate our own people so that this financial benefit may accrue to them. In other words, our prosperity results in the artist-craftsman, and as we have no artist-craftsman, and as we have neither the services of foreign-trained men, accept tenth-rate native work, or go without.

"Every architect knows that the success or failure of his work depends largely on the craftsmen who carry it out and complete it with all the decorative features of form and color, and yet in a nation of 100,000,000 people, with a dozen schools of architecture, practically nothing is done toward educating these same craftsmen, and we either secure the services of foreign-trained men, accept tenth-rate native work, or go without.

"Take a case in point; it is decided to build a metropolitan cathedral with little regard to cost; plans are made (we will say satisfactorily), what then? If it is to be a great and comprehensive work of art, and exactly as much as it needs its architect) sculptors, painters, carvers in wood and stone, glass-makers, mosaicists, embroiderers, leather workers. Are there enough schools in America to train all the craftsmen needed in this one monument — if so, where?

"One of the foolish arguments against Gothic is that it is quite dependent on the artist-craftsman, and as we have none, we must abandon the style; one of the foolish arguments in favor of classical design is that anybody can learn to carve an acanthus, therefore we had better stick to what we know we can do. Neither argument is sound, if we have no artist-craftsmen then it would be better for us to close up half the schools that are turning out architects and employ the funds for the training of the only men who can give life to the architect's designs."

HOLLOW SHELF REFRIGERATION.

Owners desiring to incorporate a distinct novelty in their projected apartment houses, private residences, hotels and similar buildings where ice bills run up large monthly figures, will find in a refrigerator ice-water system being introduced something that will conduci largely to the success of the enterprise. The system, in a word, utilizes the water flowing from the melting ice and employs it in procuring further ventilation.

THE EFFECT OF SMOKE ON PAINT COATINGS.

K. K. Stevens, B. S., Consulting Chemist, Carnegie Institute of Technology.

Recent investigations of the smoke problem throughout the country have made it desirable to determine the effect of smoke on various substances, one of the most important of these being paint coatings.

Since these coatings are applied to many different surfaces, it would be inadvisable, if it were not impossible, to include in this report the effect of smoke on each of these coatings when applied to all the surfaces for which it is suited. Paint coatings on wood alone will therefore be dealt with, and in as brief a manner as possible.

From a chemical standpoint the subject must necessarily be treated technically, but in view of the fact that this paper may be read by many not thoroughly conversant with the technical composition of paints, and the chemical reactions which take place during the formation of the film, the writer has endeavored to avoid the use of technical terms wherever possible, and to make explanation of points which may not be understood.

Smoke has been shown to be composed of tarry matter, free carbon, ash oxides of sulphur, together with small amounts of other constituents.

Technically speaking, paints are in general composed of a pigment of finely ground insoluble inorganic compound (which may or may not combine with the oil used as a vehicle) homogeneously mixed with a drying oil, or a mixture of several such, and thinned with turpentine or some other liquid having similar properties.

Paint coatings fulfill two purposes: namely, that of protection to the surface and that of decoration of ornamentation. As a result we have two general effects to look for, one which causes disintegration of the film, thereby nullifying both its protecting and decorating qualities, and the other that of darkening only, which may or may not destroy its decorative properties without injuring it as a protective coating.

There are two methods which may be used in determining the effect of the smoke constituents on a paint coating. The first, which is more or less theoretical, is that of stating the chemical composition of the smoke and in general that of the paint, and ascertaining by experiment or from previous knowledge the effect of the different chemical compounds on each other. The second, or more practical method is that of placing a set of painted wood panels where they
arc exposed to an atmosphere containing smoke, and another set under similar climatic conditions where there is no smoke. After a suitable period of time has elapsed, a comparison can be made of the coatings in the different localities and definite results established. In the case of the first method, the composition of the smoke and paint having been stated, there remains only to determine the reactions which take place between the different constituents.

The pigment in general use may be said to be basic carbonate of lead or as it is commonly known, "white lead," the vehicle, linseed oil, and the thinner turpentine. The resulting compound is in part lead linolate, unconbined basic lead carbonate, unconbined thoroughly oxidized linseed oil, while the thinner turpentine has nearly all evaporated. The carbon dioxide and sulphur dioxide in the smoke form carbonic and sulphuric acid respectively when they come in contact with the atmosphere. The action of sulphuric acid on the organic compounds such as linseed oil or linoleates, is very destructive, rapidly decomposing them, although in this particular case, as the sulphuric acid is very dilute, the action is extremely slow, and only shows the presence of carbon dioxide is not so after a duration of several months. The objectionable in the decomposing process is very slow and it produces but a slight effect on the paint film. Hydrogen sulphide in coke oven and blast furnace-gases darkens basic lead carbonate forming lead sulphide, but this soon oxidizes to lead sulphate. Lithopone, barytes and basic lead sulphate are not darkened by the hydrogen sulphide. These are the only results available from the theoretical standpoint, and take into consideration neither the climatic conditions nor the varying composition of the smoke.

The National Paint Manufacturers' Association has erected test fences in certain localities throughout the United States for the purpose of studying the climatic effects on various paint formulae, with the idea of determining the best formula for each locality. These fences are situated in Pittsburgh, Pa.; Atlantic City, N. J.; Fargo, N. D.; and Nashville, Tenn. The climate of Nashville seems to be more nearly that of Pittsburgh than any of the others, and at the same time to be in an atmosphere much less smoky than that of Pittsburgh. Although many different formulae have been tested, the results will be given from a comparison of the panel of the general formula stated above.

As a general statement, it may be said that the paint coating in Pittsburgh darkens more rapidly, and to a greater extent than that in Tennessee. The disintegration is also much greater in Pitts-

THE NATIONAL PAINT MANUFACTURERS' ASSOCIATION.

The results show the following general facts:

1. Deposit on the surface and in the exterior skin of the film of from:
   1. 1.5 to 4 per cent of carbon.
   2. 20 to 9 per cent of insoluble matter.
   3. 10 to 8 per cent of iron oxide.

2. All of this deposit is entirely foreign to the original paint coating, the carbon alone and some mineral matter being the direct product of the combustion of coal, the oxide of iron coming from the blast furnace.

The change of lead carbonate into lead sulphate by the sulphuric acid is the principal change which takes place in the constituents of the coating itself. Of course this only takes place in a pigment of this particular composition while in other pigments other changes are characteristic. Whether or not this internal change is detrimental to the life of the coating has not been determined, and the effect probably varies with different formulæ.

The darkening of the coatings is found in a great many cases, while a few have remained white. The reasons for this behavior will be discussed in a later article. In the coatings so darkened the tarry matter seems to be thoroughly incorporated in the film, and it is extremely difficult to remove any part of it without destroying the coating.

The darkening of pigments may be due to two causes, either the chemical action of hydrogen sulphide on the basic carbonate of lead, which is not a permanent darkening, or the simple deposition of tarry matter and carbon. As is well known, the hydrogen sulphide is easily oxidized upon exposure to the air. Therefore, this darkening will only take place in the immediate vicinity of the source of the hydrogen sulphide. On analyses of the washings obtained from the darkened paints of the Pittsburgh test fence no trace of sulphides was found. The analysis of the washings mentioned above shows that such carbon is deposited and that from one to five per cent is enough to considerably darken the coating.

FLOORING AND FINISH.

Sweet birch is a satisfactory wood for flooring, whether the purpose is ornamental or long service or both. The wood is handsome, it stands well when thoroughly seasoned, and it lasts a long time. Large quantities of this flooring are made in the Lake States and it finds service in houses of the Western States. A smaller amount is manufactured into parquet floors and into wood carpet. The dark heart-wood is much valued for the last-named commodities, because it forms pleasing contrasts with woods of lighter color.

Ornamental columns of sweet birch find place indoors. Newel posts of the same wood and the associated rails, spindles and steps of stairways belong in the same class, along with brackets, capitals, chairboards, moldings, grills, and mantels. Window frames, doors and blinds of birch are exquisite finish when a dark rich effect is desired. Birch doors are a special article—that is, particular pains are taken to finish them in the most attractive style, after selecting choice material. Curly birch is often seen to best advantage in this class of work. The wavy grains and figures are matched in the panels, stiles, rails and mullions. The curly wood is frequently cut into veneer for the double purpose of making it go farther and securing better seasoning. It is not uncommon to equip birch doors with knobs of the same wood. Many birch knobs, however, are used elsewhere than on doors; furniture makers find many places for them. Ceiling is little less important than flooring in the quality of birch used. A considerable amount of birch ceiling listed is intended for porches. The wood shows to good advantage in wainscoting, where the dark wood of the heart is sometimes alternated with a white wood such as maple. Floors and ceilings are often made in the same way.

SUB-CONTRACTS FOR CHURCH.

Rose & Fisher, Pennsylvania avenue, Northside, Pittsburgh, who have the contract to build a two-story stone church building for the Emmanuel Methodist Episcopal Congregations, have awarded to C. G. Hanny & Company, West North avenue, Northside, Pittsburgh, the contract for the miscellaneous iron work; sheet metal work, to W. H. Knowell, East Diamond street, Northside; tile work to Twin City Marble & Tile Company, Northside; plastering to I. N. Dunn, Maple street, Northside.
Pittsburgh.

Sub-bids are being taken by James Hood, Highland building, for building a brick and tile duplex residence, for Mrs. Mary C. Thaw, William Pitt Boulevard. Cost $8,000.

Martzak Brothers, House building, have been awarded the contract for a brick addition to the Nurses Home on the Northside, for Mrs. S. P. Harbon, 1001 Davis avenue. Cost $16,000.

Walter S. Cohen, Oliver building, has been selected architect to prepare plans for a brick fireproof institute to be built on Wylie avenue and Green street, for the Hebrew Institute of Pittsburgh. Cost $30,000.

The contract has been awarded to S. G. Baldensperger, 214 North Highland avenue, to build a brick private garage for Paul C. Wolff, Oliver building.

Architect George H. Schwan, Peoples Bank building, is preparing sketches for the erection of a $5,000 brick residence, in Mount Washington, for Paul K. Harper, Fifteenth and Penn avenue.

The Lytle-Campbell Company, 1007 Forbes street, has been awarded the general contract for remodeling the brick store building on Liberty avenue, for the L. S. Harris Company. Cost $4,000.

Architects Ingham & Boyd, Vandegrift building, have sketches under way for a brick fireproof high school building in Edgewood, for the Board of Education. Cost $75,000.

The general contract has been awarded to Wells & McCandless, Tingley avenue, Bellevue, to build a brick and cement plaster double residence, for Mrs. Ida K. Chester, Rogers and Bayne avenue, Bellevue. Cost $11,000.

S. A. Hamel, Mt. Oliver Station, has been awarded the contract to erect a brick duplex residence on Brownsville Road, Carrick, for Edward J. Bonner. Cost $11,000.

Oswald Miller, 2084 Potomac avenue, Dormont, has private plans for eight residences which he will build in Dormont, costing about $5,000 each.

Architect R. G. Vandervort, First National Bank building, Northside, has plans for the erection of a frame addition to the Queen of Heaven Church, on Juniusa street, Northside. Cost $6,000.

Architect W. H. Waber, 188 Shetland avenue, has plans under way for the erection of two frame shingle and stucco bungalows, to be located near Blackadder avenue.

Architect U. J. Peoples, Vandegrift building, is preparing new plans for the erection of a brick and terra cotta store and apartment building, for H. B. Yarnum, Jenkins Arcade building. Cost $25,000.

The contract has been awarded to the Lytle-Campbell Company, 1007 Forbes street, to build a brick fireproof community garage on Penn avenue near Lexington, for the Lexington Land Company, Germania Bank building. Cost $10,000.

J. B. Ensell, Climax street, is taking sub-bids on the erection of a brick veneer residence in Dormont, for Mrs. A. E. Stewart, 2015 Voelkel avenue, Dormont.

A contract has been awarded to Irene C. Crofcheck, Wilkinsburg, for the erection of a brick, cement plaster and tile bungalow, to be built in Ardmore Farms, for J. W. Barrett, Wilkinsburg. Cost $4,500.

I. H. Fellahom, 1001 Herbeton avenue, has been awarded the contract to build two brick double residences in McKee Place for W. E. Wright, 217 McKee Place. Cost $6,000 each.

Charles B. Price, Oakmont, has private plans for eight brick residences, which he will erect in Oakmont.

The contract will be awarded soon for a brick residence for which David Plantgam, West Liberty avenue, Dormont, has private plans prepared. Cost $3,500.

Architect Louis Stevens, Columbia Bank building, will probably award separate contracts for the $20,000 residence addition and alterations, Forbes street, for Mr. John Worthington, 5605 Forbes street.

Architect J. H. Giesey, Mellon Bank building, will be ready for bids about May 25 on the erection of a brick store and office building on Diamond street, for the Mellon Trustees.

John A. Long, Machesney building, has been selected architect to prepare the plans for the erection of a brick church and parsonage in Mt. Washington, for the German Evangelical Protestant Congregation.

Architect Louis Stevens, Columbia Bank building, is taking separate bids for remodeling a brick residence or Squirrel Hill, for James Ward, Jr., First National Bank building.

J. Mettaw, West Park, McKee Rocks, is taking bids on a brick veneer residence which he is to erect. Cost $3,000.

J. H. Fellahom, 1001 Herberton avenue, received the contract for the erection of a brick veneer residence in Sheneley Heights for L. H. Smith, 221 Oliver avenue.

The H. E. Kennedy Company, Home Trust building, is writing specifications for the erection of a $20,000 brick and stone parsonage for the Trinity M. E. Congregation, Northside.

D. F. Shanahan, Magee street, near Fifth avenue, is contemplating the erection of a $20,000 reinforced concrete fireproof storage building on Hooper street, for which the architect has not yet been selected.

The Board of Education, Fulton building, is taking bids until May 21 for the erection of a brick and stone elementary school in the Negley district. Cost $175,000.

The contract has been awarded to W. L. Merritt, 8035 Zephyr street, Sheridan, to build a $3,500 brick veneer residence on Elliott and Freedom streets, for Harry Schachter, 822 Steuben street.

Architect Charles R. Geisler, 1933 Warmock street, is preparing new plans for the erection of a brick and concrete fireproof sales garage on Baum boulevard for the Vestal Motor Company.

Architect H. E. Kennedy, Home Trust building, will be ready for bids about May 18 on the erection of a stone parish house, costing $15,000, for the First Methodist Protestant Congregation.

Architect H. S. Blair, Vandegrift building, will have plans ready for bids about May 25 for the erection of a brick residence on Beacon street, for R. W.
The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plat as illustrated.

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Hammans, Vandergrift building. Cost $15,000.

Henry Hileman, 68 St. Clair street, has been awarded the contract to construct 1/2 miles of brick paving between Emsworth and Hayesville for the Board of County Commissioners. Ott Brothers, 414 Warrington avenue, received the brick paving work for the West Run road, near Homestead.

Ambridge, Pa.—Architect R. H. Hill, 658 Maplewood avenue, is taking bids on the erection of a $2,800 frame residence for Mrs John Kroeh.

The general contract has been awarded to Louis Von Gunter, to build a $3,000 frame residence for John Olenik.

Architect H. A. Lord, Fourth avenue, has plans completed for a brick veneer cottage for David Ambose. Cost $4,300.

Bedford, O.—A. A. Marsh, Blackstone building, Cleveland, is taking bids on two frame residences. Cost $2,500 each.

Butler, Pa.—Architect M. Nirdlinger, Diamond Bank building, Pittsburgh, Pa., is taking bids on the erection of a brick residence on McKean street, for W. S. Bokeslee. Cost $15,000.

The general contract has been awarded to H. E. McManns, 135 N. Main street, for the erection of a brick and hollow tile residence for Frank Koch & Sons. Cost $16,000.

Cleveland, O.—Architects Frank B. Meade and James Hamilton, Garfield building, are taking bids on the erection of a stucco and hollow tile residence, to be built on E. One Hundred and Fifteenth street, for Emil Joseph, Society for Savings building.

Connellsburg, Pa.—A. C. Herwick has been awarded the contract to build a two-story brick residence, costing $4,500, for S. J. Whipple, 290 E. Fairview avenue.

Cory, Pa.—Architect A. F. Mount & Son, Erection building, have plans completed for the erection of a brick and shingle bungalow, costing $5,000, to be built for Abe Cumburst.

Lancaster, O.—Architect W. T. Mills, McCune building, Columbus, O., has plans under way for the erection of a brick residence for Joseph Mattix, Cost $8,000.

Otto Darnell, Sixth avenue, has private plans under way for a $6,000 frame residence, which he is contemplating having erected in the near future.

Medina, O.—Mrs. F. P. Buchannan, 120 N. Broadway avenue, is taking bids on the erection of a frame residence. Cost $4,600.

Portsmouth, O.—Architect W. A. De Voss, First National Bank building, has plans for a pressed brick and stucco residence, to be built for Charles Grassman. Cost $7,000.

Versailles, Pa.—Harry Aldquist, McKee'sport, Pa., has been awarded the contract to build a brick residence for Frank Jack. Cost $5,000.

Warren, Pa.—Architect F. H. Gunning, Watermore building, is ready for bids on the erection of a $5,000 brick residence for P. S. Tarbox, 4 Maple Place.


Mansfield, O.—A. E. Hancock is taking bids on a brick and hollow tile apartment building, which will be built in the near future. Cost $8,000.

Richmond, Ky.—J. C. & T. S. Todd, received the contract to build a brick residence for Mrs. Tutt Burman. Cost $20,000.

Sewickley, Pa.—Architect H. A. Lord, Fourth street, Ambridge, has plans under way for the erection of a brick residence, costing $10,000.

Patterson & Shaw, 30 E. Robinson street, Pittsburgh, received the contract for the interior alterations to the frame residence on Beaver street, for S. C. Cooper, Oliver building, Pittsburgh. Cost $3,000.

Streitvich, O.—Thomas Burke & Sons, N. Third street, were awarded the contract for the erection of a brick residence for Mary J. Lee, Atlantic City, N. J. Cost $6,500.

Youngstown, O.—Architect Louis Boucherie & Son, Stambaugh building, is about ready for bids on the erection of a stucco on hollow tile residence for Mr. T. H. Clarke. Cost $10,000.

Ambridge, Pa.—The Home Realty Construction Company is contemplating the erection of three brick and stone ordinary constructed bungalows on Fourteenth street. Cost $3,500 each.

Charles Wright Denny, Reserve Trust building, has plans under way for the erection of a $15,000 brick apartment building for the United Realty Construction Company.

Architects E. H. Goldfein, Reserve Trust building, has plans under way for the erection of a $6,000 frame apartment building for Herman & Muskowitz, E. Sixty-first street.

Lakewood, O.—Architect William Koehl, Park building, Cleveland, has sketches prepared for the erection of a brick residence and garage, to be built on Lake Avenue. Cost $12,000.

Medina, O.—Dr. H. P. Robinson has private plans for the erection of a brick residence for Mrs. Hattie Swinby, R. F. D.

Cleveland, O.—Architect E. H. Goldfein, Reserve Trust building, has plans under way for the erection of a $15,000 brick apartment building for the United Realty Construction Company.

Architect E. H. Goldfein, Reserve Trust building, has plans completed for the erection of a $6,000 frame apartment building for Herman & Muskowitz, Sixtieth-eighth street.

Ashland, O.—The Kaufman Bostwick Company, Rose building, Cleveland, is taking bids for the erection of a stucco on hollow tile residence and garage for T. W. Miller.

Barbertown, O.—A. A. Moore is taking bids on the erection of a brick residence. Cost $4,600.

Belville, O.—Architect Frank E. Harst, 43 Glenwood Boulevard, has plans under way for the erection of a brick veneer residence for A. A. Skalfer. Cost $7,000.

Columbus, O.—Amos Boyer & Son, 1289 W. Mount street, were the low bidders on the erection of a brick and tile residence, to contain 15 apartments and six offices, on Norwich avenue and High street, for Mrs. Margaret Zinge, 819 Franklin avenue. Cost $3,000.

Derrick City, Pa.—John Iver & Company, Bradford, were the low bidders on the erection of a brick and tile residence for E. E. Slingerland. Cost $3,500.

Architects Brickell & Brickell, Main street, Bradford, will take bids soon on the erection of a frame and tile bungalow for L. L. Lawry. Cost $3,000.

Franklin, O.—John Bigler is contemplating having four frame residences erected for which no architect has been selected. They will cost $5,000 each.

Bryan, O.—Architects Wachtel, Beeman & Schrieber, Nicholas building, Toledo, are ready for bids on the erection of a frame brick and stucco residence for R. C. Crocker, Knowser street. Cost $4,500.

Charlestown, W. Va.—H. B. Kline, P. O. building, has been awarded the contract to build a brick residence for Prof. Wright Denny. Cost $4,600. Mr. Kline also received the contract to build a $4,000 brick residence for Mrs. Hattie Swinby, R. F. D.

Cleveland, O.—Architect E. H. Goldfein, Reserve Trust building, has plans under way for the erection of a $15,000 brick apartment building for the United Realty Construction Company.

Architect E. H. Goldfein, Reserve Trust building, has plans completed for the erection of a $6,000 frame apartment building for Herman & Muskowitz, E. Sixty-first street.

Lakewood, O.—Architect William Koehl, Park building, Cleveland, has sketches prepared for the erection of a brick residence and garage, to be built on Lake Avenue. Cost $12,000.

Medina, O.—Dr. H. P. Robinson has private plans for the erection of a brick and frame residence. Cost $5,000.

Warren, Pa.—Architect E. A. Phillips, Warren Trust building, has plans under way for the erection of a brick and tile residence on Second street, for Harry S. Peterson, 408½ Hazel street. Cost $5,000.

Youngstown, O.—Work will soon be started on a frame residence for Arthur Brinter, 318 Burke street. Cost $3,000.
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will start work soon on a $2,600 frame residence for which private plans have been prepared.

A building permit has been issued for a frame residence which Joe Helms, 1120 Franklin street, will erect. Cost $2,000.

O. E. Hawk & Company, 522 Wills avenue, have started work on the erection of a frame residence. Cost $3,000.

The general contract has been awarded to L. P. King, 71 Monroe street, for the erection of a $4,000 frame residence for James Humble, 402 Wills avenue.

Akron, O.—The contract has been awarded to W. A. Young, 104 Cosgrove avenue, for the erection of a frame residence, costing $4,000, for L. F. Winterhalter, 70 North Prospect street.

Butler, Pa.—Architect H. E. McNulty, 155 N. Main street, will be ready for bids about June 1 for the erection of a $10,000 brick residence in Oakland place, for Benjamin Williams, Main street.

Architect Harry Winer, 71 Monroe street, has plans completed for the erection of a brick residence on Lookout avenue for Prof. Loyd Hall, 412 Lookout avenue. Cost $5,000.

Cleveland, O.—Architect E. H. Fish, Superior building, and Adam Rosgen, 1884 W. Twenty-eighth street, will take bids about May 13 for the erection of an 8,000 brick apartment building on Sixtieth street.

Cleveland, O.—Plans are being taken by Dr. A. N. Sidel, 2906 Woodhill road, and Architect H. S. Fish, Superior building, for the erection of a $7,000 brick residence on Woodland avenue.

Columbus, O.—Architect E. S. Fish, Superior building, and Adam Rosgen, 1884 W. Twenty-eighth street, will take bids about May 13 for the erection of an 8,000 brick apartment building on Sixtieth street.

Cleveland Heights, O.—The contract has been awarded to Bunday Brothers, Shaw avenue, for the erection of a frame residence on Forrest 1111 boulevard for Charles H. Riesenh. Fifty-ninth street, Cleveland.

Cleveland, O.—Architects Langdon & Hohly, Nicholas building, have plans about completed for the erection of a $7,000 stucco residence for Charles Brady, Nicholas building.

A contract has been awarded to Lawrence Cenkier, 414 Mettler street, for the erection of a $2,500 frame residence for Joseph Kaperski, 351 Elm street.

Louis Brady, 414 S. Main street, has been awarded the contract to build a $2,600 frame residence for Gottfried Whitley, Starr & Main streets.

G. G. Meyers, Rising Sun, O., has been awarded the general contract to build a $3,500 frame apartment building on Melrose avenue for Otto Mehrenesi, Point Place.

Architects Langdon & Hohly, Nicholas building, will have plans ready for bids about May 20 on the erection of a $9,000 brick veneer apartment building for Harry Silverman.

Tyrell, O.—Architect J. W. Earl, 265 W. Federal street, Youngstown, has plans about completed for a $3,500 stucco and shingle residence to be built for William Palen, who will take bids about May 20.

Warren, O.—Architect J. L. Decker, Stambaugh building, Youngstown, will be ready for bids about June 10 on the erection of a $15,000 stone residence for R. H. Wilkinson, Jr.

Architect E. H. Gruninger, Wetmore building, has plans under way for the erection of a brick addition and remodeling the residence on Pennsylvania avenue of Dr. J. W. Hamilton. The owner will take bids shortly. Cost $4,000.

Youngstown, O.—O. E. Hawk, 522 William street, is taking separate bids on the erection of a frame residence for L. C. Pappas, 48 Chalmers street.

Plans are being prepared by Architect J. W. Earl, 215 W. Federal street, for the erection of a bungalow for Dr. A. L. Kiraly, W. Federal street.

Beaver Falls, Pa.—Architects Boyd & Stewart, Century building, Pittsburgh, are preparing new plans for the erection of a brick residence and garage for W. L. Satter, Beaver Falls, Pa. Cost $4,000.

Cleveland Heights, O.—The contract has been awarded to Bunday Brothers, Shaw avenue, for the erection of a frame residence on Forrest 1111 boulevard for Charles H. Riesenh. Fifty-ninth street, Cleveland.

Cleveland, O.—Thomas H. Harobin, 38 Wadena avenue, has been awarded the general contract to build a brick double residence for Frank C. Herman, 231 Ontario street.

East Palestine, O.—Grant Wilson, East Palestine, is taking bids on a $5,000 frame residence which he intends building on W. Market street.

Fair Oaks, Pa.—Architect J. W. Earl, 265 W. Federal street, Youngstown, O., has plans under way for the erection of six stucco on hollow tile bungalows, costing $3,000 each, for the Fair Oaks Land Company.

Franklin, Pa.—Architects Brady & Brady, Franklin Trust building, have plans under way for the erection of a $12,000 brick and tile residence for Dwight C. Morgan, Post Office building.

Martinsburg, W. Va.—John N. Stewart, W. King street, is about ready for bids on a $50,000 brick, stone, hollow tile, and stucco residence and pergola which he is contemplating having erected. Cost $50,000.

Sharon, Pa.—Architects Clepper & Owen have plans completed for the erection of six frame residences for Frank Flowers, Hamory Block. Cost $3,000 each.

Architects Clepper & Owen will take bids about June 1 on the erection of a $6,000 brick residence for Mr. Ray.

Snedport, Pa.—Mrs. W. D. Gallup is taking bids on a frame addition and alterations at a residence. Cost $3,500.

Warren, O.—Architect J. L. Decker, Stambaugh building, Youngstown, O., will take bids about June 10 for the erection of a frame residence for Prof. Carey. Cost $7,000.

Xenia, O.—Architect R. B. House, 26 S. Jersey street, Dayton, O., is taking bids on the erection of a $5,000 brick residence on N. King street for Dr. J. R. McCormick.

Youngstown, O.—Architects Stiley & Schleide, Wick building, have plans completed for the erection of a $140,000 brick veneer residence for E. Haar, Elm street.

Columbus, O.—Architects Bryan & Latham, Columbus Savings & Trust building, will be ready for bids about May 21 for the erection of a brick double residence for E. D. Lockhart, 525 South Champion avenue. Cost $4,500.

Deweyville, Pa.—Architects Clepper & Owen, Sharon, Pa., will take bids at once on the erection of a $3,500 frame dwelling for Harry Cook.

Rochester, Pa.—The general contract has been awarded to Anderson & Cooke, Beaver Falls, Pa., for the erection of a brick residence for Frank Woodruff. Cost $12,000.

St. Marys, Pa.—Bert A. Schieler, 133 Washington street, will take bids at once on a $4,000 frame bungalow, which he is contemplating having erected on North Michael street.

Youngstown, O.—Architects King & Zenk, 115 East Federal street, have plans...
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well under way for the erection of a $20,000 brick veneer and stone trim residence, for F. F. Anderson, 1062 Mahoning Bank building.

The general contract has been awarded to O. E. Hawks & Company, 522 Williamson avenue, to build a frame and single residence, for Paul Boucherle, 516 Stambaugh building. Cost $5,000.

Beaver, Pa. — Architects Carlisle & Starrer, Jenkins Arcade building, Pittsburgh, are revising plans for the erection of a $7,000 brick residence, for William J. Mellon.

Charleston, W. Va. — The general contract has been awarded to H. B. Kline, P. O. building, for the erection of a $4,000 brick residence for C. H. & C. P. Millery, Congress street.

New Castle, Pa. — Architect C. F. Owsley, Mahoning Bank building, Youngstown, O., has plans under way for the erection of a $50,000 brick residence, for A. C. Hoyt.

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**Business Buildings.**

Akor, O. — Architects Eichter & Brooker, Second National Bank building, have plans in progress for the erection of a brick, tile and reinforced concrete store and apartment building, for J. T. Enright. Cost $15,000.

Ambridge, Pa. — The general contract has been awarded to Paul Blenerack, to build a brick ordinary construction store and apartment building, for Andy Kozak. Cost $4,500.

Lima, O. — Ross Mullen will take sub-bids soon for the erection of a concrete brick stone and terra cotta store and apartment building, for D. C. Dunn, Holland building. Cost $10,000.

Piqua, O. — The De Vore-McGormley Company, Nashy building, Toledo, is revising plans for a common brick fireproof office building, for the Wood Shovel & Tool Company. George B. Hicks, South Charleston, O., has the general contract and will be ready for sub-bids next week.

Bradford, Pa. — John Regalsky, Chambers street, will select an architect soon to prepare the plans for a brick store and apartment building. Cost $16,000.

Monroeville, O. — Architect Franz Warner, Hippodrome building, Cleveland, has plans under way for the erection of a brick store and apartment building for F. C. Seaman. Cost $15,000.

Parkersburg, W. Va. — Architect D. W. Daly, 121 Lynn street, has plans under way for the erection of a brick and steel mill constructed warehouse, to be built for the Smith Hardware Company. Cost $30,000.

Akron, O. — The Central Union Telegraph Company is contemplating the erection of a brick and concrete fireproof telephone building, for which it has not selected an architect. Cost $60,000.

Bridgeville, Pa. — Architect A. Robb, Eason street, has plans ready for bids for a store and apartment building, for Collusy Brothers, Baldwin street. The building will be of solid brick construction and cost $7,000.

Cincinnati, O. — The contract has been awarded to the Ferro Concrete Construction Company, for the erection of a reinforced concrete and brick fireproof laundry building, for the Home Steam Laundry Company. Cost $35,000.

The general contract has been awarded to Irwin & Leighton, 126 North Twelfth street, Philadelphia, Pa., for the erection of a brick and reinforced concrete fireproof service building, for the Ford Motor Company.

Marion, O. — Architects Marion, Allen & Hall, Hayden-Clinton building, Columbus, have plans under way for a brick and concrete store, apartment and office building, for Hays Thompson, Waldorf building.

Martinsburg, W. Va. — M. L. Compson, Miller avenue, has the contract and will take sub-bids soon on the erection of an $80,000 brick mill constructed warehouse, for the Berkley Buggy Company.

Mason, O. — Architect Vernon Redding, Bird building, Mansfield, is taking bids on the erection of a stone and brick bank building, for the First Savings and Loan Company. Cost $50,000.

Medville, Pa. — The E. E. Bailey Company, Chambers building, Oil City, has plans under way for a brick and steel fireproof office building for the United Natural Gas Company. Cost $10,000.

Oil City, Pa. — The E. E. Bailey Company, Chambers building, has plans for the erection of a brick and steel fireproof office building, for the United Natural Gas Company.

Toledo, O. — A. Bentley & Sons Company will take sub-bids on the erection of a brick, marble and terra cotta fireproof bank and office building, for the Dime Savings Bank. Cost $50,000.

Warren, O. — The general contract has been awarded to the Bankers' Building Bureau, New York city, for remodeling the Trumbull Savings & Loan Company's bank. Cost $7,000.

Zelienople, Pa. — The contract has been awarded to George W. Rape, to build a $7,000 brick store and motion picture theatre building on Main street.

East Pittsburgh, Pa. — The contract has been awarded to H. C. Foltz, Tistle Creek, for the erection of a brick store and apartment building, for Joseph Francielle, East Pittsburgh. Cost $5,000.

The Ardmore Lumber Company, has been awarded the contract to build a brick store and apartment building, on Electric avenue, for Joseph Maceco. Cost $11,000.

Columbus, O. — The contract has been awarded to William Watson, 507 W. Ninth avenue, for repairs in a brick and steel store and light manufacturing building on N. High street, for the White Haines Optical Company. Cost $10,000.

Corry, Pa. — The steel work is being erected for a brick fireproof shop building for C. R. Rogers Company, Main street. Cost $15,000.

Ford City, Pa. — The contract has been awarded to Herman Bierkampfer, Kattanning, Pa., for the erection of a brick and stone mercantile building for He Lefkosky, Park building, Pittsburgh. Cost $12,000.

Portsmouth, O. — A contract has been awarded to Piekier & Carson for building a brick and concrete wholesale produce house on Tenth street, for Leichtner & Jordan. Cost $4,000.

Cleveland, O. — Architect A. F. Jansonowitz, 322 Permanent building, will have plans ready for bids shortly on the erection of a brick store and apartment building, costing $30,000, for H. A. Kangesser, Williamson building.

Elyria, O. — Architect Paul Rissman will have plans ready for bids about June 1 on the erection of a brick fireproof store and club building, for the Elyria Eagles Club Company.

Greenville, Pa. — The Greenville National Bank is taking sub-bids on the remodeling of its bank, costing $8,000.

Martinsburg, W. Va. — Lee M. Bost, 123 Race street, who has the general contract for erecting a brick and apartment building for Louis Boulc, Market street, has begun the excavating work. The building will cost about $15,000. No sub-contracts have been awarded.

Mesdville, Pa. — The contract has been awarded to M. K. Byam, for the erection of a brick and steel fireproof store and apartment building, costing $16,000, for Pippino Galbo.

Oil City, Pa. — H. C. Mundt has been awarded the contract to build a brick and concrete blacksmith shop and storage building for S. R. Parson & Brother, Seneca street. Cost $10,000.

Toledo, O. — The contract has been awarded to Felix Gesiorowski, Avon-
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WASHINGTON COURT HOUSE, O.—Architect Paul T. Cahill, 1900 Euclid building, Cleveland, has preliminary plans for a brick and terra cotta store and apartment building for Henry Friedman.

Archbold, O.—The Village of Archbold has selected George Champe, 608 Nashy building, Toledo, as engineer for the water works system to be installed.

East Liverpool, O.—Eichard Brothers have been awarded the general contract to construct the sanitary sewers for the City of East Liverpool.

Franklin County, O.—Thomas Prugh, 180 N. Princeton avenue, Columbus, was the low bidder on the grading and macadamizing work on Stimmel road for the Board of County Commissioners. Cost $12,248.60.

Lawrence County, Pa.—The Board of County Commissioners, care clerk, New Castle, Pa., will take bids about June 1 for the state road work in Beaver township, consisting of 3½ miles asphaltic bituminous macadam.

Wood County, W. Va.—The contract has been awarded to Gisler & Morris, Marietta, O., for the road improvement of 2½ miles of secondary roads in the township of New Hope, consisting of bituminous macadam.

New Kensington, Pa.—The general contract has been awarded to L. Hillman & Company for the grading and paving work on Victoria avenue for the Board of County Commissioners. Cost $8,500.

Zanesville, O.—The general contract for the superstructure of the new steel and concrete bridge to be erected across the Muskingum river for the Board of County Commissioners has been awarded to the Childs Construction Company and the contract for the sub-structure to the Zwolle Construction Company. The work consists of 752 feet roadway, 40 feet wide, two suspended sidewalks, crosseted plank and block floor and reinforced concrete sidewalks. Cost $116,000.

Altoona, Pa.—The City of Altoona is taking bids on the construction of a reinforced concrete reservoir having a capacity of 15,000,000 gallons with a reinforced concrete wall 20 feet high. Cost $100,000.

Columbus, O.—The City of Columbus is taking bids until May 26 on the building of cement sidewalks costing $89.083.15.

Dayton, O.—W. E. Leopold, 2721 Main street, has been awarded the contract to build a brick and composite constructed church and parsonage for the North Riverdale Lutheran Church. Cost $17,000.

Lancaster, O.—C. B. Van Gundy was the low bidder on the erection of a brick with stone trim church building for the Maple Street Evangelical Congregation. Cost $18,000.

Wilmerding, Pa.—The George M. Hall Company, Homestead, received the contract to build a brick church for the Methodist Episcopal Congregation. Cost $9,000.

Farrel, Pa.—Clepper & Owen, Sharon, Pa., have been selected architects to prepare plans for a brick and stone trim synagogue for the Hebrew Congregation. Cost $15,000.

Youngstown, O.—Architects Miller & Ford, Dollar Bank building, have plans about completed for rebuilding the Home Avenue Baptist Church. The work will be of brick and stone construction and cost $25,000. The general contract for the work will be awarded to Hopkins Brothers, 143 S. Pearl street.

The contract has been awarded to Steve Herman, 442 E. Myrtle avenue, for the erection of a brick and stone school and auditorium for the Youngstown Slavic Tara. Cost $15,000.

Lancaster, O.—J. D. Van Gundy was the low bidder on the $18,000 brick with stone trim church to be erected for the Maple Street Evangelical Congregation.

Perrysville, O.—Architect C. W. Hodgson, Penn building, Pittsburgh, has plans ready for bids for erecting a brick church addition for the Hiland Presbyterian Congregation.

Raymond, O.—Architect Paul T. Cahill, 1900 Euclid building, Cleveland, has plans for a $6,000 brick church building for the M. E. Congregation.

Norton, W. Va.—Architect Bedford Brown, 806 Seventeenth street, N. W., Washington, D. C., has plans nearly completed for the erection of a brick church and Sunday school building for the Memorial Arch Deacon Lloyd. Cost $8,000.

Butler, Pa.—Architect O. C. Johnson, 241 Main street, will take bids about May 20 for the brick addition and alterations to be built to the St. Paul's Reformed Church. Cost $6,000.

Springfield, O.—The St. Bernards R. C. Congregation is taking bids on the erection of a reinforced concrete and brick fireproof school building, residence and church remodel to cost about $85,000.

La Porte, Ind. — Architects H. M. McClure, Gerke building, Indianapolis, is preparing plans for a fireproof high school building, to be built on the grounds of the former school, for the Board of Education. Cost $35,000.

Ashland, O.—The Board of Education is taking bids on the erection of a reinforced concrete brick high school building, costing $110,000, to be built on Cottage street. The building will contain 15 class rooms, offices, manual training and domestic science departments, auditorium, gymnasium, kindergarten, swimming pool, etc. Bids close May 20.

Huntington, W. Va.—Architect V. T. Ritter, Union Bank building, has plans well under way for a brick and concrete fireproof high school building for the Board of Education. The building will cost about $300,000.

Institute, W. Va.—Architect H. R. Warne, Charleston, W. Va., has plans completed for the brick dormitory, which will be erected for the State Board of Control. Cost $35,000.

Keyser, W. Va.—Architect H. R. Warne, Charleston, has plans well under way for the erection of a girls' dormitory, to be built for the State Board of Control. The building will be of stone, brick and steel, and will contain kitchen, store room, cold storage, laundry, dry room, servants' room, domestic science room, etc.

Lakewood, O.—Lau & Strauss, Cleveland, O., were the low bidders on the new brick and reinforced concrete fire-
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The National Supply & Construction Company, Niles, was the low bidder for the erection of a brick and steel fireproof high school building for the Board of Education. Cost $40,000.

The Foster Stone Company has private plans for a brick factory addition, to be erected on Second street.

The Carmichael Construction Company has been awarded the contract to build two brick, steel and reinforced concrete fireproof factory additions for the Firestone Tire & Rubber Company.

The Lyria Theatre building, Cincinnati, are preparing plans for a brick varnish factory addition for the Ault & Wiborg Company. Cost $20,000.

The Overland Company. Cost $35,000.

A site has been selected on Pioneer street, by the Coca Cola Bottling Works for the erection of a brick and concrete bottling plant costing $35,000.
Mr. Architect, Mr. Builder,
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Toledo, O. — The Flexstone Products Company is contemplating the remodeling of its factory building for which it has not yet selected an architect.

East Palestine, O. — Architects Clipper & Owen, Mahoning Bank building, Youngstown, will take bids at once on the erection of a brick factory addition for the East Palestine Rubber Company. Cost $8,000.

Parkersburg, W. Va. — J. W. Curry has been awarded the contract for the concrete masonry work on the manufacturing plant addition, which will be erected for the Parkersburg Transfer & Storage Company. Cost $25,000.

Society and Club Buildings.

Carthage, O. — Architect Lyman Walker, First National Bank building, Covington, Ky., is revising the plans for the $20,000 brick and concrete store and lodge building which the Iolanthe Lodge, No. 385 Knights of Pythias, will erect on Maia street.


Parkersburg, W. Va. — Architect F. L. Packard, Hayden building, Columbus, O., has plans about completed for the erection of a brick, terra cotta and marble fireproof temple for the Masonic Association. Cost $125,000.

Oxford, O. — Weippeis & Taylor were the low bidders on the brick and stucco fraternity house to be erected for the Delta Kappa Epsilon Fraternity. Cost $12,300.

Roscoe, Pa. — The contract has been awarded to J. A. Rigg, Speers, Pa., for the erection of a brick lodge building, costing $8,850, to be built for the Senior Order of United American Mechanics.

New Castle, Pa. — Architect Frank Fouk, Pearson block, is taking bids for the erection of a brick and stucco lodge building for the B. P. O. E. Cost $59,000.

Sandusky, O. — Architects Langdon & Hobly, Nicholas building, Toledo, O., have preliminary plans under way for the erection of a brick addition and remodeling the Masonic temple, for the Masonic Temple Association. Cost $13,000.

Oil City, Pa. — Sub-contracts will be awarded and work will be started at once on the erection of a brick and steel fireproof store and lodge building for the Oil City Lodge of I. O. O. F.

Oxford, O. — The contract has been awarded to T. G. Lloyd for the erection of a brick and stucco fraternity house, for the Delta Kappa Epsilon Fraternity.

Toledo, O. — The contract has been awarded to Joseph Holtz, 944 Western avenue, for the erection of a frame club house for the Saxon club. Cost $4,000.

State, County and Municipal.

Covington, Ky. — The Board of County Commissioners will take bids about May 15 on the erection of a Children's Home. The building will be of brick and concrete construction and cost $25,000.

Portsmouth, O. — The City of Portsmouth will take bids shortly on the paving work on Fifteenth street, which consists of brick and concrete work and will cost $10,000.

Bay, O. — John Kaiser & Brothers, Eliya Block, Eliya, O., were the low bidders on the brick town hall to be built for the village of Bay. Cost $10,000.

Cincinnati, O. — The city of Cincinnati is asking sketches on a brown stone addition, to the city hall building, which it is contemplating having erected. Cost $50,000.

Clark County, O. — Graham & Kinneard, Hartman building, Columbus, have been awarded the contract for the grading and macadamizing on Springfield and Washington Road for the Board of County Commissioners. Cost $22,618.

Ross County, O. — J. F. Perry, Chiloee, O., received the contract for the grading and paving work on Lancaster Pike, for the Board of County Commissioners. Cost $12,467.

Mercer County, O. — Morrison & Evans, Celina, O., have been awarded the contract for the road improvement work, consisting of five miles of macadamizing for the Board of County Commissioners. Cost $30,000.

Pittsburgh, Pa. — The contract has been awarded to the Potters Lumber Company for the erection of a brick and stucco sanitarium for the Youngstown Sanitarium. Cost $30,000.


Youngstown, O. — Architect J. L. Decker, Stambaugh building will take bids at once on the erection of a brick, terra cotta and stucco sanitarium for the Youngstown Sanitarium. Cost $50,000.

Hospitals.

Cincinnati, O. — Architect Louis G Dittoe, Provident Bank building, has plans under way for the erection of a brick addition to the Home for the Aged for the Little Sisters of the Poor. Cost $80,000.

Delaware, O. — S. D. Peacock, 8112 E. Commerce street, Cincinnati, O., was the low bidder on the stone and stucco sanitarium which the Board of Trustees of the Delaware Sanitarium will erect on W. Central avenue. The contract for the foundation has been let to David Kraus, 61 N. Terrace avenue, Columbus, Ohio.


New Brighton, Pa. — Architects Carlisle & Sharer, Jenkins Arcade building, Pittsburgh, have sketches about completed for the erection of a brick addition to the Children's Home for the Children's Home Association. Cost $10,000.

Youngstown, O. — Architect J. L. Decker, Stambaugh building will take bids at once on the erection of a brick, terra cotta and stucco sanitarium for the Youngstown Sanitarium. Cost $50,000.

Theatres.

Plymouth, O. — Architect Frank B. Hurst, Glenwood Boulevard, Mansfield, has plans under way for the erection of a brick motion picture theatre and apartment building, for Routhel Dieker. Cost $9,000.

East Liverpool, O. — The contract has been awarded to the Potter's Lumber Company for the erection of a brick and hollow tile reinforced theatre building, for the J. C. Walsh Hotel.

New Boston, O. — Architect W. A. De Voss, First National Bank building, Portsmouth, has plans under completed for the erection of a brick motion pic-
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Keasby & Mattison Co., 209 Third Avenue, Pittsburgh.
ture theatre building for Rudy Kountz, Boston, O. Cost $6,000.

Franklin, Pa. — The E. E. Bailey Company, Chambers building, Oil City, has plans about completed for the erection of a brick and steel fireproof theatre building on Liberty street, for the Orpheum Theatre. Cost $17,000.

Miscellaneous.

Erie, Pa. — The Pennsylvania Lines West, Pennsylvania Station, Pittsburgh, Pa., are taking bids until the 12th inst for the erection of a brick freight house on Sassafras street.

Ashville, O. — The Burrell Engineering Company, 327 South Lasalle street, Chicago, Ill., has plans well under way for the building of a frame and corrugated iron grain elevator for the Ashville Grain Company.

Oil City, Pa. — The Pennsylvania Railroad, Allegheny Division, Philadelphia, Pa., will be ready for bids about July 5, on the erection of bridge and elevated track work.

Hotels.

New Kensington, Pa. — Architect W. E. Snacen, Empire building, Pittsburgh, will take bids about May 22 for the erection of a brick addition to the Howard Hotel. Cost $25,000.

Lien Filed for Labor and Material Furnished.

ALLEGHENY COUNTY, PA.


The Graff Company, a corporation vs. the Buena Vista Land Company, a corporation. Building in the Twenty-sixth ward. Cost $1600.05.


NO LIEN CONTRACTS.

Roy McCormick vs. the Benner Drilling Tool Company. Agreement made May 6 and filed May 9, to erect building in the Twelfth ward. Cost $3,000.


F. Hoffman & Company vs. Schenley Farms Company. Agreement made and filed to erect and complete residence No. 36 in Grant Boulevard, Fourth ward. Cost $17,032.

Bellevue Building Supply Company vs. Brighton Club Company. Agreement made and filed to erect brick residence No. 208 in the Berkeley Plan of Lots, Twenty-seventh ward, Northside.

Wells & McCandless vs. Mrs. Ida B. Chester. Agreement made and filed to erect a duplex residence in Rogers avenue, Bellevue. Cost $8,791.

Broth & Finn vs. Pressed Steel Car Company. Agreement made and filed to do excavating for preparation for sites for plant shops, car store house and transfer table, etc., on Graham street.

Sub-Contract Notes.

Mantle and Tile Work.


The Vermont Marble Company, Cleveland, received contract for department store addition and alterations, Cleveland. Owner, William Taylor & Sons Company, Cleveland.

Patrizio Art Mosaic Company, Pittsburgh, received contract for hospital addition and alterations, Pittsburgh. Owner, St. John's General Hospital, Northside, Pittsburgh.

Patrizio Art Mosaic Company, Pittsburgh, Pa., received contract for the elementary school, Pittsburgh. Owner, the Board of Education.

Electric Work.

F. C. Handy, Sewickley, Pa., received contract for church addition and alteration, Sewickley. Owner, First United Presbyterian Congregation, Sewickley.

Champion Iron Company, Kenton, O., received contract for high school building, Pomeroy, O. Owner, the Board of Education, Pomeroy.


The Burger Iron Works, Akron, O., received contract for light addition, Medina, O. Owner, Medina Foundry Company, Medina.

Mill Work.

The Benise Company, Bradford, Pa., received contract for residence, Bradford. Owner, Fred W. Dana, Bradford.

The Keystone Lumber Company, Pittsburgh, received contract for the fac-
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THE CONSTRUCTION RECORD

Amer. Owner, William J. Crittendon, 22 The Reinforced Tile Roofing Company, Cleveland, O., received contract for factory addition, Cleveland. Owner, Cleveland Worsted Mills Company, Cleveland.

Goebbing Manufacturing Company, Akron, O., received contract for school building, Kenmore, O. Owner, the Board of Education, Kenmore.


C. F. Reed & Brothers, Oakmont, Pa., received contract for motion picture theatre, Oakmont. Owner, J. W. Smith, Aspinwall, Pa.


Falls Creek Planing Mill Company, Falls Creek, Pa., received contract for the township high school building, Brockwayville, Pa. Owner, the Snyder Township School Board, Brockwayville.

Peters Mill Work & Lumber Company, Cleveland, O., received contract for the trim work in the factory building, Cleveland. Owner, E. Zimmerman Company, Cleveland.

Roofing.

The South Hills Hardware Company, Pittsburgh, received contract for residence, Pittsburgh. Owner, Henry Herrman, Dormont, Pittsburgh.

Scott A. White, Pittsburgh, received contract for the apartment building, Dormont, Pa. Owner, Ralph W. Minnear, Bellevue, Pa.

A. P. Miller, Pittsburgh, Pa., received contract for two residences, Dormont. Owner, Oswald Keller, Dormont, Pittsburgh.

GENERAL NEWS.

Architects Peterson & Clark, 250 Market street, Steubenville, O., will soon ask for bids for the interior trimming for a $100,000 hotel building, being constructed at Steubenville, for the Ohio Valley Hospital Association.

Vilsack, Martin & Company, Penn avenue, Pittsburgh, have been awarded the ornamental iron work for the symphony hall and chancery being constructed on Craig street, Pittsburgh, for the Diocese of Pittsburgh. The sheet metal work has been awarded to Frank Limbach, Laverie street, Northside.

The Reinforced Tile Roofing Company, Youngstown, has been awarded the contract for roofing the motion picture theatre building, for R. A. Rowland, Empire building, Pittsburgh. This building is now under course of construction at Whitefield and Kirkwood streets. The general contractors being Golden & Crick, 312 Fifth avenue, Pittsburgh. The mill work, ornamental iron and marble and tile work will soon be awarded.

The Diebold Lumber & Manufacturing Company, Wabash avenue, Pittsburgh, secured the mill work for the addition to the St. Johns General Hospital, Northside, Pittsburgh. The plastering work has been awarded to C. E. Pintz, 330 Sheridan avenue; brick work to Steel Brothers, Wilkinsburg; ornamental iron to the Sommerville Iron & Bronze Company, Butler street; sheet metal work to W. H. Scholes, Northside; plumbing to the Berkeley Plumbing Company, 319 Second avenue.

HOSPITAL FOR SALEM.

The Dawson Construction Company, Pittsburgh, will start work next week on the interior work of a brick and terra cotta building for the Salem City Hospital Association, Salem, O. The building is to have reinforced concrete stairways, hollow tile partitions, maple flooring, oak interior trimming, steam heating system, electric lighting work, etc.

AWARDING FRANKLIN SCHOOL WORK.

Sub-contracts are being awarded by John Osborne & Son, Franklin, Pa., for the new addition to be built in the Franklin, Pa., high school building. The cut stone work has been awarded to Vogan Brothers, Franklin; plastering Charles Reeves, Franklin; steel work, Pittsburgh Bridge & Iron Works, Pittsburgh. Bids are now being taken by F. L. Belsing, secretary of the School Board on plumbing, electrical work, steam heating, etc.

SCHOOL FOR STEUBENVILLE.

Plans will soon be completed by Architects Peterson & Clark, Steubenville, O., for the proposed North Street high school building for the Board of Education, Steubenville. This is to be a two story and basement structure, to contain nine rooms, and will be constructed of brick and steel with composition flooring, ornamental terra cotta, etc. The estimated cost is $75,000.

NEW CLEVELAND DEPARTMENT.

A $100,000 building to contain hotel, store and apartments, is to be built at 1512 St. Clair avenue, Cleveland, for Earnest Schimmelman, St. Clair avenue, Cleveland, plans for which are now being made by the W. S. Ferguson Company, 1500 Euclid building, Cleveland. This building is to have five stores and nine suites together with 60 rooms for hotel purposes. It will be of brick and reinforced concrete construction, measuring 48x100 feet. Bids on the general contract will be taken about May 20. Among the specifications are reinforced concrete floors, composition roofing, skylights and ventilators, kitchen and refrigerating equipment, vacuum cleaning system, low pressure steam heating system, patent store fronts, etc.

SKETCHING HIGH SCHOOL BUILDING.

Architects Ingham & Boyd, Vanderbit building, Pittsburgh, are working on preliminary plans for the proposed $5,000 high school building, which will be erected on Maple avenue, Edgewood, Pa., for the Board of Education, W. J. McCance, secretary. The building will be 158x270 feet, two stories and basement and will contain eight rooms. Full details for the construction have not been decided upon, but structure will have either slate or composition roofing with face brick exterior.

AWARDING ROSENBAUM WORK.

James L. Stewart, Oliver building, who has the contract for constructing the history department store building for the Rosenbaum Company, Liberty and Federal streets, Pittsburgh, has awarded the fireproofing work to the National Fireproofing Company, Pittsburgh; sheet metal and hollow metal windows to the Perritt Iron & Roofing Company, Wilkinsburg; plastering to John A. Roland, 138 Washington street, Chicago; plumbing, George H. Soffel Company, Pittsburgh; painting, E. R. Chuley, Pittsburgh.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

Contracts Awarded:

January 1, 1914 to date $50,205,000
January 1, 1913 $39,963,000
Corresponding period 1910 $44,902,000
Corresponding period 1911 $2,498,000
Corresponding period 1912 $4,906,000
Corresponding period 1913 $61,019,000
Corresponding period 1914 $32,734,000

Contracts Awarded:

Week ending May 13, 1914 $3,108,000
Week ending May 6, 1914 $1,510,000
Week ending May 19, 1914 $1,500,000
Week ending May 2, 1914 $2,048,000
Week ending May 9, 1914 $2,048,000
Week ending May 3, 1914 $69,020,000
Week ending May 10, 1914 $36,920,000
Week ending May 17, 1914 $36,920,000
Week ending May 24, 1914 $36,920,000
Week ending May 31, 1914 $36,920,000

Contracts Awarded:

Corresponding period 1910 $44,902,000
Corresponding period 1911 $2,498,000
Corresponding period 1912 $4,906,000
Corresponding period 1913 $61,019,000
Corresponding period 1914 $32,734,000

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THE CONSTRUCTION RECORD

Classified Index of Advertisers, Continued

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Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.


SITE SELECTED FOR McKEEPSPORT SCHOOL.

The Board of Education, McKeesport, Pa., has selected a site at Haiey and Library streets, McKeesport, on which school building, 140x140 feet at a cost of $100,000. The board expects to select an architect to design its structure about June 8.

SCHOOL FOR ZANESVILLE.

Bids will close early next week on the construction of a two-story brick, stone fireproof school building, for the Board of Education, Zanesville, O. This building will have composition roofing, structural steel frame, fireproof doors, metal sash, face brick exterior, rolling partitions, ornamental iron and steel, etc. Plans were made by Architects C. D. Handshy and H. C. Meyer, Zanesville.

STORAGE BUILDING AT HUNTINGTON.

The Gwinn Milling Company, Columbus, O., intends building a seven-story grain storage and office building at Huntington, W. Va., which will be 42x67 feet in size and cost about $40,000. The building is to have reinforced concrete foundations, composition roofing, metal window frames, hollow tile partitions, concrete bins, spiral steel conveyor system, hot water heating system, etc.

ALLIANCE TO BUILD CITY HALL.

A three-story brick and reinforced concrete structure 90x110 feet is to be constructed for the Board of Public Service, Alliance, O., from plans which are now being made by Architect L. W. Thomas, Pythian building, Cleveland. It is not known definitely when bids will be asked. Material specifications will include reinforced concrete floor construction, composition roofing, fireproof doors, skylights, metal lath, etc. The work will cost $75,000.

RUBBER WORKS TO BE BUILT.

The Santo Rubber Company, Oliver building, Pittsburgh, has secured a site at Niagara Falls, N. Y., on which it will erect a new factory to cost about $60,000. Architect D. A. Croce, Oliver building, has prepared plans for a one-story building 90x260 feet to be used for factory purposes and a two-story administrative building 50x60 feet. The company will manufacture automobile tires and other rubber goods.

ASK SUE-BIDS FOR PITCAIRN SCHOOL.

Madigan & Company, Inc., Indianapolis, Pa., who secured the contract to construct the $100,000 school building for the Board of Education, Pittsburgh, are asking bids on ornamental terra cotta, ornamental iron, reinforced concrete work, etc. The school board will take bids until the 29th inst. for the electric lighting, steam heating, plumbing and piping for vacuum cleaning system.

SIDEWALK LIGHT CONTRACT.

The Mullen Brothers Company, Fulton building, Pittsburgh, manufacturers of replaceable vault lights, has just been awarded the contract to furnish 2,000 square feet of reinforcing sidewalk lights for the Rosenbaum Company, Pittsburgh. The work is also to include the roofing lights for a large marquis. This latter work is a new departure in marquis construction. The Mullen Company has just finished 400 square feet of sidewalk lights for the First National Bank of Allegheny, also 400 square feet of sidewalk for McCrory & Company, Fifth avenue, Pittsburgh.

PLANNING CHARLESTON BUILDING.

Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, have plans under way for a four-story brick and concrete fireproof store and office building which is to be erected at Charleston, W. Va., for Mrs. A. Boitnott, Kanawha street, Charleston. The structure will measure 68x100 feet and will have patent store fronts, metal ceilings, composition roofing, prism class, electric freight elevator, etc.

SCHOOL BOARD READY FOR BIDS.

The Board of Education, Canton, O., is ready for bids on the erection of a two-story reinforced concrete school building, 60x100 feet, which will contain 12 rooms, together with assembly room, manual training and domestic science departments. The building was designed by Architect George Hammond, 1240 Prospect avenue, Cleveland, O. It will have composition roofing, electric lighting, steam heating, etc, and cost about $55,000.

CARNEGIE TECH ENLARGEMENT.

Separate contracts are to be awarded by Architect Henry Hornbostel, Carnegie Institute of Technology, Pittsburgh, for the construction of two additional wings to the School of Applied Design. Each of these wings will be 40x100 feet, six stories high and will be constructed of brick and terra cotta with sheet copper roofing, combination tile and reinforced concrete flooring, tile partitions, skylights, etc. Plans will be completed about July 15. The cost will approximate $300,000.

PITTSBURGH SCHOOL UP FOR BIDS.

Bids are to close May 31 for the erection of the elementary school building on Colombo street, Pittsburgh for the Board of Education, Fulton building. Architects Janssen & Abbott, Century building, Pittsburgh, have the plans for the structure which will measure 67x238 feet, two stories and basement. Alternate bids will be taken, omitting the auditorium. The building will be constructed of brick and stone with reinforced concrete floors, hollow tile partitions, metal window frames and sash, cut stone, structural steel, ornamental iron, sheet metal work, etc.
Hollow Tile Block Build-Up Sewers

New Type of Sewer Section Tested by Fireproofing Manufacturers Last Week at Columbus O., in the Presence of Engineering Experts. Claimed to Resist Very Heavy Water Pressure—Manufacturers Contemplate Active Competition With Cast Iron and Riveted Pipe Producers.

BUILDING sewers out of "Natco" segmental hollow tile block promises to revolutionize sewer construction, according to contractors and engineers who witnessed a demonstration given a few days ago at Columbus, O., by the National Fire Proofing Company. A dozen men prominent in construction work of that character journeyed to the Pittsburgh company's storage yards at Columbus and witnessed what was considered a most satisfactory test. Men prominent in sewer building in Pittsburgh, Cleveland, Cincinnati and Detroit were present.

The test was made by piling 10 tons of cement in bags on the section of the sewer constructed for the test. The weight on the sewer was about 800 pounds to the square foot. The size of the sewer was 48 inches, it being impossible to mould pipe of this size for sewer building. The interesting feature identified with the building of the segmental tile sewer, by which it is technically known, is that it can be built any size. The same principle is applied to the construction of this type of sewer as is used in the building of silos, only a different style block is used. It is of an interlocking pattern and the invention of H. B. Naylor of the National Fire Proofing Company.

The same day a test was made at Columbus another test was made at the Haydenville, O., plant of the fireproofing company. It also withstood a weight pressure of cement bags totaling 800 pounds to the square foot and 3,090 pounds per linear foot.

A New Method.

The tile used in the construction of this type of sewer and which someone declare will replace to a large extent the brick constructed sewer, is salt-glazed so that it will turn any acids or sediment which might come in contact with the tile.

The segmental sewer is made in sections of two pieces and the blocks can be manufactured any size desired. These sections are designated as the outer and inner pieces, so that when it is laid up, it can lap joints from 6 to 9 inches, giving a perfect cement coating and making it air-tight. In the excavating of the sewer it is necessary to have a templet made of the diameter of the outside circle of the sewer, so that the bottom of the lower portion of the ditch can be excavated to a radius to receive the outer section of the Natco sewer tile.

Method of Installation.

This outer section is placed on the bottom of the sewer or excavation, just the same as if it were to be paved with brick or any other material, and cement applied between the joints. After outer segments have been laid so that they work up on each side of the sewer about one-quarter of a block past the first half, the inner segments are placed and worked up to the same height. A round center one inch thick is then inserted in the lower half to arch the top of the sewer, just the same as an ordinary arch.
Effect Of Stipulations In Building Contracts Requiring Alterations Or Extras To Be Ordered In Writing.

Stipulations are frequently inserted in building and construction contracts for the purpose of fixing the entire agreement between the parties in writing and avoiding the uncertainties that arise from oral contracts. These stipulations vary from provisions that no extra work shall be done nor any alteration made except upon a written order, to those which provide that no compensation shall be made for any extra work or alterations unless the same has been done in pursuance of a written order.

According to W. A. Estrich, on “Case and Comment,” all courts treat such stipulations in building and construction contracts as valid. It does not follow, however, that a failure to comply with the requirements of such stipulations and obtain a writing prevents a recovery in all cases, for, except in the case of sealed contracts, it is held that such stipulations may be waived or superseded by subsequent oral transactions between the parties. To hold that such a stipulation may not be waived or modified by subsequent oral transactions would be equivalent to giving it the effect of a statute of frauds, and this the courts have refused to do. It has been stated that parties to a written contract of the character of a building contract are as free to alter it after it has been made as they were to make it, and all attempts on their part by its terms to tie up their freedom of dealing with each other will be futile. Again, it has been stated that it does not stand with reason that the parties can by contract preclude themselves from subsequently contracting in any particular way.

It may be admitted that such a stipulation may be waived or superseded by subsequent oral transactions between the parties, but it should prevent any changed liabilities where the only thing that is subsequently done is the thing which by the express terms of the written contract the parties had the right to do without affecting any such change. The courts have been entirely too free in considering such stipulations waived or superseded by subsequent oral transactions between the parties.

A distinction should be drawn between the various forms of these contractual provisions in this regard. A contract providing simply that no extra work shall be done except upon a written order might be considered waived, or the contractor entitled to recover upon oral transactions subsequently taking place between the parties, when upon the same transactions there should be no recovery under a contract which provides that the owner may make any desired change without avoiding the contract and requiring the additional cost to be added to the contract price, and that no bill or account for extra work shall be allowed or paid unless authority for contracting the same can be shown by a certificate from the owner.

The view is taken in one case that a provision in a contract that the owner should have the right to make alterations and the contractor should comply with such as were ordered in writing was intended merely to require the contractor to perform such alterations or extras as were ordered in writing, but not to interfere with his recovery of the price thereof, if he chose to perform them other than upon an order in writing.

With reference to orders by architects and engineers it may be doubted whether a provision that no extra work shall be ordered, or that the contractor shall make no claim for extra compensation unless ordered by the architect or engineer in writing, is intended to apply to an order by the owner, notwithstanding the cases have assumed, rather than decided, that this is the case.

As stated above, the courts sustain the validity of such provisions in a contract and hold that they must control unless clearly waived or superseded. The theories on which the courts have held such provisions in a contract to be superseded and a recovery allowed in the absence of a written order may be classified as, (1) independent contract, (2) modification or rescission, and (3) waiver. These theories have not always been kept distinct by the courts, although theoretically there is a distinction between them. One court, in speaking of the distinction between rescission and waiver, states that "rescission of a contract is one thing, waiving some of its terms is quite another. Rescission required concurrent action by both parties—a meeting of minds. A waiver is the act of the party for whose benefit the condition exists. The fact that the other party failed to comply with the condition is no evidence that the party to be benefited by it intended to waive it."

In some cases no particular theory is referred to, the court under certain circumstances allowing a recovery for work done in the absence of a written order therefor notwithstanding the provisions of the contract. It is apparent that some of these courts at least, if not all, have had in mind some theory of avoidance of such stipulations in the contract, but have not so expressly stated.

The theory of alteration, rescission, or abandonment is based upon the principle that parties may alter their contract at pleasure by oral agreements, unless the contract be one which the law requires to be evidenced by writing and signed; that the provision that alteration
must be made in writing is not strictly binding upon the parties when both agree to the alteration and change. It is held that a rescission exists whenever the owner has ordered and the contractor agreed to do whatever extra work the parties mutually agreed upon. But in one case it is held that where the contractor does not exact a promise of payment as for extra work upon the owner's ordering the change, and does not inform the owner that it will entail extra expense the owner may well infer that no extra charge will be made.

The theory most frequently adopted in avoiding such stipulations in contracts is that of waiver, it being held in a large number of cases that such a provision in a contract may be waived.

The ultimate question in all cases is the effect the subsequent transactions between the parties have upon their rights and liabilities. The answer to this question depends upon the character of the subsequent transactions. It is uniformly held that the mere doing of extra work or the making of alterations will not entitle the contractor to recover therefor in the absence of a written order. This is true where the owner had no knowledge of the alteration, and has likewise been held true where the owner has had knowledge of the alteration. In the latter case the court states that "there is no foundation in law nor warrant in reason for saying that in a case like the present, where a party stipulates that he will not pay for alterations in the work unless they are agreed upon and reduced to writing beforehand, he shall nevertheless be held responsible upon a quantum meruit. It would be to deny him the benefit of written evidence and subject him to the uncertainties of parol proof depending upon the fluctuating opinions of other persons as to the character and the value of the work, and to bind him against his will.

But where the owner has made changes in the plan of the building and afterwards received the benefit of the work, the contractor may recover compensation although he is unable to secure a writing because the principal contractor has absconded and the superintendent refuses to give the writing. So, where the city building inspectors have ordered a change in the work, and the architect refused to give the writing. So, the owner is liable therefor.

It is when the extra work or alterations are merely ordered by the owner that the dispute comes as to whether the contractor may recover therefor. A recovery is denied by some courts where the work is merely ordered, while others allow a recovery. Others while allowing recovery upon the oral order of the owner, require that the nature and expense of the extra work performed be shown by the parties contending and expected that such work should be done and paid for.

So, where the owner has orally ordered work, and, upon receiving a statement therefore, makes a partial payment and acknowledges a balance due according to the statement, he is liable for the work ordered done.

Some of the cases which allow a recovery upon the oral order of the owner seem to require a benefit to the owner from the extra work or alterations in order that there may be a recovery, but that a benefit to the owner is not sufficient to entitle the contractor to recover for work orally ordered done by the owner has been held in at least one case where the owner received a benefit from the extra work.

Some of the other cases, also, which allow a recovery for work done upon the oral order of the owner are decided under facts which make a strong case in favor of the contractor, either on account of the extensive character of the work done, or on account of a uniform course of ignoring the provisions of the contract.

The weight of reason is with those cases which deny a recovery for work done upon a building covered by the contract upon the mere oral order of the owner, where there is such a stipulation in the contract, as the owner should have a right to presume that any alterations or minor changes ordered by him would be included within the contract price unless he expressly agreed to pay extra for the same, or from the nature and extent of the work ordered it is apparent that the parties contemplated and expected that such work should be paid for as extra.

One court in summarizing the law states that "it makes no difference if the extra work was ordered by the owner, provided it was on the mill. As we have said, the builder need not accede to the owner's views; he may refuse, or he may assent, under the protection afforded by this clause. If extra work be done without it, the right to additional compensation is waived. Any other interpretation of such words would make them valueless to the parties. The appellee's view if adopted, would deny to the owner the privilege of specifying anything—the most trivial—alteration of the work, without incurring the risk of opening the whole contract; then the written agreement would be substituted by a mere quantum meruit claim for work and labor, to be afterwards adjusted upon uncertain oral testimony. And in many cases his mere presence on the premises might subject him to extra charges, on the ground of acquiescence in alterations made by the builder, when it might well be supposed that there was to be no additional charge, because not previously attached to the contract." The view taken in this case is so obviously sound that it is strange that any courts have departed from it.

**COSTLY BUNGALOW PLANNED.**

A $60,000 bungalow is to be built near Worthington, O., by Charles B. Wolf, 3729 Morse avenue, Columbus, O., plans for which are now being made by Architects Monroe, Heath & Blake, 333 West main avenue, Columbus. It will be built of stucco on metal lathe and will measure 9x103 feet. It is planned to have a private water supply system, seven baths, private electric light plant, etc.

**CARRIAGE COMPANY ENLARGING.**

Bids will be taken about June 1, on the construction of a three-story brick addition to the paint shop of the Keystone Carriage & Automobile Works, Erie, Pa. The new building will be 70x105 feet, and will have steel beam girders with corrugated iron siding, composition roofing, yellow flooring, etc. Architect George E. Eichenlaub, 628 State street, Erie, designed the building.

**MUNICIPAL WORK OPEN.**

Separate and scaled proposals will be required by the City Controller, Pittsburgh, Pa., until the 29th inst., for furnishing and completing a kitchen and bakery equipment and refrigerators; also complete laundry equipment, in addition to a refrigerating plant. All the work will be installed in the new Tuberculosis Hospital, Twelfth ward. Plans and specifications have been prepared by Architects Klein & Elliott, Keenan building, Pittsburgh.
LIME AND CEMENT SPECIFICATIONS.

C. W. Boynton, chairman of Committee B-5 on standard specifications for lime and cement, of the American Society of Engineering Contractors, has submitted for his committee the following report:

"A committee of the American Society for Testing Materials has the subject of lime specifications under consideration at the present time. This committee has had the co-operation of various active members of the National Lime Manufacturers' Association of the United States Bureau of Standards. Your committee recommends that no action be taken in regard to specifications for lime until such time as the above mentioned committee has submitted its report."

"The standard specifications for cement of the American Society for Testing Materials, which requires that all tests shall be made in accordance with the methods proposed by the committee on uniform tests of cement of the American Society of Civil Engineers, is recommended for consideration by the society."

"In an executive order of President Taft, dated April 30, 1912, Portland cement purchased after that date by any department, bureau, office or independent establishment of the Government, or that may be used in construction work connected with any of the aforesaid branches of the Government service, is required to conform to the specifications known as the United States Government specification for Portland cement, adopted by the Department Conference, February 13, 1912. This specification is also recommended for consideration by the society."

"The Government specification requires that the cement shall be tested in accordance with the standard methods described in the specification. The standard specifications of the American Society for Testing Materials include specifications for natural and Portland cement. The United States Government specifications covers only Portland cement. The requirements of the two specifications in regard to Portland cement do not differ essentially one from the other."

"Paragraph 1 of the American Society for Testing Materials' specifications, which covers sampling, reads as follows:"

"Cement in barrels shall be sampled through a hole made in the head, or in one of the staves midway between the heads, by means of an auger or a sampling iron similar to that used by sugar inspectors; if in bags, the sample shall be taken from surface to centre. Cement in bins shall be sampled in such a manner as to represent fairly the contents of the bin. The number of samples taken shall be as directed by the engineer, who will determine whether the samples shall be tested separately or mixed."

"The samples shall be passed through a sieve having 20 meshes per linear inch, in order to break up lumps and remove foreign material."

"The provisions of the Government specifications covering sampling are as follows:"

"Sampling: 18.—The selection of the samples for testing will be left to the engineer. The number of packages sampled and the quantity to be taken from each package will depend on the importance of the work, the number of tests to be made, and the facilities for making them."

"17.—The samples should be so taken as to represent fairly the material, and, where conditions permit, at least one barrel in every 50 should be sampled. Before tests are made samples shall be passed through a sieve having 20 meshes per linear inch to remove foreign material. Samples shall be tested separately for physical qualities, but for chemical analysis mixed samples may be used. Every sample should be tested for soundness, but the number of tests for other qualities will be left to the discretion of the engineer."

"The methods of testing recommended by the special committee on uniform tests of cement of the American Society of Civil Engineers, and which are specified in the American Society for Testing Materials' specification, differ from the methods required by the Government specifications principally in regard to two of the tests, viz.: the method of determining the time of setting and the normal consistency. Briefly the American Society's method for determining the time of setting and the normal consistency involves the use of the Vicat needle apparatus. In the Government method the normal consistency is determined by the ball method and the time of setting is determined by the standard Gilmore needles."

"The standard specifications for cement of the American Society for Testing Materials are printed together with the methods of testing recommended by the Special Committee on Uniform Tests of Cement of the American Society of Civil Engineers in pamphlet form."

GENERAL NEWS.

Bids will close May 27 for the heating system to be installed in the high school building for the Board of Education, Salem, O. Architect Charles Osley, Mahoning Bank building, Youngstown, O., has the plans. * * *

The Hyde-Murphy Company, Kidg­way, Pa., has been awarded the interior trim for the $1,600,000 department store building being constructed in Cleveland for the Haile Brothers Company. * * *

Lau & Hogan, Youngstown, O., have been awarded the steel work for the new building of the Youngstown Hospital Association. The building will be 90x96 feet, 3½ stories high. The sheet metal work has been awarded to J. R. Squires, Youngstown; plastering to Dougherty & Brennan, Weck building, Youngstown. * * *

J. Willis Dalzell, 713 House building, Pittsburgh, will hereafter represent the F. A. Requarth Company, Dayton, O., manufacturers of high grade mill and cabinet work. Architect E. E. Bailey, Chambers building, Oil City, Pa., is working on the heating plans for the new high school addition for the Franklin, Pa., school board. These plans will be ready for bids about June 11. * * *

Contracts awarded for the construc­tion of a grade and high school building for the Board of Education, McKees Rocks, Pittsburgh, include the stone work which was secured by Frank Ryan; McKees Rocks; sheet metal work to Frank Limbach, Northside, Pittsburgh; mill work to John Davis, McKees Rocks; roofing to Scott A. White, Oliver building, Pittsburgh. * * *

The Weisberg Roofing Company, Northside, Pittsburgh, has just finished the roofing work on the Imperial Theatre, Beaver avenue, Northside; St. Regis Home, Congress street; Hay building, Twenty-ninth and Smallman street, and is ready to start on the work on the Presbyterian hospital, North­side, Pittsburgh. * * *

The Architectural Iron & Wire Works, Wheeling, W. Va., secured the ornamental iron work on the $100,000 church and parsonage for the Presbyterian Church, Connellsville, Pa. The sheet metal work has been awarded to Stahl & Company, Connellsville. Pa. The general contract is in the hands of Holbert & Spedden, Fairmont, W. Va. * * *

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The sheet metal and roofing work on the new building for the United Hardware & Supply Company, Erie, Pa., has been awarded to the McCreery Roofing Company, Erie. The mill work went to the Commercial Sash & Door Company, Beaver Falls, Pa.; steel work to the Erie Steel Construction Company, Erie, and ornamental iron to Edgar Werth­einer, Pittsburgh.
S. A. Hamel, 317 Giffin avenue, Mt. Oliver, was the low bidder on the erection of a $7,000 brick veneer church on the Northside, for the Emanuel Baptist Congregation.

Architect Thomas Hannah, Keenan building, has been selected to prepare plans for a tapestry brick and terra cotta fireproof institutional building, costing about $30,000, for the Western Theological Seminary, Northside. The work consists of a chapel, library, class rooms, and administration offices.

Architect Charles Bickel, May building, has plans completed for remodeling a brick mercantile building on Penn avenue for M. Arnow & Sons, Fifth avenue and Market street. The work consists of general interior alterations and new store front.

Architect Henry Hornshostel, Carnegie Tech Schools, will award separate contracts for the erection of a brick and terra cotta fireproof addition to the School of Applied Design in the Carnegie Institute of Technology. Cost $500,000.

Architect Paul W. Irwin, Kensington building, has plans completed for a brick fireproof addition to the Glenmore school building, Dormont, for the Board of Education, for which bids will be taken at once. Cost $220,000.

Architect W. E. Snaman, Empire building, will award complete plans for four brick veneer bungalows in Ardmore Farms. Cost $6,000 each.

J. W. Smith, Astinwall, has private plans for a $6,000 brick store and apartment building which he will erect on Delaware avenue, Oakmont.

Architect L. O. Brose, Highland building, is taking separate bids for the erection of a $5,500 brick and tile residence for George Peck, 1333 Melwood avenue.

W. J. Shaw, Fulton building, has been selected architect to prepare plans for the erection of a brick fireproof high school building on Sheridan avenue, Bellevue, for the Board of Education. Cost $174,000.

Architect W. E. Snaman, Empire building, is taking bids on the erection of 16 brick veneer residences in Ardmore Farms. Cost $3,000 each.

The Union Paint Company has private plans for the erection of a $25,000 brick mill constructed factory building, to be built on South avenue, Northside. A contract has been awarded to L. A. Fellabom, 1001 Hoberton avenue, for the erection of an addition and alterations to the brick residence of P. O. Laugher, 1237 Boulevard. Cost $1,000.

The Baldwin Township School Board is taking bids on the erection of a brick and stone fireproof grade school building at Point View. Cost $18,000.

F. L. Fischer, 2004 Watson Way, has awarded the contract to erect a brick and stucco residence on Squirrel Hill for Mrs. Lydia Riesmyer.

Patterson & Shaw, 30 East Robinson street, were the low bidders on the erection of a brick, stone and cement planter addition and alterations to the residence on Morewood Heights belonging to H. Wilfred DuPuy, Empire building. Cost $25,000.

H. E. Beall & Company, Sewickley, received the contract to build a brick residence and garage in Edgeworth, for Charles W. Davis, 202 Quaker road, Sewickley. Cost $20,000.

A contract has been awarded to W. O. Wright, 24 S. Highland avenue, for the erection of a $10,000 brick veneer residence on Winzellel avenue for Robert Lewin, 342 S. Atlantic avenue.

Architect C. G. Mendel, Martin building, is revising plans for the erection of a $3,800 brick residence on Ormsby st., Northside, for Dr. Walter E. Mendel, 405 East Ohio street, Northside.

Louis Dicht, 167 S. Eighteenth street, is taking bids on a double residence to be built on Brownsville road, Carrick. The dwelling will be of brick construction and cost $7,000.

The City of Pittsburgh has extended the time until May 25 for taking bids on the erection of the market house to be built on Diamond street.

P. F. Schellenberger & Company, Oliver building, were the low bidders for the Heights Run bridge for the City of Pittsburgh.

Architect Frank H. Smart, 35 River-view avenue, will be ready for bids next week for erecting a brick duplex residence on Venture street for Joseph Leoffler, 222 Watsonia boulevard.

A contract has been awarded to Irvin C. Crosbie, to build a brick and cement planter bungalow in Ardmore Farms, for J. W. Barrett, Wilkinsburg. Cost $4,500.

The Sanitary Chemical Company is contemplating the erection of a brick fireproof plant addition on Northside, for which no architect has been selected. Cost $15,000.

Architect Carlton Strong, Union Bank building, has received bids for building a $60,000 brick and stone convent in Know Station, for the Sisters of Charity.

Architect Frederick Scheibler, 604 Penn avenue, has plans for a brick bungalow on Beacon street for Mrs. C. M. Logue, 349 Graham street.

Frank Pichier, North avenue, Millvale, has been awarded the contract for the erection of a $3,800 frame residence in Shaler township for George A. Martin, 19 Sedgewick street, Millvale.

Patterson & Shaw, 30 East Robinson street, Northside, will build a brick, stone and cement planter addition and make alterations to the residence in Morewood Heights, for H. Wilfred DuPuy, Empire building. Cost $40,000.

The general contract has been awarded to Hering Brothers, 1010 Middle street, Northside, for alterations to the municipal building in Turtle Creek, Pa., for the borough of Turtle Creek. The work consists of altering the stone foundation to conform with the new grade. Cost $3,500.

Architect W. A. Thomas, Park building, is ready for bids on the erection of an $18,000 brick church addition on Wylie avenue, for the Calvary Baptist Congregation.

The Syria Improvement Association, care Henry L. Dixon, Rosslyn Road, Carnegie, will select an architect soon to prepare plans for the erection of a...
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brick, stone and terra cotta shrine temple on Grant Boulevard. Cost $250,000.

F. Schillo, Third street and Penn avenue, is taking bids on the erection of a $6,000 brick bungalow in Aspinwall, for which he has private plans.

Architect F. A. Park, Kincaid street, will take bids until May 25 on the erection of five brick and shingle residences on Shady and Homestead avenues, for James Ward, Jr., Brown Station. Cost $5,000 each.

**Apartment and Dwellings.**

**Beaver Falls, Pa.**—The contract has been awarded to Clark Kinsey, College Hill, for the erection of a brick residence and garage for Thomas McPherson. Cost $5,000.

**Belleair, O.**—Architect George H. Dieringer, N. Huron street, Wheeling, will be ready for separate bids about June 1 for the erection of a $20,000 brick frame and stucco residence for Charles Keiser.

**Cleveland Heights, O.**—Architect E. A. Ringgold, Rose building, Cleveland, is taking new bids on the erection of a $5,000 brick residence for Ben Davis, 4221 E. Ninety-ninth street.

The contract has been awarded to J. W. Dicks, 1013 Pierpont avenue, for the erection of a $15,000 brick residence and garage on E. Ninety-eighth street, for E. M. Krezelius, 100 Pierpont avenue.

The contract has been awarded to J. Klainman, 4417 Carnegie avenue, to build a $5,000 brick apartment building for Mr. Trumble.

**Columbus, O.**—Architect Charles Jones, Deshler building, Columbus, is ready for bids on the erection of a frame bungalow for Carl J. Schmeeder, 168 E. Blake avenue.

**Fairmont, W. Va.**—G. F. Barnes, First National Bank building, has private plans for a brick veneer residence. The contract has been let to the Hawkins Construction Company and the brick work to Holt & Cranmer. Cost $14,000.

**Greenville, O.**—Theodore Finnarn, Public Square, is contemplating the erection of a $5,000 brick residence on N. Broadway street.

**Sharon, Pa.**—The general contract has been let to Wallet & Carley, for the erection of a brick residence for L. T. Ray. Cost $60,000.

**Cambridge, W. Va.**—Architect George H. Dieringer, N. Huron street, Wheeling, will take bids about May 25 on the erection of a $6,000 brick veneer residence for R. A. McKanebury.

**Canal Dover, O.**—Ross Webster has private plans for a brick veneer residence which he is contemplating having erected some time during the summer.

Wenz Lumber Company has been awarded the contract to build a $1,500 brick veneer residence for Henry Janes.

Architects Peterson & Clark, Steubenville, O., are preparing sketches for the erection of a brick fireproof apartment building for Henry Homan, Wooster avenue. Cost $10,000.

**Columbus, O.**—The contract has been awarded to Petzinger & Schlepp, Livingston avenue, for the erection of a $12,000 brick residence for Howard Monett, Wyandotte building.

Elizabeth E. Lunk, 23 Thurman avenue, will take separate bids at once on the erection of a $7,000 brick residence on Indiana avenue.

The contract has been awarded to Jones & Murray, 227 Wilson avenue, for the erection of a $4,000 brick bungalow for W. M. Jones, clerks, Police Court.

**East Cleveland, O.**—Nathan Welsman, 2663 E. Forty-seventh street, has been awarded the contract to build a $10,000 brick apartment building for Morris Solomon, 239 E. Forty-sixth street.

**Fairmont, W. Va.**—C. W. Hall is taking bids on the erection of a $4,000 brick residence on Pittsburgh avenue.

**Hills Station, Pa.**—Architect A. A. Rehman, Essen street, Bridgeville, Pa., has plans for the erection of a frame residence for John Billotte, Bridgeville. Cost $3,000.

**New Castle, Pa.**—Architect C. E. Owsley, Mahoning Bank building, Youngstown, Ohio, will take bids about June 15 on the erection of a brick residence, stone trim, for Mrs. M. Hoyt. Cost $30,000.

**Parkersburg, W. Va.**—W. H. Wolfe is taking new bids on the erection of a $12,000 brick residence, with stone trim on Sixteenth and Market streets.

**Rowlesburg, W. Va.**—Architect A. A. Gillis, Jacob building, Fairmont, W. Va., has plans completed for the erection of a brick residence for Albert Elison. Cost $6,000.

**Spencer, W. Va.**—Architect R. H. Mair, 222 Fifth avenue, Parkersburg, will be ready for bids shortly on the erection of a $6,000 brick residence for R. Harper.

**Warwood, W. Va.**—P. E. Schaffer, Schumack building, Wheeling, W. Va., will build a $3,300 frame residence for which he is taking separate bids.

**Wheeling, W. Va.**—Architect Edw. Bates Franzein, Schumack building, will be ready for bids about June 1 on the erection of a $25,000 residence for N. E. Whitaker. The building will be of brick and tile construction.

The contract for the carpentry has been let to the W. W. Wood Company, and the masonry to Samuel Nesbit for the brick addition and alterations to the residence of George W. Lutz. Cost $6,000.

**W. A. Wilson, 1409 Main street, is taking preliminary figures on the erection of a brick or frame double residence on Coal street. Cost $8,000.**

**Zelienople, Pa.**—The general contract has been awarded to Osterling Brothers for the erection of a brick veneer residence for Frank Seibert, Third and Ross streets, Pittsburgh. Cost $4,000.

**Columbus, O.**—Amos Boyer & Son, 1260 E. Mound street, for a brick apartment and physicians' office building on Norwich avenue for Mrs. Margaret Ziegler, 819 Franklin avenue, Cost $32,000.

**Architect Lowell & Thomas, 151 E. Broad street, have plans under way for the erection of a $30,000 residence for E. Mithoff, Hayden-Clinton Bank building.**

**Edgartown, O.**—A. L. Lint has private plans for a frame residence which he is contemplating having erected soon. Cost $2,500.

**Eric, Pa.**—Architect George D. Carlin, 628 State street, will have plans completed about June 1 for the erection of a brick and tile residence for W. G. Quinn. Cost $9,000.

**Fairmont, W. Va.**—R. A. Johnston is taking bids on the erection of a frame residence. Cost $3,500.

**Ft. Thomas, Ky.**—Architects Weber, Werner & Atkins, 414 Walnut street, Cincinnati, have plans for a pressed brick residence for M. M. Allen, Tenth and Park avenues, Newport. Cost $19,000.

**Greenville, O.**—Al Neiswonger, 300 E. Fifth street, will take bids about May 25 on the erection of a $6,000 residence, brick and frame construction. The contract for the concrete foundation has been let to Horace Curtis.

**Huntington, W. Va.**—Architect Venus T. Ritter will take bids until May 25 for the erection of a $6,000 residence for Mr. McCue.

**Lorain, O.**—Architect H. O. Wöllmer has plans under way for a frame residence on Tenth street for R. W. Mill, 411 Ninth street. Cost $6,000.

**Maysville, O.**—Architects Weber, Werner & Atkins, Mercantile Library building, Cincinnati, will soon start plans for a $10,000 pressed brick resi-
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McDonald, Pa. — Architect J. N. Campbell, Penn building, Pittsburg, will soon be ready for bids on the erection of a $6,000 brick veneer residence on Station street for A. V. Campbell.

Frank Cadoul, Sturgeon, Pa., is taking bids on sub-contracts for the erection of a $8,500 brick residence for D. L. Williams.

Roseville, O. — William Heckle is taking bids on the erection of a frame and stucco residence for J. H. Fitch, Jr., 102 Wick avenue, for which R. W. Packard, 205 Park avenue, has the general contract.

Union City, Pa. — The contract has been awarded to C. E. Thomas for the erection of a frame residence for R. W. Nova. Cost $4,000.

Washington, Pa. — D. C. Vester has been awarded the general contract to build a $10,000 stucco on metal lath bungalow for Jeff Duncan, 80 S. Main street.

Weston, W. Va. — J. S. Turner has private plans for a brick residence costing $10,000, on which work will be started very soon.

Youngstown, O. — Gus Skoog, Mahoning Bank building, is taking sub-bids on the erection of a frame residence for Arthur Kelso, 312 S. Jackson street. Cost $4,000.

Work will be started soon on the erection of a $20,000 brick venter and stone residence for J. H. Fitch, Jr., 102 Wick avenue, for which W. R. Packard, 205 Park avenue, has the general contract.

Buchannan, W. Va. — L. Heaver will take bids about June 14 for the erection of a brick residence costing $10,000.

Architect A. Reese has plans completed for the erection of a $4,500 brick residence for Eugene Brown.

Cleveland, O. — Architects Stinchcomb & Bier, Engineers building, will be ready for bids about May 22 for the erection of a $5,000 frame house for Dr. N. Stone Scott, Citizens building.

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THE CONSTRUCTION RECORD

Toledo, 0.— John Pott Company, 221 Huron street, was the low bidder on the erection of a brick, concrete and terra cotta laundry building on Detroit avenue, for the Ohio Board of Administration. Cost $20,000.

Cleveland, 0.— R. Armoson, 3125 Woodland avenue, is taking bids on the erection of a brick warehouse on E. Thirty-seventh street. Cost $14,500.

Malta, 0.— Dr. Lee Humphry will take bids shortly on the erection of a frame and stucco store and office building. Cost $4,500.

Marion, 1.— Architect J. J. Sloan, 13 Jefferson street, will take bids about June 10 on the erection of a brick store and apartment building on Center street, for Dr. R. C. Dugan, E. Center street. Cost $12,000.

Massillon, 0.— Bids are being taken by Architect Vernon Redding, Birt building, Mansfield, for the erection of a $30,000 bank building for the First Savings & Loan Company. The time for closing bids has been extended until May 25.

Youngstown, 0.— Hopkins Brothers, 133 Pearl street, were the low bidders for the general contract and Philip Schmid, 515 Walter avenue, the low bidder for the masonry in the erection of a $12,000 brick, hollow tile and steel store and office building for E. A. Page, 45 N. Peoples street.

Erie, Pa.— George B. Swift Company, 189 Madison street, Chicago, has been awarded the contract to build the freight station for the Pennsylvania Lines West, Pittsburgh. The building will be 42x29 feet, one and two stories high, brick construction.

Huntington, W. Va.— No date has been set for closing bids on the construction of a grain storage and office building for the Gwinn Milling Company, Columbus, O. This is to be a seven-story building 42x67 feet and will cost $40,000. Private plans.

Wheeling, W. Va.— R. R. Kitchens & Company, Wheeling, secured the contract to build a seven-story brick, granite, stone and terra cotta bank and office building for the National Bank of West Virginia. Cost $100,000. Architect Charles W. Bates, Board of Trade building, prepared the plans.

Erie, Pa.— Architect J. C. O'Sullivan, 146 E. Thirteenth street, is revising plans for the erection of a brick store and apartment building on East avenue for A. Solomon Ginsburg, 330 E. Tenth street. Cost $8,000.

William Ackerman & Son were the low bidders on the erection of a brick store and apartment building on W. Eighteenth street for Jacob Baker, Twenty-eighth and Myrtle streets. Cost $5,000.

Erie, Pa.— Architects Shutt & Morrison, Marine Bank building, has plans about ready for bids for the erection of a brick store and apartment building, for F. G. Esier, 960 E. Sixth street. Cost $27,000.

Religious.

Farmington, W. Va.— C. E. Minor, Fairmont, W. Va., has been awarded the contract and Holt & Kramer, Fairmont, the contract for the brick work in the erection of a brick and stone church for the First Methodist Congregation. Cost $8,000.

New Comers town, O.— The M. E. Church has private plans for the erection of a brick venter church addition and remodeling for which they will take bids in about a month. Cost $12,000.

Strasburg, O.— The U. B. Congregation is contemplating the erection of a $3,000 brick parsonage for which an architect will soon be selected.

Cleveland, O.— Architects Maasen & Mills, Schofield building, are taking separate bids for the erection of a brick church for the Glenville Baptist Congregation.

Coshocton, O.— Architect R. Dickerson will be ready for bids about June 8 on the erection of a brick stone trimmed, church, costing $10,000, for the Baptist Congregation.

Ingram, Pa.— Architect J. N. Campbell, Penn building, Pittsburgh, will take bids at once on the erection of a brick addition and alterations to the First Presbyterian Church, Prospect avenue. Cost $3,000.

Matoaka, W. Va.— Architect Millard Carter, is ready for estimates for the erection of a cement, plaster, and frame parsonage for the Methodist Congregation.

New Brighton, Pa.— Architects Boyd & Stewart, Century building, Pittsburgh, will take bids at once on the erection of a brick addition to the First Baptist Church on Seventh avenue. Cost $1,000.

West Rushville, O.— The Presbyterian Congregation is taking bids on the erection of a brick and stone church. Cost $12,000.

Cassella, O.— Michael Boemer, R. F. D. No. 2, St. Henry, O., has the general contract and Joseph Vonder Horst, Celina, O., the contract for the brick work in the erection of the St. Marys Catholic Church addition and remodeling. Cost $7,000.

Celina, O.— A. M. Fry, W. Green street, Piqua, has been awarded the con-
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Belmont avenue, has been awarded the contract to build a brick church and Sunday school building for the Methodist Episcopal Congregation. Cost $65,000.

The Hodder Construction Company was awarded the contract to build a brick and stone church for the Himrod Avenue Baptist Church. Cost $5,000.

Youngstown, O. — The Ferro Concrete Construction Company was awarded the contract for the erection of a $450,000 brick and reinforced concrete loft building, for the Methodist Book Concern.

Rowlesburg, W. Va. — Architect S. W. Ford, Union Bank building, Clarksburg, will take bids on the erection of a brick church and parsonage for the M. E. Congregation. Cost $15,000.

The Board of Education will have an addition built and alterations made to the Emmons School for which Architect Ritter will take bids until June 5. Cost $11,000.

The Board of Education will have a $65,000 brick and reinforced concrete fireproof high school building erected for which the following contracts have been let: Masonry, Lau & Strauss, 3068 Marvin avenue, and carpentry to John Meissner, 1384 West Eighty-fifth street, Cleveland, Ohio.

The Board of Education will have a $65,000 brick and reinforced concrete fireproof school building erected for which Architect Ritter will take bids until June 10, for the erection of a brick high and grade school building. The Board of Education will have a $65,000 brick and reinforced concrete grade school building. Cost $50,000.

The Board of Education will have a $65,000 brick and reinforced concrete fireproof high school building. Cost $50,000.

The Board of Education will have an addition built and alterations made to the Emmons School for which Architect Ritter will take bids until June 5. Cost $11,000.

Youngstown, O. — The Dayton Construction Company, Dayton, received the contract to build a brick and reinforced concrete high school building, costing $50,000, for the Board of Education.

Huntington, W. Va. — Architect Verus T. Ritter, will take bids until June 5, for the erection of a school building addition and alterations for the Board of Education. Cost $10,000.

Bids are being taken until June 5, by Architect Ritter, for alterations and addition to be built to the Holderty School. Cost $12,000.

The Board of Education will have an addition of a brick high school building. Cost $11,000.

The Board of Education will have an addition built and alterations made to the Emmons School for which Architect Ritter will take bids until June 5. Cost $11,000.

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The Board of Education will have an addition built and alterations made to the Emmons School for which Architect Ritter will take bids until June 5. Cost $11,000.

Educational.

Alliance, O. — The contract has been awarded to J. C. Devine to build a brick and concrete fireproof grade school building for the Board of Education. It will contain assembly hall, recreation rooms, domestic science and manual training room, etc., and will cost $41,000.

Bridgeport, O. — Architect F. F. Farris, Schumback building, Wheeling, will take bids until May 28 for the erection of a brick fireproof high and grade school building for the Board of Education. Cost $65,000.

Evans City, Pa. — The M. E. Church may select an architect about June 1 to prepare plans for a brick church building. Cost $10,000.

Harlem, O. — The Board of Education is taking bids on the erection of a brick school building. Cost about $2,000.

Salem, O. — Architect Charles Owsley, Mahoning Bank building, Youngstown, has plans under way for the erection of a brick reinforced concrete and hollow tile high school building, costing $85,000, for the Board of Education.

Wheeling, W. Va. — F. F. Farris, Schumback building, has been selected architect to prepare plans for a brick fireproof high school building, on Vane street, for the Board of Education. Cost $75,000.

Youngstown, O. — The Board of Education is accepting bids for a brick, stone, trim fireproof medical college building for the Vanderbilt University. Cost $350,000.

Ripley, O. — Architects Weber, Wener & Adkins, 414 Walnut street, Cincinnati, are preparing sketches for a brick and stone fireproof grade school building. Cost $50,000.

Warrensville, O. — No architect has been selected as yet to prepare the plans for the special district high and grade school building, which the Board of Education is contemplating. It will be
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of brick and steel construction and cost $10,000.

Paulding, O. — The Carnegie Library Association is taking bids until June 8, on the erection of a brick and stone fireproof library building.

Pittsburgh, Pa. — A contract has been awarded to Madigan & Company, Inc., Indiana, Pa., for the erection of a brick and terra cotta reinforced concrete high and grade school building, for the Board of Education. Cost $100,000.

Toledo, O. — Wallis, Bock & Kuhlman. Nashy building, was the low bidder on the erection of a brick and stone grade school building on Cherry street, for the Board of Education. It will contain 16 class rooms, principals and teachers rooms, gymnasium, auditorium, swimming pool, etc., and will cost $30,000.

Canal Dover, O. — Architects Howard & Merriman, 8 East Broad street, Columbus, have plans ready for the erection of a brick fireproof school building, for the Board of Education. Cost $150,000. The building will include a physical and chemical laboratory, domestic science room, gymnasium, auditorium, etc.

Canton, O. — The Board of Education will take bids shortly for the erection of a $55,000 brick and reinforced concrete fireproof grade school building, on East street.

Cleveland, O. — Howard & Merriman, 8 East Broad street, Columbus, O., have been selected architects to prepare plans for a brick college building, for the Western Reserve University. Cost $90,000.

Oxford, O. — Sims & Benzing, 300 Central avenue, Hamilton, O., was the low bidder on the erection of a frame chemical laboratory building, for the Board of Trustees of the Miami University. Cost $11,000.

Roseville, O. — The contract has been awarded to Taylor & Line, Zanesville, for the erection of a brick fireproof high school building, for the Board of Education. Cost $25,000.

East Cleveland, O. — The contract has been awarded to the Cleveland Fireproof Construction Company, Cleveland, for the remodeling of the Shaw high school building for the Board of Education. Cost $15,000.

Elizabethtown, Ky. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, have about completed plans for a $30,000 brick fireproof public grade school building for the Board of Education.

Hopedale, O. — Architect Charles F. McCarty, National Exchange building, Wheeling, W. Va., will probably be ready for bids by June 13 on the erection of two brick veneer and semi-fireproof college school buildings for the Board of Education. Cost $6,000 each.

Olive Hill, Ky. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, have plans under way for the erection of a brick fireproof school and dormitory building for the Home Missionary Society of the Methodist Episcopal Church. Cost $30,000.

Rossford, O. — The Board of Education will take bids until May 27 on the erection of a brick, stone and steel school addition, costing $35,000, which will include six rooms, auditorium, gymnasium, principals' room, teachers' room, etc.

Wheeling, W. Va. — The contract has been awarded to John L. Giesey to do the carpenter work in the porch addition which will be erected for the Mt. De Chantal Academy. Cost $20,000.

New Albany, O. — The Board of Education of Plain township, has selected Rusk & Shats, Brunswick building, Columbus, O., as architects to prepare the plans for a brick township grade school building. Cost $5,000.

Westmoreland City, Pa. — M. R. Welty, Greensburg, Pa., has been awarded the contract to build a $12,000 grade school building, for the North Huntington Township Board of Education.

Ironon, O. — Architects Howard & Merriman, 8 East Broad street, Columbus, O., will be ready for bids about May 29, on the erection of a brick and steel fireproof grade school building, for the Board of Education. Cost $35,000.

Youngstown, O. — The Board of Education has selected Architect E. R. Thompson, Realty Trust building, to prepare the plans for the erection of a $35,000 brick, stone trim, fireproof school building, on Brier Hill.


Washington, O. — The Findlay Clay Products Company has private plans and will award separate contracts for the erection of a brick plant addition, consisting of a new warehouse, steel and corrugated iron, four additional fire brick kilns.

Cleveland, O. — Paul Brothers Company, Citizens building, received the contract for the erection of a brick and reinforced concrete light manufacturing building on East Eighteenth street, for the C. E. Realty Company.

Mannington, W. Va. — J. F. Adamson, Mt. Vernon, O., has the contract to build bottle works, corrugated iron construction, for the Mannington Bottle Works. No site has yet been selected.

Mercer, Pa. — The Planned Sheet Iron & Steel Company has private plans for the erection of a structural steel factory building.

Hospitals.

Cincinnati, O. — Architects Tietig & Lee, Lyric Theatre building, are preparing new plans for a brick, stone trim, fireproof contagious building for the Board of Hospital Commissioners.

Dixmont, Pa. — James L. Stuart, Olver building, Pittsburgh, Pa., was the successful bidder on the interior alterations to the hospital building. The work consists chiefly of new reinforced concrete floor, general interior alterations, painting, etc., and will cost $20,000.

Weston, W. Va. — The Weston General Hospital Company, Inc., is contemplating the erection of a $40,000 brick hospital building for which it has not selected an architect.

Zanesville, O. — Adams Brothers have been awarded the contract for the erection of a brick composite constructed hospital building addition, for the Good Samaritan Hospital.

Cleveland, O. — Architect W. S. Lougee, Marshall building, will close bids this week for the erection of a hospital building on Detroit avenue, N. W., for the St. Johns Hospital. The building will be of brick and steel and reinforced concrete fireproof construction and cost $150,000.

Indian View, O. — C. C. Hobbs, Madisonville, Cincinnati, O., has been awarded the contract to build a $8,500 hospital building, frame construction, for Dr. C. H. Buser.

Society and Club Buildings.

Bradford, Pa. — Architect George E. Eichenlaub, 628 State street, Erie, will be ready for bids about July 1 on the erection of a $35,000 brick, stone and steel fireproof club house for the Bradford Council, Knights of Columbus.

Ford City, Pa. — Architect H. C.
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Telephone Court 1453. 421 Wood Street. Pittsburgh.
office building for the United States Government: Cost $70,000.

Oil City, Pa. — The State Armory Board, care Major A. J. Logan, Twenty-ninth and Liberty streets, Pittsburgh, will take bids soon on the erection of a brick armory building on Second and State streets.

Tuscarawas County, O. — The Board of County Commissioners, care W. C. Kline, New Philadelphia, O., will take bids about July 1 on the erection of a reinforced concrete fireproof city hall, to be built for the Board of Public Service.

Canal Dover, O. — Bids will be taken about July 1, for the construction of a sewerage system and disposal plant for the city of Canal Dover, for which City Engineer George Arnold, New Philadelphia, has plans in progress. Cost $65,000.

Erie, Pa. — The city of Erie will take bids about July 1, for paving and curbing work to be done on Nineteenth street.

The city of Erie is contemplating doing some paving and curbing work on Newman street, in the near future, for which bids will be taken about July 1.

The city of Erie is taking bids on the remodeling of the city hall building, which will cost $20,000.

Greenville, O. — Robert Horn, City building, is the city engineer and Johnson & Fuller, 120 Nassau street, New York city, consulting engineers for the water works improvement for the city of Greenville. Cost $60,000.

Wooster, O. — The Ohio State Board of Agriculture, State House Annex, Columbus, O., will be ready for bids about June 1, on the erection of a brick and concrete creamery and experimental building. Cost $21,000.

Union County, O. — The Board of County Commissioners, Court House, Marysville, O., are taking bids until June 1, on a $9,000 bridge which is to be built over Darby Creek.

Braddock, Pa. — The contract has been awarded to John Clark, Swissvale, Pa., for the construction of a reinforced concrete retaining wall on Sixth street, for the Borough of Braddock. Cost $8,000.

Indian Lake, O. — The State of Ohio J. J. Miller, superintendent of Board of Public Works, Columbus, has private plans for the erection of a reservoir wall, costing $20,000. It will be of con-
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crete construction, 1,800 feet long.

Mercer County, O. — J. J. O'Brien, Lima, O., was the low bidder on the erection of a concrete wall around the St. Marys reservoir for the State of Ohio. Cost $45,000.

Moundsville, W. Va. — W. H. Bateson, Moundsville, was the low bidder for erecting a post office building for the United States Government. It will be of stone facing, fireproof construction.

Niles, O. — The contract has been awarded to Frank Manella, 1457 Lane avenue, Pittsburgh, Pa., for the sewer work costing $100,000 for the Board of Control.

Miscellaneous.

East Liverpool, O. — The contract has been awarded to the Samuel Austin & Sons Company, 1420 Eash avenue, Cleveland, for erecting two bath houses, toilet house, and swimming pool in Nela Park for the National Electric Lamp Association of the General Electric Company. The bath houses will be of stucco on metal lath construction and the swimming pool of reinforced concrete construction.

Morgantown, W. Va. — The Morgantown & Wheeling Railroad Company, care F. Martin, will take bids about June 1 on the erection of two sub-stations.

Cleveland, O. — Hubbell & Benes, 201 Avenue building, have been selected architects to prepare plans for a brick and concrete telephone sub-exchange building addition for the Central Union Telephone Company. Cost $30,000.

Columbus, O. — A contract has been awarded to C. W. Schneider, 633 Linwood avenue, for the erection of a brick and concrete warehouse, boiler house and filing house. Cost $37,000.

Hotels.

Coshottocn, O. — The Park Hotel Company is contemplating remodeling and building an addition to the hotel on Main street. Cost $30,000.

Johnstown, Pa. — Architects Jansen & Abbott, Renshaw building, Pittsburgh, are taking bids on a brick and terra-cotta hotel building, costing $400,000, to be built for the Johnstown Hotel Company on Main street. Bids close May 29.

Mt. Sterling, Ky. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, O., have plans under way for the erection of a brick and steel fireproof hotel building for H. C. McKee, Cost $100,000.

Cedar Point, O. — The Cedar Point Resort Company, care George A. Boeckling, Sandusky, O., will take bids about June 10 for the erection of a hollow tile and stucco composite constructed hotel addition costing $75,000.

Theatres.

Canal Dover, O. — Architect Frederick Baird, Bangor building, Cleveland, O., has plans for a brick and reinforced concrete theatre and apartment building for Isadore Weber. Cost $18,000.


Girard, O. — The Penn Ohio Lumber Company was awarded the contract to build a brick, hollow tile picture theatre, for Jacob Mosk. W. H. Parish, Youngstown, received the contract for the masonry. Cost $8,000.

Tiltonville, O. — Charles W. Bates, Board of Trade building, Wheeling, W. Va., has been selected architect to prepare plans for a brick vaudeville theatre building for Harry Walker, Dillenvalle, O. Cost $15,000.

Liens Filed for Labor and Material Furnished.

ALLEGHENY COUNTY, PA.


NO-LIEN CONTRACTS.


H. E. Beall & Company vs. W. J. Crittenden. Agreement made and filed to erect three-story brick residence at Shields, Pa., for $48,854, and a brick garage for $9,000.

James L. Thompson & Company vs. W. J. Crittenden. Agreement made and filed to complete electric wiring system in Crittenden residence, Shields, Pa., for $3,000.

Iron City Heating Company vs. W. J. Crittenden. Agreement made and filed to install hot water heating system in Crittenden residence, Shields, Pa., for $4,650, and garage $72.

American Laundry Company vs. Trustees of Magee Hospital. Agreement made and filed to furnish kitchen equipment for the Magee Hospital, Emily and Halket streets, for $6,321.

Demmler & Schenk Company vs. Trustees of Magee Hospital. Agreement made and filed to furnish and do plumbing and gas fitting in C. W. Davis residence, Edgewood, Pa., for $1,977.

Sub-Contract Notes.

Ornamental Iron.

The Toledo Wire & Iron Company, Toledo, O., received contract for the office and factory building. Toledo. Owner, Toledo Pipe Threading Machine Company, Toledo.

Structural Steel.

John Eichleay, Jr., Company, Pittsburgh, received contract for repairs and addition to physics building, Columbus, O. Owner, Board of Trustees of the Ohio State University, Columbus.

The Toledo Erecting Company, Toledo, O., received contract for office and factory building, Toledo. Owner, Toledo Pipe Threading Machine Company, Toledo.


Marble and Tile Work.

Marion Thomas, Maysville, Ky., received contract for apartment building, Maysville. Owner, E. T. Kirk, Maysville.

The Logan Company, Pittsburgh, received contract for laboratory building, Pittsburgh. Owner, Hugh Hall, Pittsburgh.

Mill Work.

Maysville Lumber Company, Marion, O., received contract for apartment
THE CONSTRUCTION RECORD

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THE CONSTRUCTION RECORD

Sheets Metal Work

L. I. Lord, Meadville, Pa., received contract for grade school remodel and alteration, Meadville. Owner, Meadville School District, Meadville.

Roofing

F. D. Milliman & Sons, Butler, Pa., received contract for residence, Butler. Owner, S. N. Kidd, Butler.

J. R. Squires, Youngstown, O., received contract for pumping station and boiler house, Youngstown. Owner, City of Youngstown.

H. Fox, Ellwood City, Pa., received contract for grade school building, Wampum, Pa. Owner, the Board of Education, Wampum.

Concrete Work


Electric Work

McKeever Electric Company, Columbus, O., received contract for physics building repair and addition, Columbus. Owner, Board of Trustees of the Ohio State University, Columbus.

The Incandescent Supply Company, Pittsburgh, received contract for research laboratory, Pittsburgh. Owner, Hugh Hall, Pittsburgh.

United Electric Company, Marion, O., received contract for vaudeville theatre building, Marion. Owner, B. P. O. Elks, of Marion.

Ryan Electric Company, Columbus, O., received contract for high school building, Pomeroy, O. Owner, Board of Education, Pomeroy.

Plastering

A. S. McMillen, Bridgeville, Pa., received contract for municipal hall, Bridgeville. Owner, Borough of Bridgeville.

W. E. Corin, Cleveland, O., received contract for residence and garage, East Cleveland. Owner, William H. Knight, Cleveland.

C. L. Atkinson, Zanesville, O., received contract for motion picture theatre, Zanesville. Owner, New Imperial Picture Theatre Company, Zanesville.

Heating

Columbus Heating & Ventilating Company, O., received contract for the high school building, Pomeroy, O. Owner, Board of Education, Pomeroy.

AWARDING SUB-CONTRACTS.


NEW WARREN PLANT TO MAKE ROOFING.

The Western Reserve Steel Company has just been organized in Niles, O., by C. G. Thomas, Ira A. Thomas, and others, who will build a plant for the manufacture of metal roofing, ceiling, siding, etc. It is understood that the new company will take over the interests of the Sykes Iron & Steel Roofing Company, Niles. Bids on the construction and equipment of the new plant will be taken at an early date. The capital stock of the new organization is $400,000.

FRANKLIN CHURCH WORK AWARDED.

C. J. Goerman, Butler, Pa., has been awarded the general contract to build an $80,000 church building for the Franklin, Pa., Methodist Congregation, and has awarded the following sub-contrac"ts: sheet work to J. B. Wilkins, Des Moines Bridge & Iron Works, Pittsburgh; mill work, Vanler Brothers, Brookville, Pa.; red tile roofing and sheet metal work, O. W. Pierce Company, Olean, N. Y.; heating, L. A. Becon, Franklin, Pa.; plumbing fixtures, J. M. Kohler & Son, Franklin. Other sub-contracts are still to be awarded.

ADDITION TO CHURCH.

The First Congregational Church, Cleveland, O., has plans prepared by Architects Mills, Ryan, Beiman & Nordhoff, Ohio building, Toledo, for a one-story stone addition to the church building which is to be used as an auditorium. The new work will call for steel reinforcing, cement floors, gypsum block partitions, terra cotta, terrazzo flooring, structural iron and steel, light iron furring, tile vault, metal frames and sash, cork tile floors, cut stone work, face brick, waterproofing, etc. The estimated cost of the work is $40,000.

MANY BIDDERS FOR GREENSBURG CHURCH.

Contractors from various sections of the country are submitting estimates for the construction of the $290,000 church building for the First Presbyterian Congregation, Greensburg, Pa. Plans made by Architects Graham & Ferguson, 35 W. Forty-second street, New York City, call for a stone fireproof structure 57x121 feet, with a parish house 45x78 feet. Specifications will include structural stone, steel, sandstone trimming, fireproof partitions, light iron work, terrazzo flooring, marble and tile work, ornamental plastering, interior trimming of select oak, ash or chestnut, etc.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

| Year | Corresponding Period | Value
|------|----------------------|-------
| 1914-1915 | 1913-1914 | $52,757,000
| 1913-1914 | 1912-1913 | $4,950,000
| 1912-1913 | 1911-1912 | $4,080,000
| 1911-1912 | 1910-1911 | $2,297,000
| 1910-1911 | 1909-1910 | $2,024,000
| 1910-1911 | 1909-1910 | $2,388,000

The McGinness-Smith Company, Pittsburgh, has secured the contract to install a low pressure steam heating system in the new warehouse for the McKinney Manufacturing Company, Northside, Pittsburgh.
THE CONSTRUCTION RECORD

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METAL LATHING
STEEL CORNER BEADS
LIGHT IRON WORK
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ARCHITECTURAL TERRA COTTA.
Scott A. White, Pittsburgh.

ART AND STAINED GLASS.

ASSOCIATED WITH CEMENT.

ASBESTOS SHINGLES.
Keasbey & Mattison Company, Pittsburgh, Pa.

AUTOMATIC ELEVATORS.
Mathew Gravity Carrier Co., Eilwood City, Pa.

BLUE PRINT PAPER.

BLUE PRINTING.
B. K. Elliott, Bessemer Building, Pittsburgh.

BUILDING PAPER.
Seeger Brothers, Pittsburgh, Pa.

BUILDING SUPPLIES.
Brown Brothers, Broadway and Lincoln Aves., Pittsburgh.

BUILDERS' SUPPLIES.

CARRIAGE SHOWROOMS.

CEMENT.

COLD STORAGE DOORS.

COUNTERS.

CONCRETE FOUNTAINS.
Garber-Emr Co., Wanash Bldg., Pittsburgh.

CONCRETE SIDEWALKS.
Fryer, Thos. R., 11th and Broadway, West Park McKees Rocks, Pa.

COMPOSITION FLOORS.

CONSTRUCTION COVERS.

CONTRACTORS' PUMPS.
Harris Pump & Supply Co., 320 Second Ave., Pittsburgh.

CORNER WORK.

ELEVATORS AND DUMB WAITERS.
Marshall Brothers, South Twenty-first and Mary Sts., Pittsburgh.

ELEVATOR DOORS.
J. Willis Den Holl, Pittsburgh, Pa.

DIRECTORY BOARDS.
J. Willis Den Holl, Pittsburgh, Pa.

DISTRIBUTORS.

DOMESTIC FURNITURE.
B. K. Elliott, Bessemer Building, Pittsburgh.

DRY WALL PLASTER.

EBERT'S WORK.
J. Willis Den Holl, Pittsburgh, Pa.

EXPANDED METAL.

EXPLODED METAL.
J. Willis Den Holl, Pittsburgh, Pa.

EXPLOSIONS.

FIRE ESCAPES.

FIREPROOF DOORS AND PARTITIONS.
J. Willis Den Holl, Pittsburgh, Pa.

FLOOR SURFACING.

GROUNDS WORK.
Mission Embroidery, Jenkins Arcade, Pittsburgh.

GRACEFUL CARPETING.
Mathew Gravity Carrier Co., Eastwood City, Pa.

HARDWOOD DOORS.
Cranston Mfg. Co., Logstown, Ind.

HEATING APPLIANCES.
J. R. Steel, Fulton Bldg., Pittsburgh, Pa.

HEATING (HOT WATER-STEAM).

INTERIOR TRIM.

INTERIOR MILL WORK.

IRON FENCING.

IRON ROOFING AND SIDING.

JOIST HANGERS.
Lau & Hogan, Youngstown, O.

LIGHTING FIXTURES.
Lighting Fixtures, 515 Liberty Ave., Pittsburgh, Pa.

LIGHTING MASTERS.

LUMBER (RETAIL).
Chas. Carnahan, Meyran Ave., Pittsburgh.

LUMBER (RETAIL).
Chas. Carnahan, Meyran Ave., Pittsburgh.

MATERIALS.

MATERIALS DEALERS.
Orner Woodworking Co., Dun bois, Pa.

MECHANICAL WORK.
Pittsburgh, Pa.

MECHANICAL WORK.
Pittsburgh, Pa.

METAL DOORS.

METAL LATH CONSTRUCTION.
J. C. Baxendell, Mt. Oliver, Pittsburgh, Pa.

MIXTURES.
Mathew Gravity Carrier Co., Eastwood City, Pa.

MIXTURES.
Mathew Gravity Carrier Co., Eastwood City, Pa.

MOSS IRON WORKS.
J. E., Wheeling, W. Va.

MOUNTED BANDS.

MUTUAL FIRE.
H. C. Bemis, Bradford, Pa.

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THE CONSTRUCTION RECORD
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MORTAR COLORS.

NON-STAINING CEMENT.

ORNAMENTAL IRON WORK.
Lau & Hogan, Youngstown, O.

ROOFERS (GRAVEL, SLATE AND TILE).
Hahn Brothers, Pittsburgh, Pa.

ROOFING MATERIALS.
Hahn Brothers, Pittsburgh, Pa.
H. B. Morrow, 365 Wash Bldg, Pittsburgh.
Kennedy, D. J., D. 6366 Frankfort Ave., Pittsburgh.
Scott & White, Pittsburgh.
South Hills Hardware Co., West Liberty, Pittsburgh.

SPIRAL WINDOWS.

SAFETY TREADS.
American Mason Safety Tread Co., Builders Exchange, Pittsburgh.
Lau & Hogan, Youngstown, O.

SAND AND GRAVEL.
Kennedy, D. J., D. 6366 Frankfort Ave., Pittsburgh.

SASH AND DOORS.
Pittsburgh Hardwood Door Co., Pittsburgh.

SEWER PIPE.
Challis, D. W. & Son, Sewickley.
Horns, Allen F., Sewickley.
Kennedy, D. J., D. 6366 Frankfort Ave., Pittsburgh.

WALL PLASTER.
Kennedy, D. J., D. 6366 Frankfort Ave., Pittsburgh.

REINFORCING MATERIAL.
Fireproof Materials Co., 320 Liberty St., Pittsburgh.

STAIR BUILDERS.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL WORK.
Ashburt, E. H., Builders Exchange, Pittsburgh.
Lau & Hogan, Youngstown, O.

STUDENT STEEL PAINTING.
Lau & Hogan, Youngstown, O.
William Patricks & Co., Box 105, Pittsburgh.

SUSPENDED CEILINGS.
J. C. Baxendell, Mt. Oliver, Pittsburgh.
Carnahan, Chas., Meyran Ave., Pittsburgh.

TILE (DECORATIVE).

TRUSSET METAL.

VAULT LIGHTS.
Lau & Hogan, Youngstown, O.

WALL BOARD.

WALL LINING.
Empire Flooring Co., Jenkins Arcade, Pittsburgh.

WALL PLASTER.

WALL PLUGS.
Bostwick Steel Lath Co., Niles, O.

WALL TIES.
Bostwick Steel Lath Co., Niles, O.

WAREHOUSE DOORS.

WATERPROOFING.
Ceceit Waterproofing Co., Chicago, Ill.
Kennedy, D. J., D. 6366 Frankfort Ave., Pittsburgh.

WATER WELL PUMPS.
Empire Flooring Co. & Supply Co., Pittsburgh.

WEATHER STRIPS.
Chamberlin Metal Weather Strips Co., Pittsburgh.

WIRE FABRICS.
Wilhers, Steel Co., Pittsburgh.

WIRE GUARD.
Hauny, Chas., S. 806 North Ave., N. B.
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FIRE ESCAPES, ELEVATOR ENCLOSURE
ARTISTIC GRILLE WORK, IRON FENCING.
READY FOR CHURCH BIDS.

Bids are now being asked by the First Baptist Congregation, Altoona, Pa., on the excavating and foundation work for the proposed $60,000 church building, which has been planned by Architect W. H. Nicklas, 1900 Euclid building, Cleveland. The building will be of stone and steel construction and will measure 90x130 feet. Bids on the superstructure will be taken by the architects at once. Specifications include cut stone, face brick, hollow tile, fireproof floors, metal lath, terra cotta, yellow pine and birch interior finish, maple flooring, etc.

REBUILDING SEWICKLEY CHURCH.

Plans will be completed by Architects Alden & Harlow, Farmers Bank building, Pittsburgh, about June 10, for rebuilding the church and parish house of the St. Stephens Episcopal Church, Sewickley, Pa., which will cost about $90,000. The work will call for slate roofing, rolling partitions, art glass, interior finish of cypress, plumbing fixtures, heating, lighting, etc.

HOSPITAL UP FOR BIDS.

A four-story brick and reinforced concrete hospital building is to be erected at Lakewood, O., by the Lakewood Hospital, who has had plans submitted by Architect Paul T. Cahill, 1900 Euclid building, Cleveland. The building will be 38x94 feet, and will cost about $100,000. The work will call for slate roofing, rolling partitions, art glass, interior finish of cypress, plumbing fixtures, heating, lighting, etc.

OLIVER TO BUILD BATH HOUSE.

A $75,000 bath house is to be built at Tenth and Bingham streets, Southside, Pittsburgh, for the Henry W. Oliver Estate, bids on the construction of which close June 2. The building will be 58x83 feet, and will include a swimming pool, office and laundry. Architects McClure & Spahr, Keystone building, Pittsburgh, prepared the plans which call for a brick, stone and terra cotta fireproof structure with concrete foundations, tile roofing, cast stone trimmings, sheet metal work, combination hollow tile and concrete floor construction, etc. The plumbing, heating and electric work will be reserved.

PLANNING BUREAU OF MINES BUILDING.

Plans for the proposed experimental station to be built in Schenley Park, Pittsburgh, for the United States Government, will be ready by Architect Henry Hornbostel, Carnegie Technical Institute, Pittsburgh, about July 1. These plans must be approved by the government officials before bids are taken on the work. The main structure will be two and three stories high, covering an area of 200x330 feet, with a storage building and power house building 170x224 feet, one story high. The structures will have reinforced concrete and tile construction, probably tile roofing, skylights, metal lath, probably hot water heating system, tile partitions, etc. About $500,000 will be spent on the work.
Making of Wooden Stave Columns
Constructive Methods of Column Making. From the Rough Lumber to the Finished Product

When the Greeks originated the Corinthian, Doric, Ionic and other types of column architecture, which in later years were more commonly used by the Romans, it is doubtful whether these masters anticipated that their designs would be copied and their models duplicated in wood by people living thousands of years after them. Yet such are the conditions of the present. Every maker of wooden columns throughout the country is constructing his products along the architectural lines of the ancient Greeks, while introducing several important processes of manufacture having varied features of constructive durability. One of the oldest makers of wooden columns in the country is the American Column Company, Battle Creek, Mich, which has an up-to-date plant for its steel sewed "Stay-Locked" columns, some of the details of making which are here given, together with numerous pictures showing the columns in different stages of their development. In Fig. 1 the effect produced by the use of these columns as part of a pergola is clearly shown in front of the company's office, which, while a separate building, yet directly communicates with the main plant.

In the manufacture of wooden columns for exterior and interior decoration, the former are invariably made of cypress at this factory, while oak, yellow pine and mahogany may be used for interior work according to demand. The various kinds of lumber arrive at the factory in carload lots, already cut into staves, being brought right up to the receiving department on the railroad tracks that immediately adjoin the plant.

The first process through which the cut lumber passes is drying, the department for this consisting of a room 60 feet long, 30 feet wide and approximately 12 feet high, with trolley tracks running down the center of the floor, the planks being loaded direct from the car. On each side of the tracks the room is divided into three sections, each section having a trolley loaded with wood almost to the height of the ceiling. These kilns are of the specially made slow-drying variety, and for thoroughly drying the lumber an average temperature of 100 degrees is maintained throughout the period, which is usually from one week to 10 days. The tracks in the drying department extend outside of the room for several feet into a storage room, so that when the wood is dry enough the trolleys are wheeled outside and are glided into staves.

All this initial work is conducted on the main floor. When the planks have been carefully planed they are cut into staves of various lengths, according to the column that may be required. The staves average in thickness from 1 1/4 to 1 1/2 inches, their width being anywhere from 2 1/4 to 2 3/4 inches. When the staves are cut they are loaded on to wooden tracks and wheeled to the freight elevator, where they are carried to the shaping department on the second floor of the building.

In the manufacture of a 10-inch column there are 14 staves used in its construction. When the staves reach the glueing department the corrugated edges are run several times over a revolving circular brush, then through a bath of water-proofed glue. The staves are then placed in a "form," the corrugated or double V-sides being fitted into one another, making a perfect water-proofed joint. When the column is half made that is to say, when half of the staves are glued together, an inside "form" is inserted and the remainder of the column built around it. When the column is completed the inside "form" is removed, and in order to keep the column true to shape and in position rings are placed over the ends. The column to be then taken to the clamp driving machine, a view of which is shown in Fig. 3. The column seen in this machine has rings around it of several sizes according to its taper. These rings are driven into place by the side arms or clamps of...
the machine, which are worked by the operator, the clamps having an up-and-down movement.

The columns are reinforced further by having two or three iron bands placed at various intervals, and are then taken to the stapling machine, shown in Fig. 4 of the pictures. The use of staples in the manufacture of these columns is one of the important parts of their construction, inasmuch as every joint is reinforced at regular intervals from one end of the column to the other. The staples used in this connection are of the strongest cold-rolled steel, each 5/16 inch wide, made in the factory by a special stapling machine.

The staples are driven at intervals averaging from eight to 10 inches throughout the length of the column, so that in a column of 10 inches diameter no less than 100 staples would be used. The stapling machine holds about 160 of these staples, so that, generally speaking, the machine has to be loaded twice in the stapling of three columns. The staples in the making are strung on steel sticks, and feeding the staples into the stapling machine is quite a simple operation. With the staples securely glued and the joints stapled, the column is made moisture-proof, so that they will not open up under any atmospheric conditions.

In order that the staples may set firmly the columns are left to stand from 12 to 24 hours, according to the size of the keys to the turning and smoothing department on the first floor. On account of the rounding of the staples in the stave sticker, however, there is little turning to be done, but, nevertheless, each column is well turned and smoothed so as to make it perfectly round from end to end.

In Fig. 5 one of the columns is shown on the turning machine. In the workman's left hand can be seen a block which rests on a guide, the grade of which conforms to the exact taper of the column, thus assuring all columns being turned out exactly alike in shape. After the columns have been turned they are well smoothed and are then ready for the oiling and painting department. The cypress columns are primed with one coat of pure linseed oil, while the columns made of other woods are painted white or any desired color. When the columns are dried after painting they are ready for crating, there being either two, three or four in a box according to size. The sides and ends of each column are well protected with packing.

In Fig. 6 is shown a broken section of a column, clearly indicating the appearance of the stay-locked joints and the interior reinforcement of the staves.

Throughout the factory there are also several interesting departments for making such accessories as bases, caps, and also departments where such fancy work as fluting is done. The bases and caps are made on the second floor. The bases on which the columns rest are made either round or square, the former being made of six quadrangular pieces of wood, after which the corners are cut off, while the square bases are made in four sections. In making the latter the pieces are placed in a clamp, nailed with cement-coated nails, and the mitered corners reinforced with corner blocks, and finally glued.
the cases of the round bases, corrugated nails are driven in the top and bottom, thus preventing any possibility of the corners opening up.

The methods of forming channels on a column is known as fluting, this work being done on a fluted lathe located on the main floor. The column is placed on a traveling support and a blunt tool pressed against it makes an even channel down the length of the column. In a column composed of 14 staves there would be 14 flutes inasmuch as the fluting is done in the center of each stave.

In the factory proper, there is approximately 30,000 square feet of floor space, taking the several buildings and departments collectively, while the adjoining warehouse 'B' has a floor space of 10,000 square feet. This storage department has a capacity for carrying 3,000 finished columns ready for immediate shipment and also carries 2,000 rough shafts.

CINDER CONCRETE FLOORS.

An Excellent Material in Need of Rational Code Regulation.

For such purposes as floors for buildings, cinders are used in concrete to a considerable extent, on account of their light weight. Cinder concrete weighs only from two-thirds to three-fourths as much as broken stone or gravel concrete. The strength, however, is correspondingly less and whether for a given strength a floor may be made lighter by the use of cinders will depend upon the conditions of use and the character of the reinforcement.

Cinders for concrete construction are understood to mean either hard or soft coal ashes coming from boiler plants. Coal ashes from a stove or a small house boiler are generally too finely divided to mean either hard or soft coal ashes coming from boiler plains. Coal ashes from a stove or a small house boiler are generally too finely divided to mean either hard or soft coal ashes coming from boiler plains.

Fig. 6—Broken Section of a Column Showing the Interior Reinforcement as Well as the Double V-Joints.

A large place in the field of concrete construction, the lack of uniform methods and the absence of specified unit stresses has brought it into discredit in many circles, and unless some definite means are found to overcome these objections the desired code may prohibit their use entirely.

Mr. Waite calls attention to the fact that floor slabs of stone and gravel concrete reinforced with steel, of the same general form as cinder concrete, have been systematized by engineers so that they are being used on a rational basis, but cinder concrete has been allowed to struggle along, without much attention from engineers in general, and is being used in a varied manner. The cities of Philadelphia, Boston and Chicago require cinder concrete for floor slabs to be designed and reinforced to a certain extent, and with certain values of unit stresses as a limit.

Mr. Waite thinks the excuse that cinder concrete is so extremely variable as not to permit of the assignment of unit stresses, is not well founded. The fact that cinder concrete is being used extensively in engineering construction is sufficient reason for assigning for safety some unit stresses, in order to insure uniformity. The present manner of making arbitrary approvals has led to confusion. Various forms of reinforcement obtained approvals in which the spans, thickness of concrete, quantities of reinforcement and floor loads vary beyond description. In New York City alone there have been 200 approvals for reinforced floor slabs of varying spans, thicknesses of concrete and quantities of reinforcement.

Mr. Waite gives the tabulated results of a larger number of experiments performed on cinder concrete floor slabs, and explains fully how these experiments were performed and the conditions surrounding each experiment. He condemns most emphatically the practice of testing cinder concrete under the most unfavorable conditions, and then recurring to the results of these tests to be used under the most unfavorable conditions.

DORMITORY FOR COLORED PEOPLE.

Bids will close June 5 for constructing a $60,000 dormitory at Institute, W. Va., for the State Board of Control, Charleston, W. Va. The building as designed by Architect H. R. Warne, Capitol street, Charleston, will be 100x138 feet, three stories high, and will be constructed of brick and semi-fireproof material with structural steel frame, lace brick exterior, concrete floors and stairs, composition roofing, hollow tile partitions, etc. The heating and plumbing work will be separate contracts.

Although cinder concrete has acquired!
GENERAL NEWS.

The Paterson-Leitch Company, 936 East Sixty-seventh street, Cleveland, Ohio, which makes a specialty of reinforced concrete supplies, has been awarded the contract for furnishing the reinforcing steel for the new five-story building, for the General Electric Company, Erie, Pa.; reinforcing steel for the Euclid-Davis building, East One Hundred and Fifth street, Cleveland, and similar material for the two-story furniture warehouse for the Conrad-Baisch-Kroehle Co., Wade Park avenue, Cleveland.

Amos Mellinger, Youngstown, Ohio, who is superintending the construction of a $50,000 church and parsonage for the Epworth Methodist Episcopal Congregation, Lakewood and Hillman streets, Youngstown, is taking bids on plastering, painting, plumbing, and steam heating work. The mill work contract has been awarded to the E. C. Tibbits Lumber Company, Youngstown, Ohio.

The Hardin County, Ohio, Building Commissioner, Kenton, Ohio, will soon take bids on the lighting fixtures, to be installed in the new $250,000 court house building. Bids will also be taken on the furniture. The Steininger-Taylor Construction Company, North Eighth street, St. Louis, Missouri, which has the general contract for the building, has awarded the ornamental iron work to Shirk Iron Works Company, St. Louis; the marble and tile work to Charles McDonald, Cincinnati, Ohio; ornamental plastering to Mellinish & Pymer, West Broad street, Columbus, Ohio.

The Bartley-Kennedy Company, Third avenue, Pittsburgh, secured the steam heating contract for the new building to be erected on Lexington avenue, Pittsburgh, for the Pittsburgh Model Engine Company.

The C. F. Morris Company, Columbus, Ohio, has awarded the structural steel contract for the various buildings, to be erected for the Manning Window Glass Company, Manning, West Virginia.

Architect M. Nirdlinger, Diamond Bank building, Pittsburgh, will award separate contracts for the electric work, low pressure steam heating system, lighting fixtures, tile walls and floors, etc., for store and loft building which is to be reconstructed at 126 Federal avenue, Pittsburgh.

The Board of Education, East Sixth and Rockwell streets, Cleveland, will likely purchase the lighting fixtures about June 1, for the $100,000 school building now being constructed at East Fifty-fifth street.

Architects Samuel Hammarford & Sons, Hulbert Block, Cincinnati, Ohio, desire catalogues on hospital equipment. They have been selected to prepare designs for the medical college building to be erected at Nashville, Tenn., for the Vanderbilt University.

Flavin & Watson, Staunton, Virginia, secured the sheet metal and roofing work on the $90,000 school building, for the Board of Education, Ellkins, West Virginia.

The Farris Bridge Company, Jenkins Arcade, Pittsburgh, received the structural steel work on the five-story department store now being erected at Huntington, West Virginia, for C. J. Morris & Company, Charleston. The steam heating work will be done by Gracia & Company, Huntington, and the concrete work by W. H. Handsher, Huntington.

The tile roofing and sheet metal work on the temple being erected by the Roddell Shiden Congregation, Youngstown, Ohio, has been awarded to J. R. Simon, Youngstown; plastering, Doherty & Berman, Wick building, Youngstown, mill work, Jacobs Lumber Company, Youngstown.

l. E. Schieble & Son, Youngstown, Ohio, secured the heating and plumbing work in the new addition for the Youngstown Hospital Association, Youngstown. The electric wiring will be done by the Electric Wiring Company, Youngstown.

The Lindswell-Cebal Company, Washington, D. C., was awarded the tile roof contract for the St. Patrick's R. C. Congregation's new church building at Weston, West Virginia. Bids are being taken on the heating system.

The Findlay Clay Products Company, Washington, Pa., intends building an addition to its brick plant, the work to consist of a one story corrugated iron building, 75x110 feet and additional kiln capacity. Separate contracts are to be awarded.

THEATRE CONTRACT AWARDED.

The contract for the erection and completion of the new and elaborate theatre building to be erected on the Midway addition to McKeesport, West Virginia, has been awarded to J. R. Baker & Bro., Moundsville, West Virginia. The structure will be erected according to plans and specifications by George H. Dieringer and under his supervision. The following sub-contractors will be used: Bridge, stone, concrete and excavating by Podley & Phillips, Moundsville; lumber and mill work by the Anderson & McGregor Company, Dallaire; structural steel, Architectural Iron & Wire Works, Wheeling; plan and ornamental gardenized iron work and metal ceilings, Wheeling Metal & Manufacturing Company, Wheeling; carpenterilor by J. R. Baker & Bro., Moundsville; press brick, The Kittanning Brick & Fire Clay Company, Pittsburgh.

The contract calls for the building to be finished September 1st. McCollough & Reid, local real estate agents are mainly instrumental for the realization of this splendid enterprise for McKeesport and announce that this is but one of the fine new structures contemplated for early erection on the Midway addition which is under their control.

PLACING LARGE ERIE WORK.

Mayer Brothers Construction Company, Erie, Pa., which is building a 10-story store and office building at Twelfth and State streets, Erie, will soon place contracts for composition roofing, terra cotta, marble and tile work, metal and patent store fronts, skylights, steam heating system, electrical work, etc.

PLANNING KENTUCKY HOTEL.

A $100,000 hotel building is to be built at Mt. Sterling, Ky., by H. C. McKee, of that place, who is having plans made by Architects Werner, Warner & Atkins, 221 North street, Cincinnati, Ohio. This is to be a seven-story structure, measuring 75x114 Walnut street, Cincinnati. This is to be a building room on the first floor. It will be constructed of brick and steel.

HARDENING CONCRETE FLOORS.

A new hardening material for the surface of concrete floors contains 95 per cent of iron dust or iron flour. It is added to the dry cement in the proportion of 15 to 25 pounds to each 100 pounds of water. The mixture is used with two parts of sand. This preparation is applied as a top coat to a thickness of one-half to one inch. It forms a hard and durable floor, claimed to be waterproof and not slippery, and is also used for making new concrete adheres to old in repairing.

NEW USE FOR ASBESTOS-CEMENT SHEETS.

Consul W. Henry Robertson, of Manchester, England, reports the growing demand for asbestos-cement sheets. Among the purposes for which this new fireproof and moisture-proof material has already been employed, its use both inside and outside in erecting bungalows, tuberculosis sanatoria, army service depots, barracks, schools, shooting boxes, and motion-picture houses, while several vessels now in service have the hatches and saloon walls and ceilings lined with these sheets.
CONCISE BUILDING INFORMATION

Authentic Building News on New Dwellings, Stores and Offices,
Churches, Schools, Theatres, Etc.

These verified reports appear in advance of all other trade publications.

Pittsburgh.

Howard Hager Company, 604 Penn avenue, was the first low bidder and the Dawson Construction Company, May building, the second low bidder on the erection of a brick and stone fireproof elementary school in Negley District, for the Board of Education.

Eighenrath & Co., 202 Mendota st., Northside, have been awarded the contract to construct a brick swimming pool on Tioga street, for the City of Pittsburgh, and is asking sub-bids on the work.

Architect Henry Hornbostel, Carnegie Institute of Technology, Schenley Park, will have plans ready for final approval about July 1 for a brick, fireproof mines experimental station for the United States Government. The work consists of administration building, chemical laboratories, mechanical laboratories, storage building, power group, boiler house, experimental shafts, service yards, etc. Cost $350,000.

Architect F. A. Park, 1355 Kinsaid street, is taking bids for the erection of five brick and shingle residences for James Ward, Jr., Brown Station, Pittsburgh. Cost $550,000 each.

Architects Aiken & Harlow, Farmers Bank building, will take bids about June 1 on the erection of a brick residence on Neadwood road, Edgeworth, for Richard G. Jennings, Sewickley. Cost $20,000.

A contract has been awarded to R. W. Roehlholz, 2231 Aurora avenue, for the erection of a brick, cement plaster and tile residence in Ardmore Farms, for J. W. Barrett, Wilkinsburg. Cost $4,000.

Fild & Miller, Wabash building, received the contract for the erection of a $10,000 brick and steel auto storage room on Melwood street, for the Atlantic Land Company.

Trustin & Wilson, Bissell Block, received the contract to build a frame bath house on Fifth avenue, for the City of Pittsburgh. Cost $4,000.

J. R. Miliken, 599 Fortress avenue, Bellevue, is contemplating the erection of 16 brick and hollow tile fireproof duplex residences in Bellevue, to cost $25,000.

Charles Oppermann, Castle Shannon, received the contract for the erection of a $51,000 brick veneer residence in Dormont, for Herbert Jones, 114 Lashes street.

Henry Schenk, Century building, was the low bidder on the erection of a $300,000 brick fireproof market house on Diamond street, for the City of Pittsburgh.

The contract has been awarded to A. Richmond & Son, 411 Wood street, for remodeling an office building on Fifth avenue and Smithfield street for the Park Estate. The work will be of granite and cost $12,000.

The Roche-Brunner Building Company, Johnstown building, Cincinnati, was the low bidder on the erection of a brick, stone and ornamental terra cotta fireproof building to contain a dual theatre, offices, etc., on Oliver avenue, for the Harry Davis Enterprise Company. Cost $300,000.

Jacob Arand & Son, 206 Spring street, Mt. Oliver, was awarded the contract to build a brick grade school building in St. Clair borough, for the Board of Education.

Brown Brothers, 1313 Potomac street, Dormont, is taking bids for a church and parish house addition and alterations, for the St. Ann's R. C. Congregation, Castle Shannon. Cost $16,000.

Architect George H. Schwan, Peoples Bank building, will complete plans this week for a $5,000 brick residence in Mt. Washington, for Paul C. Harper, 403 Grandview avenue.

Architects MacClure & Spahr, Keystone building, will take bids until June 1 on the erection of a brick, stone and terra cotta fireproof bath house on Tenth and Bingham streets, for the Henry W. Oliver Estate. Cost $90,000.

H. E. Kennedy & Company, Home Trust building, have plans well under way for the erection of a brick fireproof addition and alterations to the Camera telephone Theatre building on Penn avenue. Cost $12,000.

W. A. Roberts, 330 Fifth avenue, has bids in and will probably award separate contracts at once for the erection of a $50,000 brick residence on Chislett street.

Architects Alden & Harlow, Farmers Bank building, will likely have plans completed by June 10 for a stone church and parish house in Sewickley, for the St. Stephens Episcopal Congregation. Cost $90,000.

Sketches are being made by Architect S. S. Beman, McCormick building, Chicago, III., for an $80,000 brick church addition for the First Church of Christ Scientists.

The City of Pittsburgh will take bids until June 1 for the erection of a concrete and enamel brick tunnel under Grant boulevard, at Washington street. Cost $7,000 each.

A contract has been awarded to Enzian & Semler, 802 Madison avenue, Northside, for the erection of a brick veneer residence for Dr. Walter P. Mendel, 405 E. Ohio street, Northside.

Architect John P. Brennan, Old City Hall, Northside, has plans completed for the erection of a brick house, built in Marshalls for the City of Pittsburgh. Cost $15,000.

The Park Commission of the Borough of Carrick, will take bids until June 1 on a reinforced concrete swimming pool in Carrick Park, Carrick. Cost $3,500.

The Greenfield Lumber Company, McKees Rocks, received the contract to build a block containing seven residences for private parties in McKees Rocks. The buildings will be of brick construction and cost $2,500 each.

The Diamond Forging & Manufacturing Company has private plans for the erection of a manufacturing plant addition on Chartiers street and Ridge avenue. It will be of structural steel and corrugated iron construction and cost $160,000.

Henry Schenk Company, Century building, received contract to remodel the brick mercantile building on Wood street for H. S. Calvin. Cost $8,500.

A & S. Wilson, Third avenue, received contract for the erection of a brick and stone residence and garage on Amberson Place, for W. Linton Smith, Kenwood...
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PITTSBURGH, PENN.
Brown Brothers, Potomac avenue, Dormont, are taking sub-bids on the erection of a 2⅓-story brick residence on Beechwood avenue, Carnegie, which will be built for W. H. Staley, Carnegie. Cost $30,000.

W. J. Gray, Boyland-Welsh building, Beechview, has a contract to build a 2⅔-story brick residence on South Atlantic avenue, for E. J. Michael, 221 N. Graham street. Cost $7,000.

R. G. Davis, Carnegie, has been awarded the contract to build a two-story brick store and apartment building at West Pittsburgh Terrace, for Charles A. Runyon. Plans were made by Architect George Schwan, Peoples Bank building.

Excavation has been started on three brick veneer residences, to be built on the Delmont Plan for W. A. Smith, 2063 Pedmont avenue, Dormont. These will be built from the designs of Architect W. D. Snayman, Empire building.

Brown Brothers, Potomac avenue, Dormont, have work well under way on a 2½-story duplex residence to be constructed on Flenmore avenue, for Harry Mayer, Dormont.

The H. F. Kennedy Company, Home Trust building, will take bids until June 1, on the erection of a $30,000 brick and stone parsonage in the Northside, for the Trinity Methodist Protestant Congregation.

W. Dudley, California avenue, Beechview, has private plans for a $4,000 brick veneer residence, for which the general contract has been let to John Kohler, 1601 Baltimore avenue, Beechview.

Arthur J. C. King, Ohio street, Millvale, is taking bids on the erection of a $6,000 cement stucco residence, in Ross township.

The Board of Education, Aispaul, is contemplating the erection of a brick fireproof high school building on Fourth street. Cost $75,000. An architect has not yet been selected.

Architect S. A. Hall, McKee Place, will be ready for bids about June 2, on the erection of a brick store and apartment building, on Bates street, near Second avenue, for James J. Coyne, 63 Bates street. Cost $9,000.

A contract has been awarded to R. H. Fisher, Holmes street, for the erection of a brick duplex residence, on Forty-second and Davidson street, for C. P. Ruhl, 4903 Butler street. Cost $6,000.

Architect A. R. Snyder, Empire building, is taking separate bids on the erection of a tile and shingle gardener's cottage in Wildwood, for George Wittmier, Jr., Wildwood. Cost $3,000.

Cincinnati, O. — The contract for the erection of a $10,000 duplex residence, pressed brick construction, for Louis Theler, 638 Riddle road, has been awarded to Frank Gillen, 1634 Bruce avenue.

Clariscburg, W. Va. — J. F. White received the contract to build a $3,000 frame addition to the residence of Mr. M. S. Reynolds.

Columbus, O. — Architects Julian & Julian, Park Savings & Loan building, have plans ready for bids on the erection of a double brick residence for W. Z. Zartman, 348 King avenue.

Dayton, O. — Architect Elmer L. Gehr, U. F. building, is ready for bids on the erection of a $5,000 frame residence on South avenue, for Miss E. De Vine, 332 W. Brown street.

Freeport, Pa. — J. E. Myers, Freeport, was awarded the contract to build a $6,000 brick veneer residence for Wilson Dougherty.

Girard, O. — W. I. Holton, 192 Evergreen avenue, Youngstown, received the contract for the erection of a $3,000 frame residence for W. S. Lane.

Uniontown, Pa. — Browning & Jones received the contract for constructing a $10,000 brick and tile residence for H. C. Jeffries, House street.

Washington Court House, O. — Frank Karney will take bids until June 15 on separate contracts for the erection of a frame residence. Cost $7,500.

Bedford, Pa. — J. H. Reynolds, Bedford, and Architect Charles W. Bates, Board of Trade building, Wheeling, are taking bids on the erection of a $15,000 stucco on tile residence.

Bluemfield, W. Va. — Larkin & Williams are taking sub-bids on the erection of a $10,000 brick residence for P. M. Shrewsbury.

Butler, Pa. — The contract has been awarded to Edward E. Wiegand to build a brick residence and garage on McKean street, for W. S. Blakeley. Cost $20,000.

Cleveland, O. — Architect F. S. Fish, Superior building, is taking bids on the erection of an $8,000 brick apartment building for Adam Rosgen, 1984 W. Twenty-eighth street. Cost $8,000.

East Cleveland, O. — C. E. Campbell, Cuyahoga building, Cleveland, will take bids about June 1 on the erection of a $16,000 brick apartment building.

Granville, O. — Architect Schenck & Williams, Arcade building, Dayton, O., will be ready for bids about June 25 on the erection of a $10,000 frame and stucco residence for E. A. Deeds, Main and K. streets, Dayton.

Lancaster, O. — Joseph Mattas, W. Main street, is taking bids on the erection of an $8,000 brick residence.

Mansfield, O. — Richmond Smith E. Third street, is contemplating the erection of a brick double residence on Park avenue, for which no architect has been selected.

New Kensington, Pa. — The contract has been awarded to A. H. Pregan to build a $5,000 brick veneer residence for James H. Bral.

Toledo, O. — Samuel Krause, 2044 Ashland avenue, received the contract for the erection of a frame and brick apartment building on Irving street for A. E. Aubry, 1530 Mott avenue. Cost $17,000.

Wilkins, O. — C. T. Glidden, 266 Oswald street, was awarded the contract for the erection of a frame residence for Karl Hardy.

W. R. Croft, 317 W. Bancroft street, received the contract to erect a $7,000 brick apartment building on Putnam street, for the Croft Realty Company.

Cirforville, O. — Wellington Morris will take bids about July 1 on the erection of a $6,000 brick residence on Court street.

Elyria, O. — William Stolzenberg, 148 Fourth street, has been awarded the contract for the erection of a $10,000 frame residence on East avenue, for A. P. Parsch, 119 Cascade street.

The contract has been awarded to Henry Beck, Masonic Temple, for the erection of a brick and frame residence on Columbus street for H. W. Colson, 11 Cedar street. Cost $5,000.

Erie, Pa. — James D. Walker, 11 W. Eighth street will select an architect soon to prepare plans for a $30,000 brick and steel apartment building which he will erect on Seventh and Peach streets.

An architect will be selected shortly to prepare plans for the erection of a $30,000 apartment building on Peach street for James D. Walker, 11 W. Eighth street. It will be of brick and steel construction.

J. Felbinger, 916 W. Eleventh street, will take bids about June 1 on the erection of a $6,000 brick veneer residence on W. Eighth street.

Freeport, Pa. — The contract has been awarded to the Freeport Plating Mill Company, for the erection of a $3,500 frame residence on Second street, for John Mandors.

Marietta, O. — Foreman & Putman, St. Clair building, Charlestown, W. Va., has been awarded the general contract for the erection of a frame bungalow for B. B. Marquis.

Shaker Heights, O. — The contract has been awarded to Younger & Farmer, 1670 Crawford Road, Cleveland, O., for
IMPROVED CONTRACTORS' DIAPHRAGM PUMP

For Pumping out Sewers, Trenches, Excavations or places containing Muddy or Gritty Water, Grain or other Foreign Matter. Our Figure 473

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WITHEROW STEEL COMPANY
Warehouse, Works and Office, PITTSBURGH, PA.
the erection of a $15,000 brick residence for Don Brookhart.

**Washington Court House, O.** — The general contract has been let to Joe Williams, Dennis Block, for the erection of a $4,500 brick veneer residence for George Cheney.

Captain E. A. Ramsey, Washington street, will take bids about June 15 on the erection of a brick veneer bungalow. Cost $4,000.

**Ashland, O.** — Joseph Gast, 42 Second street, has private plans for a brick, stone trim, apartment building, which will be erected at a cost of $8,500.

**Cincinnati, C.** — William Miller & Sons, 202 Elm street, received contract for the erection of a pressed brick residence on Ohio avenue and Warner streets, for Albert Schefer, Liberty and Central avenues. Cost $5,000.


Architects Schenck & Williams, Arcade building, will be ready for bids about June 3 on the erection of a $15,000 brick and stucco residence on Stoddard avenue, for Theodore Neumann, 31 W. North avenue. The same architects will be ready for bids about June 10 on the erection of a $15,000 brick and stucco residence for Walter J. Phelps, 121 W. First street.

Bids will be taken about June 2 by Architects Schenck & Williams, Arcade building, for the erection of a brick residence in field stone and stucco residence for C. F. Ketlerling, First and Madison avenues. Cost $35,000.

**Oil City, Pa.** — F. M. Crooch received the contract to build a brick residence on the Southside, for H. C. Rush, 115 W. Second street. Cost $9,000.

**Turtle Creek, Pa.** — Architects Langdon & Hobly, Nicholas building, will take bids about June 3 on the erection of a $9,000 brick residence for John V. Lytle, 157 N. Salem avenue.

**Cleveland, C.** — The Superior Architectural Company, 416 Superior building, is taking bids on the erection of a $10,000 stone and brick residence for John V. Lyle, 157 N. Salem avenue.

**Toledo, O.** — Architects Langdon & Hobly, Nicholas building, will take bids about June 3 on the erection of a $9,000 brick residence for John V. Lytle, 157 N. Salem avenue.

**Mew Kensington, Pa.** — Architect A. M. Winter, 221 Reese street, has private plans completed for a brick home for R. C. Powell, 925 Salem avenue. Dayto on: for the erection of a $35,000 stone building and office wing for the Farmers bank.

**Verona, O.** — The contract has been awarded to D. E. Lithart, 575 South Champion avenue, for the erection of a double brick residence, costing $4,500.

**Bridal, O.** — Architect J. J. Jones, Dispatch Annex building, will be ready for bids about June 11 on the erection of a brick and stucco residence, for Dan T. Jones, 20 East Broad street.

**E. D. Lockhart, 575 South Champion avenue, is taking bids on the erection of a double brick residence, costing $4,500.**

Fair Oaks, Pa. — R. B. McDaniell, New Brighton, Pa., received contract for the erection of a $4,500 stone and shingle bungalow, for J. A. Mink.

**Farrell, Pa.** — C. W. Flowers, Sharon, Pa., is taking sub-bids on the erection of a brick residence for Mike Zettl. Cost $3,000.

John Anderson has private plans for a brick residence which he is contemplating having erected. Cost $3,000.

**Homestead, Pa.** — The contract has been awarded to Wolfe & Croubrough to build a $3,500 brick residence for Stephen Jale.

**Logan, O.** — M. H. Cherrington will be ready for bids about June 1 on the erection of a $5,500 brick residence.


**Shaker Heights, O.** — Bids are being taken by Architect H. A. Walsh, Lebanon building, Cleveland, on the erection of a $7,000 cement on wood residence, for George Bissell, 20 Union street, East Cleveland.

**Carrollton, O.** — Architects Langdon & Hobly, Nicholas building, for the erection of a $5,000 brick residence for Theodore Tange.

**Shaker Heights, O.** — William Miller & Sons, 202 Elm street, received contract for the erection of a pressed brick residence on Ohio avenue and Warner streets, for Albert Schefer, Liberty and Central avenues. Cost $5,000.

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**Cincinnati, C.** — Walter Bennett, Hyde Park, has private plans completed for the erection of three brick bungalows. Cost $4,000 each.

**Columbus, O.** — Architect J. A. Jones, Dispatch Annex building, will be ready for bids about June 11 on the erection of a brick residence for Mike Zettl. Cost $3,000.

**Charleston, W. Va.** — Ed. Calderwood, Capitol street, is taking bids on the erection of a brick residence on Elm avenue. Cost $9,000.

**Cincinnati, O.** — Walter Bennett, Hyde Park, has private plans completed for the erection of three brick bungalows. Cost $4,000 each.

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**Shaker Heights, O.** — Bids are being
H. C. BEMIS
MANUFACTURERS OF
HIGH GRADE MILLWORK
BUILT UP TRIM
STAIR WORK
BANK AND OFFICE FIXTURES
INQUIRIES SOLICITED

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PITTSBURGH PENNSYLVANIA
Beckley, W. Va.—Architect H. M. Miller, Henderson building, Roanoke, Va., will be ready for bids about June 1 on the erection of a $15,000 brick store and office building for E. M. Payne.

Charleston, W. Va.—Architect W. H. St. Clair, 1010 Washington street, will take bids until June 1, on revised plans for the erection of a $85,000 brick store and office building on State street for S. A. Moore, Stephens-McDerson building.

Cleveland, O.—Architect O. J. Lorenz, Beckley, W. Va.—Architect H. A. Mil­

ing for E. Twenty-seventh street, for the

000. .

a brick, steel and timber laundry build­

Company received the contract to build

for a pressed brick and stone dairy

Rieg, 2554 Vine street, is preparing plans

planning having erected.

private plans under way for a brick

bottling house which they will erect on

Main street. Cost $4,000.

Toledo, O. — Architects Wachtler,

Bluefield, W. Va.—Architects Hoggeson

Brothers, 7 East Thirty-fourth street,

New York city, will take sub-bids about

June 1, on the erection of a $30,000 stone

and terra cotta bank and office building

for the Flat Top National Bank.

Charleston, W. Va. — C. G. Gates is

contemplating the erection of a brick

and apartment building, for which Abbott Brothers

will probably receive the contract. Cost

$10,000.

The Central Trust Company has not

yet selected an architect to prepare the

plans for the brick fireproof office building

which it contemplates building on Capitol
d, to cost $100,000.

Farrell, Pa. — Plans are being made

by Architect Herbert Johnson for a two-

story brick store residence, to be built

for Frank Carine, at a cost of $5,000.

Bids on the work will be taken about

June 10.

Madison, O. — Nicholas Miller has

been awarded the contract to build a

two-story stone and brick bank building

for the First Savings and Loan Com­
pany, New Brighton, received the

contract for the erection of a brick store

and apartment building on Seventh av­

ue, for Joseph Gatto, Seventh avenue.

Bluefield, W. Va.—Architects Pedigo

& Garry, K. & M. building, will take

bids about June 3 on the erection of a

brick warehouse on Hoge street, for pri­

vate parties. Cost $35,000.

Richards, Dean building, is taking bids

on the erection of a $20,000 brick veneer

store and apartment building for Isaac

Lewin, 1629 Locust street.

Monongahela, Pa.—Calvert & Neff have

private plans under way for a brick

store and residence for J. Collins.

Gallipolis, O. — Charles F. Kircher,

Athena, was the low bidder on the erec­

tion of a brick, concrete and terra cotta

laundry building for the Ohio Board of

Administration. Cost $44,000.

Homestead, Pa.—Architect S. C.

Richards, Dean building, is taking bids

on the erection of a $30,000 brick veneer

store and apartment building for Isaac

Lewin, 1629 Locust street.

Religious.

Altoona, Pa.—Architect W. H. Nick­

las, 1900 Euclid building, Cleveland, O.,

is ready for bids on the erection of a

$60,000 stone and steel church on Seven­

teenth street, for the First Baptist Congre­

gation.

Adamston, W. Va.—John Patton sec­

ured the contract for the erection of a

brick church, costing $10,000, for the

First M. E. Congregation.

Washington Court House, O.—A site

has been selected on North street near

Temple avenue, for the erection of a

$30,000 brick church for the Christian

Church Congregation, who will select an

architect soon.

Erie, Pa.—Architect W. P. Ginther,

Akron, O., will submit sketches soon for

a $100,000 stone and steel fireproof

church, to be erected on Seventh and

Raspberry streets, for the St. Andrews

Catholic Congregation.

Latonia, Ky.—Architect H. M. Mc­

Clarey, Gerke building, Cincinnati, O.,

is writing specifications for a brick and

concrete school building on Church

dempel street, for the Holy Cross R. C. Congre­

gation. Cost $35,000.

Bellefonte, O.—The Christian Congre­

gation is taking general and separate bids

on the erection of a $30,000 brick and

stone church and parsonage on Belmont

dstreet.

Charleston, W. Va. — The St. Pauls

Evangelical Congregation will select an

architect soon to prepare plans for a

church and Sunday school building. It

will be of stone construction and cost

$56,000.

New Castle, Pa.—A. Wishart & Sons,

Sharon, Pa., are taking sub-bids on the
HYDE-MURPHY CO.
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VENERED DOORS

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Interior Finish,

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TWO GOOD THINGS TO USE

THEY GO WELL TOGETHER
erection of a brick and stone church to be built for the St. Margaret's Congregation. Cost $9,000.

New Kensington, Pa.—Architect Thos. G. Easton will submit sketches this week to the Lutheran Congregation for a brick and stone church which will cost $25,000.

Raymonds, O.—The M. E. Congregation will take bids about June 1 for the erection of a frame church costing about $5,000.

Sharon, Pa.—Walls & Carley were the low bidders on the erection of a church for the East Side Baptist Congregation. It will be of brick construction, stone trimmed, and cost $10,000.

Marietta, O.—Wilkins & Lang have been awarded the contract to build a two-story brick parsonage for St. Paul's Evangelical Church.

Charleston, W. Va.—Architect A. G. Hagenhauser, Coyle-Richardson building is completing plans for a two-story brick gymnasium and chapel for the Breane Memorial Church. The building will measure 65x70 feet and cost $20,000. Bids will be taken about June 6.

New Kensington, Pa.—Architect Thos. G. Easton is making sketches for a brick and stone church building to be built on Kennedy avenue, for the Baptist Church.

Princeton, W. Va.—Plans have been completed by Architects Pedigo & Garor, Hinchcliff, for a two-story brick church building for the Roman Catholic Church. Bids will be taken by the owners at a later date.

Springfield, O.—Bids close June 1 on the remodeling of a school and church building for the St. Bernard R. C. Congregation. Plans for which were made by Architect Arthur Kunz, Jr., 955 W. Court street, Cincinnati.

Washington, Pa.—The M. P. Church Congregation of Washington will take bids on the erection of a 4-story Sunday school annex, to measure 45x30 feet, two-story. Plans for the work were made by Architect Henry Hahne, Waynesburg. The building will be of masonry, metal spiked, wood cornice, wood floors, and finish, hard plaster, metal ceilings, ventilators, waterproofing, etc.

Greensburg, Pa.—On account of bids running too high, Architects Granville & Ferguson, 33 W. Forty-second street, New York City, will probably prepare new plans for the erection of a stone, fireproof church for the First Presbyterian Congregation. Cost $250,000.

Ingomar, Pa.—Architect C. W. House- don, Penn building, will take bids until June 15 on the erection of a $100,000 brick and tile church for the Franklin M. E. Congregation.

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**Educational.**

Alpha, O.—Plans have been completed for the brick composite constructed addition and the remodeling of the school building for the Board of Education, who will take bids soon. Cost $8,000.

Ashland, O.—The Carmichael Construction Company, Akron, was the low bidder on the erection of a $110,000 reinforced concrete and brick high school building for the Board of Education. The building will contain 15 class rooms, two teachers' and principal's rooms, manual training and domestic science departments, swimming pool, kindergarten, etc.

Erie County, Pa.—George H. Shick- ler & Sons, Marine Bank building, Erie, were the low bidders on the erection of a brick and steel fireproof constructed school building for the School District of Mill Creek township. Cost $8000.

Natchez, Pa.—A contract has been let to J. C. Stuffers for the improvement work on the school building on Natchez Heights. The work consists of constructing new maple wood floors, plastering walls and ceilings, furnishings, new black boards, etc.

Ashland, O.—The Carmichael Construction Company, Akron, was awarded the contract to build a reinforced concrete and brick high school building on Cottage street, for the Board of Education. The building will contain 15 class rooms, two teachers' and principal's rooms, manual training and domestic science rooms, swimming pool, kindergarten, etc. Cost $19,000.

Carnegie, Pa.—The Board of Education is taking bids for the erection of a $100,000 brick high school building addition on Robert avenue, containing class rooms, gymnasium, kitchen, etc.

Clarksburg, O.—Architect J. Howard Hicks, Dennis Block, Washington Court house, will be ready for bids about June 15 on the erection of a $15,000 brick high school building for the Board of Education.

Elyria, O.—L. A. Barrett & Company, Lorain, is asking bids on the erection of a brick fireproof high school building for the Board of Education. Cost $10,000.

Youngstown, O.—Architect C. E. Ow- sley, Mahoning Bank building, has been selected to prepare plans for the erection of a brick fireproof constructed school building for the Board of Education.

Athens, W. Va.—Architect H. R. Warme, Capitol street, Charleston, is taking bids on the erection of a brick mill constructed normal school building, for the State Board of Control. Cost $10,000.

Cleveland, O.—Plans are being pre- pared by Architect R. C. McCormick for the erection of a school building for the Board of Education. The building will be of brick reinforced concrete fireproof construction and cost $150,000.

Erie, Pa.—Architect W. B. Ittner, St. Louis, Mo., has plans about completed for the erection of a brick and fireproof grade school building for the Board of Education. The building will contain a gymnasium, shower baths, assembly rooms, manual training and domestic science departments, kindergartens, etc., and will cost $150,000.

Fairhaven, O.—The Board of Educa- tion is taking bids on the erection of a brick grade school building costing $10,000.

Hudson, O.—Architect J. W. Cress- wellk Gorbasier, Lennox building, Clevel- and, is preparing sketches for a high and grade school building, to be erected for the Board of Education. It will be of steel, reinforced concrete and hollow- tile fireproof construction, and cost $90,000.

La Carne, O.—M. Rabitt & Sons, NASby building, Toledo, received the contract to build a school building for the Board of Education. It will be of pressed brick construction and cost $20,000.

New California, O.—L. D. Hetrick Brothers, 799 S. Ohio street, Columbus, received the contract for the erection of a frame grade and high school building addition for the Board of Education.

North Piscarain, Pa.—Architect S. C. Richard & Company, 140 Library street, Braddock, Pa., are taking sub-bids for the erection of a brick school building for the Patton Township School Board. Cost $10,000.

Pomeroy, O.—E. C. Dow received the contract to build a $100,000 brick fireproof Carnegie Library on Second street, for the Board of Trustees of the Carnegie Library.

Sibbing, O.—The Board of Education is taking bids on the erection of a brick and stone school building.

Redstone Township, Pa.—The Brownsville Construction Company, Brownsville, was awarded the contract for building a brick school addition to the Orient School for the School of Ro- stone township, Brownsville. Cost $6,000.

Scio, O.—Willings Brothers, Belleve- ry, Pa., have been awarded the contract for the erection of a brick and stone semi- fireproof high and grade school build- ing for the Board of Education. The building will contain class rooms, office, etc.
GOOD ENOUGH FOR THE BEST

Residence of Mr. John C. Oliver, Edgeworth, Pa.

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auditorium, recreation rooms, chemical and physical laboratories, etc., and will cost $26,218.

Brecksville, O.—The Board of Education will take bids until June 8, on the erection of a brick school building. Cost $25,000.

Kingview, Pa.—Architect John H. Harman, First National Bank building, Uniontown will take bids until June 3, on the erection of a brick school building, for the School Board of the School District of Upper Tyrone township.

Rudolph, O.—The contract has been awarded to Winters & Wilson, Arcade building, Columbus, O., for the erection of a $79,000 brick and steel fireproof grade school building, on Pleasant Heights for the Board of Education.

J. J. Coyne received the contract for building a two-story stucco on home street for the Dayton Aerial Fraternal Society hall for the Croation Society. Cost $10,000.

Canton, O.—Architect George L. Die-ringer, New Berlin, O., for the erection of a foundry building on Twelfth and Elm streets, for which it has not yet selected an architect.

Springfield, O.—The general contract has been awarded to George B. Hicks, South Charlestown, O., for the erection of a reinforced concrete fireproof factory addition on Sheridan avenue, for the Lagonda Manufacturing Company. Cost $25,000.

Washington Court House, O.—C. L. Craig Company will take bids soon on the erection of a $7,000 brick factory building.

Du Bois, Pa.—Nicola Building Company, Penn avenue and Lamberti street, Pittsburgh, was awarded the contract for the reinforced concrete floor in the central power plant for the Northwestern Mining & Exchange Company. Cost $100,000.

Owens Station, O.—The Marion National Mill Company, 30 E. Center street, Marion, is contemplating the erection of a $16,000 lime plant of concrete, brick, or corrugated iron construction.

Sandusky, O.—The Frohman Chemical Company is contemplating the erection of a steel and concrete fireproof manufacturing building in West End.

Toledo, O.—The Western Manufacturing Company has purchased a site on Water street and will soon begin the erection of a two or three-story mill addition. No definite plans have been prepared for the work.

Cincinnati, O.—Architects Des Jardins & Hayward, Pickering building will take bids until June 17 on the erection of a $30,000 brick with stone trim auditorium, for the Dayton Aerial Fraternal Order of Eagles No. 321. The building will be of brick and steel construction.

State, County and Municipal.

Cincinnati, O.—Architects Des Jardins & Hayward, Pickering building will take bids until June 17 on the erection of a $30,000 brick with stone trim auditorium, for the Dayton Aerial Fraternal Order of Eagles No. 321. The building will be of brick and steel construction.

Johnstown, W. Va.—Plans are being prepared by county road engineer C. C. Frito, Clarksburg, for the erection of a concrete arch and girder bridge to be built over Roaring Creek for the Board of County Commissioners.

North Lewisburg, O.—The Village of North Lewisburg will ask bids about June 15 on grading and paving work to be done on various streets. It consists of 10,000 square yards of brick or creosoted black, stone or concrete curb, and will cost about $50,000.

Ross County, O.—S. M. Darby, Frankfort, O., received the contract for concrete work in road improvements for the Board of County Commissioners. Cost $17,238.

The contract for the sub-structure has been let to Oster M. Junk, Chillicothe, O., and the super-structure to the Capitol Construction Company, Ruggery building, Columbus, O., for a bridge over the Scioto river for the Board of County Commissioners. Cost $89,130.

Cleveland, O.—Could & Maybach, 855 E. One Hundred and Fiftieth street, was the first low bidder on the construction
**THE CONSTRUCTION RECORD**

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It effects a saving of 20 to 30 per cent in gas bills. Costs less than a coal boiler of equal rating. Ask for descriptive catalogue.

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of a brick storm sewer for the City of Cleveland. Cost $30,000.

Parkersburg, W. Va.—County Road Engineer Burdette Woodward, has plans completed for road improvement work in the Williams and Parkersburg Districts. The work consists of seven miles of concrete work and will cost $75,000.

Worthington, O.—The Board of County Commissioners will take bids about June 16 on the grading and paving work which consists of brick paving with concrete and stone curb.

Cleveland, O.—The City of Cleveland will probably take bids about July 15 for the erection of a horticulture building, costing $160,000. The building will be of marble construction.

Fairchance, Pa.—Engineer George Porter, Seator building, Uniontown, Pa., is taking bids on street improvement work on Main and Church streets. Wood block paving will be used.

Institute, W. Va.—The State Board of Control will take bids until June 5 on the erection of a $35,000 brick dormitory.

Pleasant, W. Va.—G. W. Childs, Flat Rock, W. Va., has plans under way for the erection of a bridge for the Board of County Commissioners.

County Engineer G. W. Childs has plans under way for the erection of a bridge, concrete girder type, across Crooked Creek, for the Board of County Commissioners.

Wood County, W. Va.—The Board of County Commissioners, care Percy Nicely, Parkersburg, W. Va., will take bids soon for the paving work in Clay District. Cost: $40,000.

Altavista, Pa.—D. C. Serber, 3 Madison avenue, New York City, was the low bidder for the erection of a reinforced concrete reservoir on Second avenue, from Twelfth to Thirteenth street, for the City of Altoona. The work will require 24,811 cubic yards of concrete and will cost $61,600.

Chillicothe, O.—Architect John Counter, Marietta Pike, R. F. D., has plans started for the erection of a $20,000 brick fire station on S. Paint street, for the City of Chillicothe.

Miamisburg, O.—County Engineer Victor C. Smith, Court House building, Dayton, will be ready for bids about June 25 on the erection of a steel truss bridge over Miami river for the Board of County Commissioners.

Chillicothe, O.—John Phillips, Eastlake building, is contemplating the erection of a brick residence for which no architect has been selected. Cost $6,000.

Columbus, O.—A contract has been awarded to J. B. Hoffman & J. E. Coffman, 99 S. Ogden avenue, for the erection of a brick residence on Park avenue for Jesse Van Horn, 23 E. Spring street. Cost $6,000.

Cincinnati, O.—Edgar H. Latham, Columbus Savings & Trust building, was the low bidder on the erection of a $65,000 brick and concrete cottage for the Ohio Board of Administration.

Lakewood, O.—J. J. Minick, 164 Lauderdale avenue, has been awarded the contract to build a brick residence for Mrs. W. W. Slay, 167 Crawford avenue, Cleveland, O. Cost: $9,000.

Shinnston, W. Va.—R. H. Lucas is taking bids on the erection of a brick and stucco residence costing $4,000.

Tarentum, Pa.—W. C. Allen, Natrona, received the contract to build a $2,000 brick residence addition on Fifth avenue for William Chandler, Fifth avenue.

Wellsville, W. Va.—The Banks Construction Company, Charleroi, W. Va., was awarded the contract for the erection of two brick residences on Commerce street, for Jasper Potts, Main street. Cost: $15,000.

Cleveland, O.—The contract for constructing a storm and sanitary sewer on E. Ninety-third street for the City of Cleveland, will be awarded to the Brookside Construction Company, 303 W. Twentieth street, which was the low bidder.

Emlon, O.—The contract for making street improvements for the Village of Emlon has been awarded to A. Wite.

Warwood, W. Va.—Earl N. Everson, Brilliant, O., was the low bidder for the erection of a one-story brick power house which is to be built near dam No. 12, for the United States Government.

Oil City, Pa.—The city of Oil City is contemplating paving and curbing work on Sixth street, consisting of paving, concrete curbs, gutters, etc. Cost: $20,000.

Hownshim, O.—E. J. Lander, Canton, O., was the low bidder on the construction of a sewage disposal plant. Cost: $30,000.

Miscellaneous.

Columbus, O.—Bids submitted for the erection of a freight house and kiln room for the Board of Trustees of the Ohio University, have been rejected and new bids will be taken at an early date. The structure will be one story 30x60 feet brick and concrete construction and will be built from designs of Architect J. N. Bradford, Brown Hall.

Martinsburg, W. Va.—The Eastern Panhandle Fair Association will probably award contract next week for the erection of a grandstand and fair buildings. The grandstand will be of reinforced concrete construction and will be 300 feet long. The work will also include artificial lake and various exhibition buildings.

Columbus, O.—The Columbus, Kenton & Toledo Traction Company is now being financed to build an electric railway from Richwood to Findlay, O., a distance of 50 miles. The work will require nine steel bridges, concrete culverts, grading, ballasting, passenger and freight stations, etc. C. W. Wiswell, Kenton, is the chief engineer.

Chillicothe, O.—The Standard Cereal Company is having plans prepared by the Barrell Engineering Company, Chamber of Commerce Building, Detroit, Mich., for a brick and reinforced concrete elevator and storage building. The work will cost $40,000.

Princeton, W. Va.—The Princeton Power Company, S. J. Evans, general
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manager, has had plans completed by George H. Hill, Thornton building, Bluefield, for an electric line to be built from Princeton to Bluefield, a distance of 12 miles. The car barns will probably be located at Bluefield. Separate contracts will likely be awarded.

Hospitals.

New Kensington, Pa.—The architect will soon be announced to prepare plans for the erection of a $45,000 brick and stone fireproof hospital building for the Citizens General Hospital.

Covington, Pa.—The Covington Hospital has preliminary plans under way for the erection of a $30,000 brick and stone hospital building.

Hotels.

Brantford, O.—Bids will close June 1 on the remodeling of a building for the Hotel Florida, to be constructed for James W. Smith, managers, cost $20,000. Plans were made by Architect L. C. Logan, Huntington, W. Va.

Mansfield, O.—Architect Vernon Bedingfield, M. B. building, has been selected to prepare plans for a two-story brick school and hollow tile school addition, for Julius Webber.

Bucyrus, O.—A contract has been awarded to Twigg Pice for the erection of a brick hotel addition, for James Ward, Jr., cost $15,000, for F. J. Carroll & Marshall P. Elbeison.

Charleston, Va. — Ragdan, Baxter & Norford, Nashville, Tenn., secured the work of building a $30,000 hotel addition, brick, semi-fireproof construction, for Dr. J. Fleetwood Butt, Charleston, W. Va.

Addison, Pa. — No date has been set for closing bids on the erection of a three-story brick hotel building, 50x65 feet, to be constructed for James W. Rush, from plans made by Architect A. P. Cooper, Uniontown, Pa.

Lumber and Mill Work.

Gotshall Brothers, Archbold, O., received contract for church, Archbold, Owner, German Reformed Church, Archbold.

Plastering.


George W. Currim, Pittsburgh, Pa., received contract for armory building, Pittsburgh, Owner, State Armory Board, Harrisburg, Pa.

J. A. Edwards, Pittsburgh, received contract for four residences, Northside, Pittsburgh, Owner, T. E. Wilson, Pittsburgh.

Plumbing.

Buehrle Plumbing Company, Pittsburgh, Pa., received contract for elementary school, Pittsburgh, Owner, the Board of Education, Pittsburgh.

Electric Work.

Morganstern Electric Company, Pittsburgh, Pa., received contract for elementary school, Pittsburgh, Owner, the Board of Education, Pittsburgh.

Structural Steel.


Burger Iron Company, Akron, O., received contract for garage and main hall, Barberton, O., Owner, Brotzman & Sigler, Barberton.

C. E. Morris, Columbus, O., received contract for store building, New Dover, O., Owner, Board of Education of Dover township.

Ornamental Iron Work.

P. Reiseck, Pittsburgh, Pa., received contract for theatre building, Sandusky, O., Owner, Charles Blatz, Sandusky.

Lumber and Mill Work.

A. A. Vincent, Zanesville, O., received contract for church and Sunday school, Zanesville. Owner, Park Street M. E. Church, Zanesville.

Sandusky Sash Door & Lumber Company, Sandusky, O., received contract for theatre, Sandusky, O., Owner, Charles Blatz, Sandusky.


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Subscription price $5 per year in advance. Advertising rates on application.

Papers are not stopped at the end of subscription unless the subscribers order them so and pay up the arrears.

ARCHITECTS KING & MILLS, Woods building, Ashland, Ky., have plans for a three-story brick and semi-fireproof warehouse 100x142 feet, to be built for Crump & Fields, Ashland. Material specifications will include structural steel, metal lath and fireproofing, etc. It is indefinite when bids will be taken.

WAREHOUSE FOR ASHLAND.

The Board of Education, 511 West Court street, Cincinnati, O., plans to build a $700,000 school building in the West End district and is having various architects in Cincinnati prepare competitive sketches. The building is to be built in the most approved manner and will be fireproof in construction.

COSTLY SCHOOL FOR CINCINNATI.

The Loyal Order of Moose, Charleroi, Pa., and Architect J. A. Loiman, Monessen, Pa., are asking bids on the erection of a three-story brick and stone club house 50x100 feet, which is to be built at a cost of $30,000. Material requirements will consist of metal lath, artificial cut stone, slate and concrete roofing, ornamental terra cotta, composition and tile flooring, electric lighting fixtures, hot water heating, vacuum cleaning system, etc.

ASKING BIDS ON CLUB HOUSE.

The Twin City Hospital Association, Denniston, O., will take bids until the 20th inst, for constructing a three-story brick fireproof hospital building, 40x100 feet, plans for which have been completed by Architect Frank L. Packard, Hayden building, Columbus, O. Among the requirements will be laundry equipment, elevator, skylights, ventilators, etc.

ASKING BIDS ON HOSPITAL.

The McGinnis Presbyterian Congregation, Pitcairn, Pa., has selected Architects Fulton & Butler, Uniontown, Pa., to prepare plans for a one-story brick or stone church building, 69x87 feet, which is to be constructed at Third and Wall streets, Pitcairn. The building will have a seating capacity of 400, with Sunday school rooms. The work will also include the brick veneering of the present parsonage to conform with the new church structure. The building will have slate roofing, structural steel frame, electric lighting fixtures, etc.

APARTMENT FOR NEW KENSINGTON.

A three-story and basement brick fireproof store and apartment building is to be built on Fifth avenue, New Kensington, for G. M. Evans. The building, which is being planned by Architect W. J. Laughlin, New Kensington, will measure 30x100 feet and will have tile or reinforced concrete floors, composition roofing, tile partitions, metal ceilings, patent store fronts, skylights, marble tile work, low pressure steam heating system, fireproofing, ventilators, electric freight elevator, etc.

HOSPITAL BIDS REJECTED.

On account of the bids exceeding the amount appropriated for erecting a tuberculosis hospital for the city of Pittsburgh at Woodville, Pa., all bids are being rejected and the plans will be revised by Architects Mccasters & Crooks, Curry building, Pittsburgh, so that the cost of the erection does not exceed $180,000. The former plans called for a one and two-story administration and dining room building 45x243 feet, with five cottages 37x126 feet, two cottages 80x100 feet, and a two-story servants' building 42x60 feet. These were all to be built of stucco and metal lath.

WILL AWARD THEATRE CONTRACT.

The general contract for building a one-story stone theatre building at Butler, Pa., for C. E. Carlton, Main street, Butler, is to be awarded at an early date. This building, which will measure 40x92 feet, will contain store rooms, offices, auditorium, bowing alleys, etc. Plans for the structure were made by Architect E. B. Lee, Peoples Bank building, Pittsburgh. Material specifications will include structural steel, reinforced concrete work, ornamental terra cotta, slate roofing, hollow tile, store fronts, sidewalk lights, face brick, sheet metal work, ornamental plastering, skylight, ventilators, metal furring and lathing, etc.

LORAIN SCHOOL UP FOR BIDS.

The city of Lorain, O., will soon ask bids for the construction of a two-story brick and steel fireproof school building, 106x110 feet, which is to cost about $60,000. Architect H. O. Wurmscr, Lorain, prepared the plans and specifications, the latter calling for reinforced concrete roof and floor construction, composition roofing, terra cotta, sheet metal work, interior finish of oak, birch flooring, cut stone, face brick, metal lath, hollow tile, ventilating system, heating, lighting, etc, etc.

RECORD THE CONSTRUCTION
A great problem of the city merchants, especially those in the busy section of the city where rents are high, is to get a maximum of window display space so as to make an attractive display of merchandise and an inviting store entrance. Window display space is recognized more and more as a valuable asset and as a result merchants are sacrificing their interior floor space in favor of large window frontage, which speaks favorably for the value of the show window from an advertising standpoint.

It has developed that by using a deep vestibule in a narrow front, one may get a great deal more valuable display space and the tendency in recently remodeled stores has been along this line. Some stores have these vestibules as deep as 25 feet, which gives two windows with a 25-foot frontage each, where a store in many cases may only have a straight frontage of 25 feet or less.

A writer in the Hardware Age states that the first thing to be considered after the merchant has decided to build is the material to be used in the building. This, of course, must be governed to a large extent by local conditions such as building restrictions and available material. The architect should be of the greatest service in advising in this regard. At the same time it is well for the merchant to acquaint himself with the use and advantages of reinforced concrete, sandstone, brick, limestone, terra cotta and marble. Reinforced concrete is the greatest service in advising in this regard. At the same time it is well for the merchant to acquaint himself with the use and advantages of reinforced concrete, sandstone, brick, limestone, terra cotta and marble. Reinforced concrete is the most practical finish to the window base it is advisable to give the window a uniform width from the sidewalk. This is a height which one doesn't care to go to the expense of natural genuine marble.

Figure 2 shows a store front arrangement which is simple, practical and quite popular. The main display windows are set at an angle which allows for an island window with a frontage of eight feet. The back ground may be constructed so as to give the window a uniform width of from four feet to four feet six inches. By constructing the background in removable panels access to any portion of the display can be readily had without disturbing the remainder of the showing. Another feature in window construction of this character is the fact that the window panels may be made reversible so that an entirely background decorative effect can be had by simply reversing the panels. These panels can be made of inexpensive material such as compo board, etc., treated in a number of the practical decorative effects such as burlap paper, to represent various wood finishes or they may be painted in cold water paints. It might be a good idea to have an extra set of these panels so that one may be given a decorative trim without disturbing the remainder of the showing.

Merchants who are doing business with the old-fashioned fronts and who hesitate to remodel owing to the cost should consider the efficiency of the improved store. It has been estimated that the difference in the selling power of a poorly-constructed front and one of the modern plan is frequently 50 per cent; therefore, the cost of remodeling is of little consequence considering its greater efficiency in winning trade.

A very good arrangement for a corner store is shown in Figure 1, which allows for a spacious corner entrance and one which will give an impressive appearance. This can be gotten in any marble finish. Another feature in window showing is the idea of removable panels so that one may be given a decorative trim without disturbing the remainder of the showing. The idea of removable panels is an important feature, especially if much merchandise is sold directly from the window.

In arranging for show-window glass...
construction, the fact is frequently overlooked that the size of the plate should be proportioned to the wind pressure they must sustain, i.e., as the glass increases in size its strength diminishes very rapidly because the glass thickness is not increased in proportion to the area of the glass.

This is one of the great advantages of using middle boards. They are very strong and save a great deal in the breaking of glass. They are designed to help the glass withstand the pressure, expansion and contraction, as well as the settling of the building. These bars are usually so narrow as to permit of an almost continued and uninterrupted front of glass. In fact, the merchandise on display can be seen from any position. Butt-end glass construction has also a number of points in its favor, but owing to the increased insurance rates and the possibilities in the breaking and cracking of the window glass it is losing in favor.

Another point of paramount importance in constructing the show window is an angle that will prevent them from sweating and frosting. In the first place, it is essential to have the windows shut in from the remainder of the store with practically air-tight partitions. Proper draining and ventilation may be taken care of by modern method of glass setting, which allows for draining and ventilating vents.

A few remarks on prism lighting will no doubt prove interesting. Light, as we all know, travels in straight lines and in order to secure good day light in the interior of the store, that is affected by high buildings on the opposite side of the street, light must be obtained from the sky. This is best accomplished with the aid of prism lights set at proper angles, thereby catching the downward rays of light from the sky and throwing them back into the interior. In order to secure the most satisfactory results from prisms, it is well to have an expert on this subject select proper angle for individual needs. The object of the prism is to diffuse the light and to take the rays that are coming in from the sky and fall directly in front of the store and divert or refract them so that they will go back into the store and thus evenly light up the whole interior.

A few other important details which would be of interest to the merchant in constructing or remodeling his store are as follows. The store door should be impressive in pattern. The best plan would be to have a large plate glass panel so as to offer a view on the interior. It is also a good idea to equip the base of the door with a 10- or 12-inch brass plate which will prevent the door from becoming marred and unsightly at this point, as is often the case with the average hardwood door.

Another very important feature is the construction of the upper portion or ceiling of the show window. This space could be laid out in attractive beam effect and that the panels be made of clear glass or moss glass variety. This arrangement has a distinct advantage in giving daylight, which can be secured from the rays coming through the prisms above the windows.

By this plan one will entirely eliminate a great deal or practically all of the reflection which is sometimes found in show windows and especially show windows which are deep in their construction. Another important feature to take into consideration is the awning. It is advisable to plan for a canopy 12 or 14 inches in width to occupy the space directly below the prisms and above the window sash. The awning should be placed at this point and by arranging for this canopy effect you can protect the awning against the wind and rain and thereby prolong its usefulness. An awning should never be placed above the prisms as by this arrangement you will shut out the daylight from the interior of the store. Another feature is the vestibule trim. One of the most popular finishes at the present time is tiling worked up in attractive colors. A practical suggestion is to work up the firm's name in the tile in contrasting colors. The treatment of the show window floors is an important matter. For the average showing of hardware we recommend hardwood floor or a floor having a hardwood border of about six inches in width and the remainder carpeted in green.

Denny Brothers, Cambridge, O., will furnish the composition roofing for the three factory buildings now being erected for the Guernsey Earthenware Company, Cambridge, O.
"QUANTITY SURVEYING": STANDARDIZING METHODS OF ESTIMATING FOR THE CONTRACTOR*

By Leslie H. Allen, Boston, Mass.

Those contractors who wish to estimate accurately and closely have to spend a lot of time on their estimates, and it is disheartening to figure week after week and get very little of the work on which so much time and thought has been placed.

In 1908 the Illinois Chapter of the American Institute of Architects prepared a report which deals with this subject. The report states the chapter investigated the office work of five representative contractors. The average number of contracts estimated by each builder in one year was 72, and the average number of jobs which he obtained from these estimates was 10. The average value of the time spent by the office force of each firm on each estimate was $125. The average expense of each estimate, including additions by sub-contractors and material men, was $378, making a total of $503 spent by each builder on each estimate.

In addition to these expenses, the head of each contracting concern spent 21 per cent of his total time estimating or overseeing the work of estimating. I have not time to quote the whole of the report, but it goes on to point out that the cost of sub-bids on a building costing between $100,000 and $150,000 ran to over $3,000; that is, between 2 per cent and 3 per cent of the whole cost.

Somebody has to pay the bills for all this waste time, and obviously it falls directly or indirectly upon the people who put up buildings.

It is assumed by the architect and the building owner that when his plans and specifications are complete it is obvious that a certain quantity, unknown, of labor and material will be required to complete the building. No amount of careful figuring by any contractors can decrease or increase the amount of those quantities in any particular. They are fixed by the plans and specifications. If 10 contractors are to figure, each one of these competes with the others in seeing how much or how little brickwork, concrete, plastering and so on, he can figure in his estimate and yet feel that the job is safe.

Who pays for all this unproductive expense? It seems obvious that in the long run it is paid by that vague personality, the ultimate consumer, who sooner or later has to foot the bill without knowing it. Who reaps the benefit of this unproductive expense? Nobody does. It is a waste, absolute economic waste.

Is there any way in which the existing state of affairs can be improved? I think there is, and for that reason I am here to discuss with you the Quantity System of estimating.

In brief, a bill of quantities is an accurate schedule of the quantities and description of the work, labor and material, required in the erection of a building.

A quantity surveyor is an independent party appointed by the owner, architect or engineer whose duty it is to prepare bills of quantities at the owner's expense.

Under the quantity system as advocated by the American Institute of Quantity Surveyors, bills of quantities will be furnished free of expense with the drawings and specifications to all builders desirous of bidding in competition. Lump sum bids will be based upon the quantities of work scheduled in the bill of quantities, the character of same being ascertained from the plans and specifications. In the event of any errors, cost is adjusted between the owner and the builder by the surveyor, so that the builder takes no liability for the accuracy of the quantities. This is a matter for the owner and the surveyor to settle between them.

It is the quantity surveyor's duty to take off the whole job, and not to confine himself to a few trades and leave subcontractors to figure out the rest.

What are the comparative advantages and disadvantages of the quantity system?

The first thing I would mention is that all bidders know what they are bidding on and are bidding on the same basis. It frequently happens that with the greatest of care, there are items which are not easily understood in the specifications and things that are indefinite or bear a double construction on the plans. The quantity surveyor, having been in much closer touch with the architects than it is possible for half a dozen contractors to be, would notice and clear up these indefinite points before his quantities were finished. There is also less chance of work being given to an incompetent estimator, who has left out some important item in the estimate through inadvertence.

It is often urged that quantity surveying will add to the number of worthless competitors. I have also heard many claims for this system that will eliminate the worthless competitor. I cannot promise that it will do either, but it will reduce the risk of work being lost for less than cost.

It is claimed that quantity surveying will reduce the cost of building work. I think that it will reduce it in three ways. First, the very large overhead unproductive expense which I have spoken of will be saved; and, second, the men who before spent all or a lot of their time in figuring quantities will be free to devote themselves to effecting economies in the conduct of their building contracts already secured. Third, it will not be necessary to add a contingency item to the bids to cover possible errors in estimating or unforeseen contingencies.

I have been asked what will happen if the accuracy of a bill of quantities is questioned and the surveyor who drew off the quantities is required to check them after the building was completed. Such cases sometimes occur, and I have been challenged on quantities that I have prepared as to the accuracy of some items of the whole building. I have always offered to measure up the work in dispute on this condition—that if the party who made the request was found to be in error he should pay the whole cost and a proper fee for the time spent in measuring.

It has been objected that if the quantity was established that no man would be able to exercise the right of judgment in making up his prices. This objection arises from a misunderstanding of the meaning of the bill of quantities. A bill of quantities would schedule, for instance, the number of fire doors, with their description, that would be required for a building. The schedule would give the number of swing doors, giving the size of each, and giving the number of sliding doors, giving the size of each.

*Address before Detroit Engineering Society, April 8; reported in May issue of "Quantity Surveyor," organ of the American Institute of Quantity Surveyors.
Of carrying the quantity surveyor’s fees in their bids. It is, however, probable that this would be offset by the greater accuracy of the quantities they figured on, and by the fact that it would not be necessary to add any profit for contingencies to cover any unforeseen expense, as a proper bill of quantities would cover all points and guarantee the contractor against errors of quantity.

KEITH WEARS A SMILE.

A new lease of life has been taken on within the past week by Ira F. Keith, the genial head of the Empire Flooring Company, Jenkins Arcade building, Pittsburgh. While no one suspected that he had anything else on his mind except that of a busy business period it appears that he has been devoting every moment confiding with Dan Cupid with the result that negotiations were recently consummated at the Allegheny county court house, whereby a combination of interests was effected with Mrs. Mary Vohwinkle. While no official announcement has been made of the consolidation, it is not thought there will be any advance made in the price of hardwood flooring due to the high cost of living.

COST OF BRICK HOUSES REDUCED BY HOLLOW TILE.

Possibly the slightly increased cost of brick over other materials is the main reason why brick houses are not as popular in small cities and towns as they should be. Everybody admires a brick house. When the principal structures of a small city or town are pointed out to visitors, brick houses are sure to be among those mentioned first. Brick houses have been erected for ages and undoubtedly always will be built. Many substitutes have been offered, some of which have merit. But nothing has yet been offered which will make a building more substantial and more attractive than this material of burned clay.

Where the question of first cost enters into the argument, it must be admitted that brick houses are slightly more expensive than structures of frame. And because of the difference in the construction cost, many houses which should be constructed of brick are built of other materials.

To reduce the cost of erection of fireproof houses, dealers have the opportunity of recommending to their customers the use of hollow clay tile. Hollow tile construction seems to solve the problem for brick houses better than any other method. This form as most often employed consists of an exterior facing of outside brick (which is really a veneer) backed up with hollow tile. Here we have the principle of the solid wall (practically, so far as strength is concerned) combined with the advantages of a hollow wall (so far as insulation goes). It has been found in many buildings that in localities not too far from the source of supply, the cost of brick backed with hollow tile is slightly less than the cost of a solid brick wall. Brick veneer on hollow tile in most instances has been found less costly than hollow walls of brick. Really, there is no comparison between the permanency of the former as compared with the latter.

There are many methods of building brick veneer with hollow tile. Almost any kind of tile can be used, set on edge or flat-wise. The method which might be called best (as it is the culmination of many years of experimental brick veneer building) is the use of what are known as “backup” blocks, laid flat-wise. No inside furring is required on a brick veneer wall lined with hollow tile, as the tile are scored to receive the plaster. Tile being so dense, no moisture can penetrate the wall.

In a fireproof house, when brick veneer on tile is used, holes in the tile are left for bonding the cross partitions of tile. At the angles, tile are laid alternating, and the holes left in every other course are afterward blocked by nailing in bits slushed with mortar. Considering all things, brick-veneer-hollow-tile is a valuable acquisition to the family of building methods. It has already become “standard” in the offices of most architects, and promises to increase the demand for brick houses, since it reverses the criticism of so many owners that “brick houses are expensive.”
Pittsburgh.

Architect John P. Brennan, Old City Hall, Northside, will have plans completed about June 10 for the erection of a brick public comfort station on Federal and Ohio streets, Northside, for the City of Pittsburgh. Cost $15,000.

Charles Yates, 110 Franklin street, Wilkinsburg, is taking sub-bids on the erection of a $4,000 brick veneer residence on Elm street, Wilkinsburg, for Andrew Rolf.

Architect John L. Beatty, 146 Sixth street, will take bids about June 5 on the erection of a $30,000 brick fireproof hospital addition on Penn avenue and West street, for the Columbia Hospital.

William Miller & Sons Company, 530 Fernando street, received the contract to build a lodge building on Penn avenue, for the Loyal Order of Moose No. 46. The building will be of brick and ornamental terra cotta fireproof construction and cost $211,566.

W. T. Powell, 508 Fourth avenue, was the low bidder on the interior alterations to the elementary school on Reedsdale street, Northside, for the Board of Education. Cost $7,000.

Architect Thomas Pringle, Mellon National Bank building, is revising specifications for a $7,000 brick and cement plaster residence to be erected on Anderson Terrace, for Dr. George A. Holliday, Jenkins Arcade.

Brown Brothers, Potomac street, Dormont, were the low bidders for the erection of a brick dairy barn in Marshallsea, for the city of Pittsburgh. Cost $24,000.

C. A. Johnson, 761 Fourth street, Braddock, has the contract for the erection of a tile and stucco hospital for dogs and cats and a caretaker's residence on Sandy Creek Road near Wilkinsburg, for Dr. H. G. Wernitz, 222 North Negley avenue.

Architect W. W. Williams, Magee building, will have plans completed about June 10, for the erection of a $15,000 brick residence on Beverly Place, for William H. Seif, Magee building.

Cuthbert Brothers, Bessemer building, were the low bidders on the interior alterations to the Birmingham School on Fifteenth and Sarah streets, for the Board of Education. Cost $6,000.

Bids are being taken by Architect Pierre A. Liesch, 18 Fourth avenue, Aspinwall, for the erection of a frame addition and alterations to the residence of J. B. Brittain, 92 Steuben street, Crafton.

Architects Rutan & Russell, Magee building, are revising plans for the erection of a brick and steel fireproof mercantile building on Thackery street, for the Republic Bank Note Company, 2817 Forbes street. Cost $200,000.

Architects H. E. Kennedy Company, Home Trust building, will take new bids for the erection of a dual theatre and other buildings on Oliver avenue and Cherry alley, for the Harry Davis Enterprise Company, Farmers Bank building.

Architect W. R. Klicker, 105 Monitor avenue, Ben Avon, will take bids about June 10, on the erection of a double residence on Dickson avenue, Ben Avon, for the Misses Reineke, Church and Dickson streets. The dwelling will be of brick construction and cost $10,000.

Architect Charles Bickel, May building, is taking bids on the erection of a brick and cement plaster double residence in Dormont, for Charles Heupel, 17 Climax street. Cost $10,000.

Architect Louis Stevens, Columbia Bank building, has plans under way for constructing a brick residence and garage on Grant Boulevard near Parkman avenue, for Miss E. T. Edwards. Cost $20,000.

Callah & Miller, 6300 Penn avenue, have been awarded the contract to build a private garage, brick fireproof construction, on Bayard and Ellsworth avenue, for Mrs. W. S. Mackintosh, Ellsworth avenue.

The contract has been awarded to W. D. Beatty Company, 900 Burd street, for remodeling the restaurant on Oliver avenue, for August Thamm. The work will be of brick and cost $2,500.

H. S. Moorhead, 220 South Highland avenue, was the low bidder on the erection of a brick store and office building on Wylie avenue, for the Mellon Estate, 514 Smithfield street. Cost $12,000.

The contract will be awarded late this week for the erection of a $2,500 frame residence on Pennsylvania avenue, Oakmont, for John Marcasi, Oakmont.

W. F. Trimble & Sons, 1719 Pennsylvania avenue, Northside, received the contract for a brick and concrete stable and garage on Brighton road, near Island avenue, for the Uniondale Cemetery Company. Cost $21,000.

Architect George Schwan, Peoples Bank building, is taking bids on the erection of a $5,000 brick residence on Mt. Washington, for Paul K. Harper, 403 Grandview avenue.

Architect Pierre Liesch, 18 Fourth street, Aspinwall, is revising plans for the erection of four frame residences in Dormont, for George M. Crawford. Cost $3,000 each.

Preliminary plans have been completed by Architect John L. Beatty, 146 Sixth street, for the erection of a church addition on Perrysville avenue, for the Eight U. P. Congregation. The addition will be of stone and contain Sunday school rooms, bowling alleys, basketball courts, billiard tables, etc. Cost $25,000.

The Children's Hospital of Pittsburgh contemplates the erection of a $30,000 hospital building on Craft and Forbes streets, for which no architect has been selected. The building will be of brick, fireproof construction.

T. W. Hockenberry, 523 Center street, East Pittsburgh, received the contract for the erection of a brick and tile addition and alterations to the store building on Braddock avenue, East Pittsburgh, owned by the East Pittsburgh Savings & Trust Company. Cost $6,000.

On account of bids running too high, Architect Paul W. Irwin, Renshaw building, will take new bids on the erection of a $6,000 residence and garage, brick construction, on Ashland street, Sheridan, for Charles S. Banker, 2556 Merchin road, Sheridan.

Preliminary plans are being prepared by Architect C. E. Willoughby, 434 Fourth avenue, for the erection of six brick residences in Edgewood for Chas.
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Lines, 512 Forbes street. Cost $2,500 each.

Architect W. A. Thomas, Park building, has plans ready for bids on the erection of a $5,500 brick residence on Millvale avenue, for George Herman, Yew street.

The Young Men's Hebrew Association of Pittsburgh, 1333 Fifth avenue, has selected Walter S. Cohen, Oliver building, to prepare plans for a club house which will be erected at a cost of $40,000. The building will be of brick and stone, fireproof construction and contain a swimming pool, gymnasium, auditorium with stage, club rooms, etc.

Architect H. S. Blair, Vandergrift building, will have plans completed about June 12 for the erection of a $15,000 brick residence on Beacon street, for R. W. Hannan, Vandergrift building.

Architect F. A. Park, 543 Kincade street, will be ready for bids about June 8 on the erection of a brick veneer store and residence on Grotto street, E. E., for Mrs. Mary Maccaro, Grotto street, E. E. Cost $4,500.

Architect Pierre A. Liesch, Aspinwall, is taking bids on the erection of a double duplex apartment in Dormont for the Pittsburgh Mansion Company, Penn building. It will be of brick veneer construction and contain 28 rooms and four baths. Mr. Liesch is also taking bids on the erection of a residence in Greensburg for A. D. Roessing. Hot air heating, electric wiring, lighting fixtures, slate roofing, etc., will be required.

The Pittsburgh Mansion Company, Penn building, is contemplating the erection of five double duplex residences in Dormont. They will be of brick veneer construction, two stories.

D. T. Riffle, Keenan building, received the contract to build a brick battery and store room building on Brontos Island, for the Duquesne Light Company, Sixth avenue. Cost $10,000.

The contract has been awarded to W. F. Trimble & Sons, 1919 Pennsylvania avenue, Northside, for the erection of a brick fireproof sub-station on Butler street, for the Duquesne Light Company, Sixth avenue.

Cuthbert Brothers, Bessemer building, received the contract to build a $15,000 brick fireproof sub-station on Warrington avenue, for the Duquesne Light Company, Sixth avenue.

Architect H. J. Lohman, Wood street, Wilkinsburg, has plans under way for the erection of a brick and tile apartment building on North avenue, Wilkinsburg. Cost $11,000.

E. C. Mann, 592 Grant avenue, Millvale, has private plans for the erection of three brick residences on Lincoln avenue, Millvale.

G. G. Kahl, 145 Grant avenue, Millvale, has private plans for a brick apartment building addition which he is contemplating having erected in Millvale, at a cost of $1,300.

Architect R. M. Trimble, Ferguson building, has plans about completed for the brick fireproof high school building in Ben Avon, for the Board of Education.

Architect F. C. Sauer, 804 Penn avenue, will revise plans and ask new bids on the erection of a brick and tile residence in Aspinwall, for James L. Lowry, 505 South Main street, Sharpsburg. Cost $6,000.

Architect W. N. Zortman, Bessemer building, has plans under way for three brick veneer residences in Wilkinsburg, for private parties. Cost $4,500 each.

++ Apartments and Dwellings. ++

Cleveland, O. — G. H. Lohman, 1207 Cranford avenue, Lakewood, has plans completed for the erection of an $8,000 brick apartment on W. One Hundred and Twelfth street.


Huntington, W. Va. — Edward Matthews was the low bidder on the erection of a $3,500 bungalow, pressed brick construction, for J. W. Williams.

Plans are being prepared by Architect L. J. Dean, Foster building, for the erection of a brick semi-fireproof apartment building on Sixth avenue, for Mrs. T. W. Dinkins. Cost $8,000.

Architect Verus Ritter will take bids about June 15 on the erection of a brick residence for Dr. T. W. Moore. Cost, $12,000.

Martinsburg, W. Va. — Architect C. E. Kent, 712 North Queen street, will take bids about June 26, on the erection of a $3,500 brick residence, for Joseph Porterfield, West Burke street.

Rochester, Pa. — The Martin Construction Company, 6106 Blair street, Pittsburgh, received the contract to build a $3,500 brick residence on Columbus avenue, for George E. Howe.

Toledo, O. — Architects Wachter, Bellman & Schreiber, Nicholas building, will take bids at once on a residence to be erected for George D. Palmer, St. Clair and Madison avenue.

Waterford, O. — Waterford Hardware & Lumber Company, received the contract to build a $7,000 hollow tile residence for Dr. E. Hayward.

Woodlawn, Pa. — The Martin Construction Company, 4708 Blair street, Pittsburgh, received the contract to build a $5,000 brick apartment building for Mr. King & Company.


Mansfield, O.—Architects Simon Small & Sons, Bird building, are revising plans for the erection of a brick and stucco residence on W. Fourth street, for Susan Homberger, West Fourth street. Cost $4,500.

McDonald, Pa.—W. J. Phillips has private plans for the erection of a brick veneer residence to be erected on Fifth street, at a cost of $10,000.
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 sub-bids on the erection of a $6,000 brick veneer apartment building for John McGahee, Second and Highland avenue.

New Castle, Pa. — Architect S. C. Richards, Dean building, Bradock, has plans under way for a brick and concrete store and apartment building to be erected on Fifth street, for Vincenzo Cursula. Cost $6,000.


Cincinnati, O. — The Ferro Concrete Construction Company is taking sub-bids for the erection of a $26,000 store and loft building on East Sixth street, for Henry Straus, Fifth and Walnut streets. The building will be of brick and concrete fireproof construction, three stories.

Cincinnati, O. — Architects Baumsith & Drainie, Gerke building, have plans under way for a store and loft building on Broadway, for Will J. Graf & Company, 230 E. Eighth street. The building will be of brick and concrete fireproof construction and cost $90,000.

New Kensington, Pa. — Architect W. J. Langhine will soon have plans completed for a brick, fireproof constructed store and apartment building on Fifth avenue, for G. M. Evans. Cost $30,000.

Portsmouth, O. — Architect W. A. De Voss, First National Bank building, will take bids at once on the store building to be erected on Chillicothe street, for Thomas Jones. It will be of brick, semi-fireproof construction, and cost $14,000.

Struthers, O. — John Sauers has the contract for the carpentry in the brick and hollow tile store building to be erected for W. A. Henderson. Cost $7,000.

W. W. Wilson is taking sub-bids on the erection of a brick and jumbo block store building costing about $6,000.

Ashland, Ky. — Plans are being prepared by Architects King and Mills, Woods building, for a warehouse for Crump & Fields. The building will be of brick semi-fireproof construction, three stories and cost $25,000.


Huntington, W. Va. — Bids will be taken at once by Architect L. J. Dean, Foster building, on the erection of store rooms on Teenth street, for Dr. I. R. Lesage and Dr. J. Vickers.

Logan, O. — L. C. Craig was the low bidder on the erection of a brick store and office building for Miss Elizabeth Remple.

New Castle, Pa. — Architect C. F. Owsley, Mahoning Bank building, Youngstown, O., will take bids next week on the erection of a $60,000 brick and stone residence for A. C. Hoyt, 203 East Lincoln avenue.

Parkersburg, W. Va. — The contract was awarded to C. A. Smith to build a $7,000 brick, stone trim, residence on Ann street, for D. C. Murdock, Ann street.

Pittswa, Pa. — C. W. Palmer is taking sub-bids on the erection of a $6,000 brick veneer apartment building for John McGahee, Second and Highland avenue.

Warren, Pa. — K. M. Andrews will take bids about June 9th on the erection of a brick residence on Fourth and Poplar streets. Cost $8,000.

Bethany, W. Va. — W. W. Pritchard received the contract for the erection of a $3,000 frame residence for F. H. Main.

Columbus, O. — Luther Loy, 43 Rugger building, and Architect J. A. Jones, Dispatch Annex building, will take bids until June 10th, on the erection of a $3,500 brick and frame bungalow.

Lima, O. — Architect J. A. Chapin, Holland Block, has plans about completed for a $10,000 hollow tile and stucco residence and garage, for S. S. Wheeler.

Nelsonville, O. — Architect B. F. Mathews, Opera House Block, Lima, O., has started plans for a brick residence for private parties. Cost $8,000.

Steubenville, O. — The contract has been awarded to T. A. McCullough, for the erection of a double frame residence on North Fifth street, for Harry Wehber, Fourth avenue.

Wooster, O. — Rev. C. G. Miller will award separate contracts for the erection of a brick and stucco residence costing $6,500.

Lima, O. — G. W. Griffith, owner, care Architect Ross E. Mullen, 1059 West Spring street, is taking bids on the erection of a brick and stone apartment building, on Charles and High streets. Cost $15,000.

Tarentum, Pa. — The contract has been awarded to O. S. Claypool, 918 Corber street, to build a brick veneer residence on East Tenth street, for Harry Pavitt.

Business Buildings.

Ashland, Ky. — Plans are being prepared by Architects King and Mills, Woods building, for a warehouse for Crump & Fields. The building will be of brick semi-fireproof construction, three stories and cost $25,000.


Huntington, W. Va. — Bids will be taken at once by Architect L. J. Dean, Foster building, on the erection of store rooms on Teenth street, for Dr. I. R. Lesage and Dr. J. Vickers.

Logan, O. — L. C. Craig was the low bidder on the erection of a brick store and office building for Miss Elizabeth Remple.
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Pittsburgh, Pennsylvania
Cleveland, O. — Jacob Sievers, 1041 Ignatius avenue, received the contract for the erection of a brick store and apartment building on Madison avenue, for John Fox, 1050 Madison avenue. Cost $10,000.

Follansbee, W. Va. — H. A. Risher, Mingo, O., received the contract for the erection of a brick store and apartment building for Herman Wusberger, Mingo, Jackson, O.

Martinsburg, W. Va. — Architects C. L. Harding, Washington, D. C., and C. E. Kent, have preliminary plans under way for the erection of a $12,000 brick fireproof printing shop for Sprinkle Brothers, Commerce street.

Monessen, Pa. — Motz Lumber Company, received the contract to build a brick store and apartment building for Mrs. Maria Fontanelli, 37 Donnor avenue.

Monroeville, O. — Architect Franz Warner, Hippodrome building, Cleveland, and F. C. Seaman, owner, are taking bids on the erection of a brick store and apartment building to cost $15,000.

Mt. Pleasant, Pa. — Architect William G. Sloan, Bank & Trust building, Greensburg, is taking bids on the erection of a store and apartment building on Main street, for Charles Pross, College avenue. It will be of brick, semi fireproof construction and cost $25,000.

Turtle Creek, Pa. — S. Ventimiglia, 216 Ross street, Wilkinsburg, Pa., received the contract to build a brick store and apartment building for Joseph Giuffre, Penn avenue. Reese Williams, Bradock, Pa., has the contract for the brick work. Cost $12,000.

Lima, O. — Architect B. F. Mathew, Opera House block, will prepare plans for a brick semi fireproof store and office building on South Elizabeth street, near Market street, for Elmer Barth. Cost $5,000.

Marion, O. — Architects Mariott, Allen & Hall, Hayden-Clinton Bank building, Columbus, will be ready for bids about June 10 on the erection of a brick and concrete store, office and apartment building for Hays Thompson, McNeal Wofford building.

McConnellsburg, Pa. — Architect M. R. Rhodes, Chambersburg, Pa., has plans under way for the erection of a $16,000 brick veneer store, bank, apartment and hotel building for Peter Morton.

Rochester, Pa. — McDonald & Hartman received the contract to build a $16,000 brick store, office and apartment building for the Campbell Heirs.

Rocky River, O. — The contract has been awarded to R. J. Moore, Clifton place, Lakewood, O., for the erection of a brick bank building addition for the Rocky River Savings & Banking Company.

Youngstown, O. — The South Side Banking Company is contemplating the erection of a brick and stone bank and office building, costing $50,000, for which architects have been asked to submit sketches.

Steubenville, O. — The Jefferson Building and Loan Company, Market street, is contemplating the erection of a bank, store and apartment building, of granite and terra cotta fireproof construction. An architect will be selected soon. Cost about $60,000.

Monessen, Pa. — The Motz Lumber Company will build a brick store building, costing $7,000, for Joseph Slepahak.

Religious.

Cleveland, O. — Architects Maurer & Mills, Schofield building, are taking bids on the erection of a brick and steel church on Dennison avenue, for the Dennison Avenue Congregational Church. Cost $25,000.

Dayton, O. — The Structural Concrete Company was awarded the contract to build the parochial school building on Xenia avenue and Samuel street, for the St. Marys Roman Catholic Congregation. Cost $40,000.

Grayson, Ky. — Architects King & Mills, Wood building, Ashland, Ky., will take bids shortly on the erection of a $9,000 brick and stone trimmed church for the M. E. Congregation.

Plans are under way by Architects King & Mills, for the erection of a brick trimmed church, for the Christian Congregation. Cost $7,000.

Ironon, O. — Plans have been completed by Architect W. A. De Voss, First National Bank building, Portsmouth, for a brick parsonage on Center street, for the Trinity M. E. Church. Cost $9,000.

Ashland, Ky. — Architect Venus T. Ritter, Union Bank building, Huntington, W. Va., will take bids about June 15 on the erection of a $27,000 brick and terra cotta church and Sunday school for the Methodist Episcopal Church.

Hollondes Cove, W. Va. — Architect J. B. Martin, East Liverpool, O., will take bids until June 10 on the erection of an $18,000 brick and stone church for the First Presbyterian Congregation.

Steubenville, O. — Floto Brothers were the low bidders on the parish house addition to be erected for the St. Paul's Congregation. The work will be of stone construction and cost $10,500.

Versailles, Pa. — Charles Langhurst, 2400 Walnut street, McKeesport, received the contract for the erection of a brick church building for the First Methodist Episcopal Congregation. Cost $12,000.

Clendenin, W. Va. — Architect A. G. Higgenbotham, Quarrier street, Charleston, W. Va., is about ready for bids on the erection of a $20,000 brick and stone church building, for the First Methodist Episcopal Congregation.

Cleveland, O. — The Latimer Construction Company, Citizens building, received the contract to build a brick church addition for the Archwood Avenue Congregational Church. It will contain a Sunday school and gymnasium and cost $12,000.

Ebensburg, Pa. — Architects Fulton & Butler, Uniontown, Pa., have plans nearly completed for a brick and stone church, for the Presbyterian Congregation. Cost $25,000.

Lancaster, O. — A. B. Van Gundy was the low bidder on the erection of a brick, stone trimmed church building, for the Maple Street Evangelical Congregation. Cost $15,000.

Architect E. S. Matheny, Crooksville, O., has plans completed for the church to be erected for the A. M. E. Congregation. It will be of brick, stone trim construction, and cost $16,000.

Monongahela, Pa. — Architect George W. Yohe will take bids at once on the erection of a brick church building, for the Italian Catholic Congregation. Cost $8,000.

Pittsburgh, Pa. — Architects Fulton & Butler, Uniontown, Pa., have been selected to prepare plans for the erection of a brick or stone church, on Third and Wall streets, for the McGinnis Presbyterian Congregation. Cost $35,000.

West Toledo, O. — Schmidt-Harwood Company, Nasby building, Toledo, O., received the contract for the sub-structure of a red pressed brick and sandstone church building, to be erected for the Collingwood Methodist Episcopal Church. It will contain church rooms, Sunday school room, gymnasium, showers and banquet rooms, and cost $25,000.

Greenville, O. — Architect J. B. Martin, East Liverpool, O., will take bids about June 15 for a brick and tile church to be erected for the Methodist Episcopal Congregation, at a cost of $12,000.

Harrison, O. — The First Methodist Episcopal Congregation will take bids next week for a brick and stone church building, to be erected at a cost of $30,000.

Newark, O. — The Tenth Street United Brethren Congregation is contemplating the erection of a $15,000 brick
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chuch for which no architect has been selected as yet.

New Brighton, Pa. — Bids will be closed this week by Architects Boyd & Stewart, Century building, Pittsburgh, for the erection of a church addition for the First Baptist Congregation. The addition will be of brick and stone construction and cost $15,000.

St. Marys, O. — The St. Pauls Reformed Church will take bids about June 10 on the erection of a brick and stone church. Cost $30,000.

Waterville, O. — The Waterville Methodist Episcopal Church is taking bids on the erection of a $10,000 brick and stone church.

Waynesville, O. — Architect C. T. Bowdle, Young building, Piqua, O., is taking new bids on the erection of a brick church for the Waynesville Methodist Congregation. Cost $15,000.

Springfield, O. — The contract has been awarded to H. Harig & Company, Cincinnati, O., to build a reinforced concrete and brick fireproof school building, church and residence remodel for the St. Bernard Roman Catholic Congregation. Cost $65,000.

### Educational.

Arnold, Pa. — W. J. Laughlin, New Kensington, received the general contract for the erection of a brick fireproof school building addition for the Board of Education. Cost $13,000.

Charleston, W. Va. — Architect A. G. Higgenbotham will take bids at once on the erection of a brick semi-fireproof grade school addition in the Third Ward, for the Board of Education. Cost $30,000.

Elda, O. — Ernst Kroemer, Dayton, O., was the low bidder on the school building to be built for the City of Elda Board of Education. It will be of brick semi-fireproof construction.

Midland, Pa. — Architect F. E. Matthews, Leaf Block, Rochester, Pa., will be ready for bids about June 12 on the erection of a $22,000 brick and steel grade school building for the Board of Education.

Oxford, O. — The Board of Trustees of Miami University will take new bids until June 23 on the erection of a brick and concrete fireproof normal school building addition. Cost $80,000.

Portsmouth, O. — Architect W. A. De Voss, First National Bank building, will be ready for bids about June 15 on remodeling the grade school buildings for the Board of Education. The work consists of new plumbing and heating systems and will cost about $25,000.

Smith Township, Pa. — Architect C. L. Whitaker of Dravosburg, Pa., has plans about completed for the erection of a brick grade school building for the Smith Township School Board. Cost $8,500.

Toledo, O. — Wallis-Bock-Kuhlman, 1100 South street, received the contract to build a $30,000 grade school building on Cherry street, for the Board of Education. It will be of brick and stone, steel construction, fireproof.

New Castle, Pa. — The Board of Education will take bids at once on remodeling the Lincoln school on Long avenue. The work will cost about $15,000.

Rossford, O. — Otto Hallaway, East Side, Toledo, O., received the contract for building the brick, stone and steel addition to the school building. Cost $35,000.

Saybrook, O. — The Village of Saybrook will take bids soon on the erection of a brick and concrete fireproof grade school building, to cost about $10,000.

Zanesville, O. — The contract has been let to E. Mast, to build a brick and stone fireproof grade school building, for the Board of Education. Cost $50,000.

Brooks County, W. Va. — A. S. Craig Company, Follansbee, W. Va., was the low bidder on the erection of a $20,000 school building for the Board of Education of Cross Creek, care W. L. Carter, Follansbee, W. Va.

Honesdale, Pa. — Bids will be taken until June 10 on the erection of a brick and stone school building addition on Ninth avenue, for the Board of Education. The addition will contain six new rooms and a new heating system will be installed in the entire building. Cost about $35,000.

Lorain, O. — The City of Lorain will take bids soon on the erection of a grade school and auditorium on Vine street. It will be of brick and steel fireproof construction and cost $60,000.

New Castle, Pa. — The Board of Education will take bids until June 9 on the remodeling of the Seventh Ward School. Cost $15,000.

Pricedale, O. — T. C. Smith, Lincoln avenue, Charleroi, O., received the contract for the addition to be built to the grade school building.

Wirtenton, O. — Carson, Crow & Henderson, Charleroi, O., received the contract to build a grade school for the Board of Directors of Rostraver Township.

Waynesburg, O. — Bids are being taken by the School Board of Franklin Township, for the erection of a three-story school building, 34x70 feet. Plans and specifications for the structure were made by Architect Henry K. Coffroth. The work will call for slate roofing, wood skylight, wood finish and doors, metal lath, hard plaster, metal ceilings, gas and electric fixtures, etc.

Concord, W. Va. — The State Board of Control, care J. S. Larkin, Charleston, W. Va., is taking bids on the erection of a brick school building addition, to cost about $46,000.

Gomer, O. — Architects McLaughlin & Halsken, Central building, Lima, O., will take bids about June 20 on the erection of a brick grade school building for the Board of Education. Cost $18,000.

Marion, O. — The Board of Education is taking bids on the erection of a brick grade school building costing $40,000.

Scioto, O. — The contract has been awarded to Willing Brothers, Bellevue, O., to build a brick and stone semi-fireproof high and grade school building, for the Board of Education.

Steubenville, O. — James A. Coyne received the contract to build a brick and steel ordinary constructed grade school building, for the Board of Education at a cost of $37,000.

Elizabethown, Ky. — J. C. Morrison will build a brick fireproof public grade school building, for the Board of Education. Cost $80,000.

Fayette County, Pa. — Smith & Shallenberger, Brownsville, Pa., received the contract for the erection of a brick school building addition for the Luzerne Township School Board. Cost $7,500.

South Brownsville, Pa. — A. P. Cooper, First National Bank building, Uniontown, has been selected to prepare the plans for a brick high school building for the Board of Education. Cost $70,000.

Wheeling, W. Va. — The Board of Education is taking bids on the erection of a brick, probably fireproof, high school building, on Chaplin street, at a cost of $60,000.

### Hospitals.

Ashland, Ky. — Architects King & Miller, Woods building, have plans in progress for a brick hospital building to be erected for the Hospital of Kings Daughters.

Martinsburg, W. Va. — The Kings Daughters Hospital, East King street, is contemplating building a brick addition. No architect has been selected.

Uhrichsville, O. — The Twin City Hospital Association, care E. D. Moody, Dennison, O., will take bids until June
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CARThage, O.—Architects W. G. Franz, Union Trust building, and Ehlner & Anderson, Ingalls building, Cincinnati, have been selected to prepare plans for a hospital building for the Board of County Commissioners. Cost $100,000.

Charleston, W. Va.—Architects A. E. Mullett & Company, Union Trust building, Washington, D. C., are revising plans for a brick and frame hospital building remodel and addition for the Charleston General Hospital. Cost $8,000.

Cincinnati, O.—Plans are being prepared by Architect Louis G. Dittoe, Provident Bank building, for the erection of a brick addition and remodel to the Home for the Aged on Florence avenue, for the Little Sisters of the Poor. Cost $90,000.

Portsmouth, O.—Architect W. A. De Voss, First National Bank building, has been selected to prepare plans for a brick and concrete semi-fireproof hospital addition for the City Hospital. Cost $12,000.

Salem, O.—Architects C. C. & A. L. Thayer, Lawrence Savings & Trust building, New Castle, Pa., have plans under way and expect to take bids about June 15, on the erection of a brick and terra cotta hospital building, third story addition, for the Salem City Hospital Association. Cost about $15,000.

Zanesville, O.—Architect Harry E. Meyers, Peoples Bank building, has preliminary plans completed for the erection of a $130,000 brick fireproof hospital building for the Bethesda Hospital Association.

Terra Alto, W. Va.—The State Board of Control, care J. S. Larkin, Charleston, W. Va., will take bids until June 15, on the erection of a frame tuberculosis hospital. The work consists of three buildings, including a superintendent's residence, receiving building, cottages, etc., and will cost $50,000.

State and County and Municipal.

New Philadelphia, O.—The Jones Construction Company, Mt. Vernon, O., has been awarded the contract to build a sewage disposal plant for the City of New Philadelphia. It will cost about $22,000 and will probably require 700 feet of 8 to 20-inch pipe.

New Martinsville, W. Va.—The contract has been awarded to H. L. Kreusler, Penn avenue, Pittsburgh, to build a brick fireproof power plant at Dam No. 15, for the United States Government, care J. P. Jersey, P. O. building, Wheeling. Cost $25,000.

Ross County, O.—The contract has been awarded to Wiley & Renick, Chillicothe, O., to build a $100,000 bridge over the Scioto river, for the Board of County Commissioners.

Bellefonte, W. Va.—H. L. Kreusler, J301 Penn avenue, Pittsburgh, Pa., received the contract for the erection of a $25,000 brick power plant at Dam No. 20 for the United States Government.

Bellefonte, O.—The Board of County Commissioners, care Emerson Campbell, Court House street, St. Clairsville, O., is taking bids on the construction of a concrete retaining wall. The work also consists of constructing a concrete bridge at Lamira, a reinforced concrete bridge on Winding Hill, steel railings, etc.

Columbus, O.—William M. Graham, Hartman building, was the low bidder on the brick work and A. G. Pugh, Union National Bank building, the low bidder on the asphalt work in the grading, training, paving and curbing work to be done on Lilly avenue, Main street, to Livingston avenue, for the City of Columbus. Cost $35,723.

Lorain, O.—A. J. Leighton, 1219 West Erie avenue, received the contract for the erection of a brick fire station on Eighteenth and Hamilton avenues, for the city of Lorain. Cost $5,400.

New Castle, Pa.—Bids which are being taken by the city of New Castle, for the erection of a brick comfort station will close late this week. Cost $7,000.

Zanesville, O.—Bids are being taken by the city of Zanesville, for the street improvement work on Pine street. The paving will be of brick with a concrete base and curb.

Erie, Pa.—The Liebler-Binney Construction Company was the low bidder on remodeling the city hall, for the City of Erie. Cost $20,000.

Galipolis, O.—New bids will be taken soon by the Ohio Board of Administration, Columbus, O., for the erection of a brick, concrete and terra cotta laundry building.

Norwood, O.—The City of Norwood will take bids about June 15 on the street improvement work on Park avenue, which will cost about $10,000.

Toledo, O.—John Pioch Company, 211 Huron street, received the contract to build a brick, concrete and terra cotta laundry building on Detroit avenue, for the Ohio Board of Administration.

Greenbrier & Monroe Counties, W. Va.—The contract has been awarded to the Concrete Steel Bridge Company, Canton, O., to build a bridge over Greenbrier river, for the Board of County Commissioners, at a cost of $30,000.

Manufacturing.

Marion, O.—John Baldoon, 324 South Vine street, received the contract to build a brick mill constructed factory addition on Main street, for J. F. Lust Company.

Cleveland, O.—Masters & Mullen Construction Company, Ross building, received the contract for the erection of a factory building for Gustav Schaefer Wagon Company. The building will be of brick and reinforced concrete, fireproof construction, four stories and basement, and will cost $35,000.

Marion, O.—The Standard Motor Truck Company, 1284 Euclid avenue, Cleveland, is contemplating the erection of a $35,000 factory building, for which no architect has been selected as yet.

Society and Club Buildings.

Charleroi, Pa.—The Loyal Order of Moose, No. 103, is taking bids on the erection of a $30,000 brick and stone club house on McKean avenue.

Struthers, O.—Miller & Ford, Dollar Bank building, Youngstown, were selected architects to prepare plans for a lodge building, to be built for the Knights of Pythias. The building will be of brick construction and cost $8,000.

New Philadelphia, O.—Architects Langdon & Holby, Nicholas building, Charleroi, Pa., will take bids at once on the erection of a brick and stone lodge and store building, for the Masonic Lodge. Cost $30,000.

Charleroi, Pa.—Architect J. A. Lohman, Donner and Sixth streets, Mone­ sensen, has plans completed for the erection of a $30,000 brick and stone club house on McKean avenue, for the Loyal Order of Moose No. 183. Bids will be taken shortly by the architect and owner.

New Brighton, Pa.—Architects Boyd & Stewart, Century building, Pittsburgh, have plans about completed for the erection of a brick and stone building for the New Brighton Y. M. C. A. Cost $30,000.

Cincinnati, O.—The Business Men's Club is contemplating the erection of a brick, stone and concrete clubhouse, on Nineteenth and Race streets, for which it has not as yet selected an architect. Cost between $300,000 and $500,000.

Verona, Pa.—The Eagle Hall Association is taking bids on the erection of a brick and tile club house, to cost about $15,000.
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Miscellaneous.

Mt. Perry, O. — The contract has been awarded to the Toledo Crane & Bridge Company, Toledo, O., for the erection of a railroad bridge, superstructure, for the Zanesville & Western Railroad Company.

Columbus, O. — Architect J. A. Jones, Dispatch Annex building, has preliminary plans under way for a brick shelter house in Franklin Park, for the Franklin Park Commissioners. The building will contain gymnasium, office, library, auditorium, club rooms, locker rooms, etc., and will cost $20,000.

Newark, O. — Joseph George, 13 North Third street, will probably take bids about June 10, on the erection of a $15,000 brick garage on Fifth street.

Ashtabula, O. — The Lord & Burnham Company, 50 E. Forty-second street, New York City, N. Y., received the contract to build a steel and glass green house and a brick and concrete power house for the Dubuque-Hastings Company. Cost $40,000.

Columbus, O. — Architects Dawson & Holtbrook, Outlook building, will be ready for bids about June 5 on the erection of a brick sales garage for A. F. Durant.

Glenshaw, Pa. — Architect A. P. Snyder, Empire building, Pittsburgh, will take bids shortly on the erection of a brick private garage, costing $1,500, for Dr. William B. Ray.

Cleveland, O. — King Bridge Company received the contract for the railroad bridge repair work near the Central viaduct for the New York, Chicago & St. Louis Railroad Company. Cost $25,000.

Theatres.

East Liverpool, O. — The contract has been let to the Potters Lumber Company to build a brick and hollow tile reinforced concrete theatre building for J. C. Walsh.

Monongahela City, Pa. — Harry K. Bentley will select an architect soon to prepare plans for a $10,000 hollow tile and stucco theatre building which he is contemplating having erected on Main street.

Logan, O. — Bids are being taken by Architect E. S. Matheny, Crooksville, O., for the erection of a $15,000 brick fireproof constructed motion picture theatre and office building, for E. Purvis and S. C. Rubie.

Youngstown, O. — Architects Knox & Elliott, Rockefeller building, Cleveland, O., have plans about completed for the erection of a brick and reinforced concrete fireproof arcade, office and theatre building, on West Federal street, for the Youngstown Hippodrome Company. Cost $450,000.

Hotels.

Martinsburg, W. Va. — The Citizens National Bank will take bids about June 20 on the erection of a brick hotel addition on King street. Cost $8,000.

NO-LIEN CONTRACTS.

ALLEGHENY COUNTY, PA.

John Ehrlinger vs. Mrs. Laura Gable. Agreement made and filed to erect brick bakeshop and make alterations to dwellings on Craig street, Oakland, Pa. Cost $7,000.


Bartley-Kennedy Company vs. Shenley Farms Company. Agreement made and filed to install the heating system in building in the Fourth ward. Cost $750.


James L. Stuart vs. Dixmont Hospital for the Insane. Agreement made and filed to build alterations and addition to building. Cost not given.

Concrete Work.

G. H. Gilbert, E. E. Pittsburgh, received contract for residence, Pittsburgh. Owner, Mrs. Lydia Reismyer, Pittsburgh.

Sheet Metal Work.

W. H. Knowell, Northside, Pittsburgh, received contract for shop building, Pittsburgh. Owner, the Philadelphia Company, Pittsburgh.

W. T. Overly, Greensburg, Pa., received contract for bakery, Irwin, Pa. Owner, the Irwin Baking Company, Irwin.

Roofing.


H. W. Johns-Manville Company, Pittsburgh, received contract for elementary school building, Pittsburgh. Owner, the Board of Education, Pittsburgh.

P. LeGoullon, Pittsburgh, received the contract for store, office and apartment building, New Kensington. Washington Court House, O. Owner, Frank Bending, Washington Court House.

Lumber and Mill Work.

Downey & McCord, McKeesport, Pa., received contract for residence, McKeesport. Owner, John Rasmussen, McKeesport.


Athens Lumber Company, Athens, O., received contract for Carnegie Library, Pomeroy, O. Owner, the Board of Trustees of the Carnegie Library, Pomeroy.

Harman Lumber Company, Coshocton, O., received contract for residence, Coshocton. Owner, D. J. Gayle, Coshocton.

Van leer Brothers, Brookville, Pa., received contract for residence, Kittanning, Pa. Owner, Dwight C. Morgan, Kittanning.

Commercial Sash & Door Company, Pittsburgh, Pa., received contract for high and grade school building, Ambridge, Pa. Owner, the Board of Education, Ambridge.

Structural Steel.

Des Moines Bridge & Iron Works, Pittsburgh, Pa., received contract for store and apartment building, New Ken-
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THE CONSTRUCTION RECORD 19
GENERAL NEWS.

Vilsack-Martin & Company, Penn avenue, Pittsburgh, have been awarded the contract to furnish the ornamental iron for the new $150,000 high school building for the Board of Education, Braddock, Pa.

The Alliance Hardware Company, Alliance, O., has been awarded the steam heating work to be installed in the grade school building for the Board of Education, Alliance, O. The National Supply & Construction Company, Niles, O., which has the general contract for erecting the building, is asking sub-bids on other work.

The cut stone work on the $100,000 church building for the First Presbyterian Congregation, Charleston, W. Va., has been awarded to the Hoosier Cut Stone Company, Bedford, Ind. The brick work will be done by B. F. Gates, Charleston. The ornamental plaster work has been let to the Art Marble & Plaster Company, Charleston.

Estimates are now being taken by Martin C. Schwab, 4 West Wabash avenue, Chicago, for installing the ventilating and refrigerating systems in the new Rosenbaum department store, Federal street and Liberty avenue, Pittsburgh.

Architects Peterson & Clark, 520 Market street, Steubenville, will be ready for bids about June 15 on the interior trimming for the $100,000 hospital building, to be built at Steubenville, O., for the Ohio Valley Hospital Association.

BUYING MATERIAL FOR POWER BUILDINGS.

The Ohio Electric & Power Company, Nelsonville, O., has started excavation for two new power buildings which will be constructed at a cost of $225,000. These buildings will be of brick and steel construction and will have composition roofing, metal sash and doors, concrete foundations, structural steel frame, etc. A coal conveying system is to be installed.

PLANNING BELLEVOUE SCHOOL.

Plans for the proposed high school building to be built at Bellevoeu, Pa., for the Board of Education, will probably be completed by Architect W. J. Shaw, Fulton building, Pittsburgh July 1, when bids will be asked on its construction. The school will measure 100x174 feet, three stories and basement and will be constructed of brick and stone with slate or tile slab roofing, reinforced concrete foundation, tile partitions, expanded metal floors, marble and tile work, composition flooring, vacuum cleaning system, structural steel, sheet metal work, etc. It is planned to have domestic science and manual training departments, swimming pool, gymnasium and auditorium, to seat 1,000.

HAGEN COMPANY GETS SCHOOL WORK.

The Board of Education, Fulton building, Pittsburgh, has awarded to the Howard Hager Company, 601 Penn avenue, Pittsburgh, the contract to build the Colombo street school building. The steam heating contract has been awarded to the Pittsburgh Heating Company, First avenue, Pittsburgh; plumbing, Buerkle Plumbing Company, Second avenue, Pittsburgh; electric work, Morgaestern Electric Company, Second avenue, Pittsburgh. Sub contracts on the erection of the building will be awarded by the Howard Hager Company.

SEPARATE CONTRACTS FOR NEWSPAPER BUILDING.

Separate contracts are to be awarded by Architect E. B. Lee, Peoples Bank building, Pittsburgh, for the erection of an eight-story brick and steel fireproof building for the Pittsburgh Gazette-Times, Rutland street and Strawberry alley, Pittsburgh. A private power plant of about 200 horsepower will be installed. Bids on the heating and ventilating systems will be taken at a later date.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

- Contracts Awarded
  - January 1, 1914 to date: $37,344,000
  - Corresponding period 1913 ... 47,888,000
  - Corresponding period 1912 ... 42,551,000
  - Corresponding period 1911 ... 59,851,000
  - Corresponding period 1910 ... 51,200,000
  - Corresponding period 1909 ... 41,772,000

- Week ending June 2, 1914 ... 2,178,000
- Corresponding period 1913 ... 2,215,000
- Corresponding period 1912 ... 3,910,000
- Corresponding period 1911 ... 2,580,000
- Corresponding period 1910 ... 1,290,000
- Corresponding period 1909 ... 1,007,000

Week ending May 27, 1914 ... 2,309,000

sington. Owner, the Crown Bottling Company, New Kensington.

Youngstown Wire & Iron Company, Youngstown, O., received the contract for picture theatre, Girard, O. Owner, Jacob Mock, Girard.

J. E. Moss Iron Works, Wheeling, W. Va., received contract for laundry building, Clarksburg, W. Va. Owner, the Empire Laundry Company, Clarksburg.


Heating.

Anderson & Darragh, Pittsburgh, received contract for the municipal swimming pool, Pittsburgh. Owner, the City of Pittsburgh.

The Lamneck Company, Columbus, O., received contract for school building addition, Dayton, O. Owner, the Board of Education, Dayton.

Electric Work.


Carter Electric Company, Pittsburgh, received contract for municipal swimming pool, Pittsburgh. Owner, the City of Pittsburgh.


Marble Work.

Pittsburgh Marble Company, Pittsburgh, received contract for elementary school building, Pittsburgh. Owner, the Board of Education, Pittsburgh.

Patrizio Art Mosaic Company, Pittsburgh, received contract for office building remodel, Pittsburgh. Owner, the Park Estate, Pittsburgh.

Plastering.

Hovis Brothers, Wilkinsburg, Pa., received contract for church, Akron, O. Owner, Trinity Lutheran Congregation, Akron.

F. T. Ross, Tarentum, Pa., received contract for store and apartment building, Tarentum. Owner, Losvik Brothers, Tarentum.

J. A. Evers, Pittsburgh, Pa., received contract for motion picture theatre and hall, Pittsburgh. Owner, M. Smoloveitz, Pittsburgh.


J. A. Evers, Pittsburgh, Pa., received contract for store and loft building, Pittsburgh. Owner, B. and George Gelder, Pittsburgh.
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LARGEST GYPSUM PLANT.

The recently completed works of the United States Gypsum Company, at Oakfield, N. Y., are the largest in this line of industry. The works are located directly over the gypsum deposit, which is mined and drawn up through the shaft into the plant. The output of the mine, which is worked up into Sackett plaster board and Pyrobar partition tile, is 350,000 tons annually. The capacity of the wall plaster plant is 250,000 tons, while that of the Sackett plaster board plant is 5,000,000 square feet a year. The capacity of the Pyrobar tile plant is 10,000,000 square feet a year.

FOR LEAKY SKYLIGHTS.

If skylights leak because the glass has been put in with ordinary putty remedial measures may be taken by making a paste of oil paint and applying it. This may be made by using paint skins that have been run through a grinding machine or boiled in a kettle and softened by linseed oil. This material remains elastic and does not crack. It must be thinned if the glass has been lapped without frames, then apply a strip of semi-paste to the end of each under-glass. When the paste has set the two pasted layers must be touched up a bit to insure perfect tightness. The result is almost a rubber glaze that will stand the effects of the weather far longer than ordinary putty. It is necessary, first to have all paris that the glaze is supposed to protect thoroughly cleaned and all traces of former putty removed.

NILES TO IMPROVE APPEARANCE.

Why should monuments not take on a practical as well as a sentimental aspect? A combination of the practical and the sentimental would make them all the more worth while. This problem has been answered in the affirmative by the National McKinley Birthplace Memorial Association, which has in view the construction of a building to perpetuate the memory of the late President William McKinley, costing $200,000, to be erected at his birthplace, Niles, O.

It has also been decided to offer a suitable prize through a committee of the American Institute of Architects for the best competitive plans and drawings for the memorial. A small park and surrounding plots of ground, consisting of about five acres, have been given by the city of Niles as a site for the building. The building will be of granite, two stories and a basement. Facing the main entrance of the memorial will be a life figure of President McKinley. Bronze busts of men associated with him in the affairs of the nation are to have a place in the building. These will be Former Presidents Roosevelt and Taft; James Ward, the elder, who was a pioneer manufacturer at Niles and established the first rolling mill there in 1842, and Senator Mark Hanna. This promises to be a most interesting competition and the decision of the association to erect a building is worthy the emulation of others.
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ARTISTIC GRILLE WORK, IRON FENCING.
DEATH OF ARCHITECT ANDREW MCMASTERS

Much regret has been expressed at the recent demise of Andrew McMasters, Pittsburgh, which occurred a few days ago. Mr. McMasters spent his entire life in Pittsburgh, having received his early education in the public schools. During his early manhood he followed the contracting business and later took up the architectural profession, in which he established an exceptional reputation for high class work.

TAKING BIDS ON SCHOOL CONSTRUCTION

No date has been set for closing bids for constructing a two-story brick school building at Hickory, Pa., for the Mt. Pleasant Consolidated Public School Board. Plans for this structure were prepared by Architect C. L. Whitaker, Devasburg, which call for a two-story and basement building, 114x112 feet, and contain school rooms, auditorium, gymnasium, laboratory, and library. Specifications will include reinforced concrete foundations, concrete or wood floor in basement, waterproofing, tile partitions, metal lath, interior mill work, maple flooring, composition roofing, lighting fixtures, water supply plant, etc.

OFFICE BUILDING TO BE AWARDED

It is probable that the contract for the erection of the Republic Bank Note Company's new building, which is to be erected on Thackery street, Pittsburgh, will be awarded before the close of the present week. The building which was designed by Architect Rutan & Russell, Magee building, Pittsburgh, will call for a six story brick, terra cotta and steel, fireproof structure, to measure 87x100 feet. It will have reinforced concrete and terra cotta block floor construction, structural steel frame, exterior face brick, blue sand stone, ornamental terra cotta, marble and tile work, skylights, fire escapes, metal lath, fire doors, interior mill work of yellow pine, etc. Separate contracts will be awarded for the heating, plumbing and elevator work.

PLANNING CANTON SCHOOL

Plans will be completed at an early date by Architect E. C. & A. L. Thayer, New Castle, Pa., for a $65,000 brick and stone school building, for the Board of Education, Canton. The building will contain 12 rooms and measure 65x128 feet. It will have concrete and composition roofing, mechanical steam heating system, electric work, plumbing fixtures, etc.

MILLION DOLLAR DEPARTMENT STORE

The George W. McAlpin Company, Cincinnati, O., intends erecting a brick and steel concrete fireproof department store at a cost of $1,000,000. The work which will mature in the near future, will call for an up-to-date type of construction. Sketches for the proposed building have been prepared by an architect whose name is being withheld temporarily.

DEPARTMENT STORE CONTEMPLATED

The H. & S. Pogue Company, Fourth and Race streets, Cincinnati, O., has in contemplation the erection of a $1,000,000 department store, to be of brick, steel and concrete construction. Premature reports are to the effect that a private lighting system is to be installed, a low pressure steam heating system, passenger elevators, etc.

BIBLE INSTITUTE TO BUILD AT CANTON

The Phillips Bible Institute, Canton, O., is to erect a three-story brick and terra cotta office and school building from plans now being prepared by Architect Wilbur T. Mills, McKim building, Columbus, O. This will be a part of a group of buildings under contemplation. Structural steel will be required in addition to metal lath, marble and tile work, cut stone, electric lighting, asphalt, shingle roofing, concrete footings and foundation, reinforced concrete floor construction, etc. About $50,000 will be spent on the work.

HOTEL PROPOSED FOR LIMA

Altschull Brothers, Lima, O., are having plans made by Architects Leech & Leech, Lima, for a four-story brick, stone and steel hotel building, to contain 100 rooms, which will be built at an estimated cost of $100,000. Bids on the work will be taken about July 1. The work will call for concrete flooring and foundation, structural steel frame, ornamental iron, tile flooring, fire doors, skylights, steam heating system, electric passenger elevators, composition roofing, etc.

NEW SCHOOL CONTEMPLATED

The German Township School Board, D. A. Huhn, Smithfield, Pa., secretary, contemplates the erection of a two-story brick and steel fireproof school building 80x100 feet, to cost about $80,000. The building is to contain eight or 10 rooms. The board will make a selection of an architect about July 15.

LARGE SCHOOL CONTRACT TO BE AWARDED

Bids on the general contract for constructing a two-story and basement brick fireproof school building for the Board of Education, Columbus, O., will close July 1. Architect Frank L. Packard, Hayden building, Columbus, has designed the building, which will be E-shaped, covering an area of 125x245 feet. Material specifications will include reinforced concrete floor and roof construction, face brick exterior, cut stone work, structural steel, plain or ornamental plastering, skylights, plumbing and heating systems, metal furring, composition roofing, etc.
Ideal Roof Construction

Minimum Weight, Economical Cost and Durability Are Salient Features of Reinforced Cement Tile Roofing.

If one were permitted to view the specifications coming from various architects' offices for heavy roof construction, there would be considerable surprise expressed at the large demand for reinforced tile roofing. Manufacturers of this type of roofing have achieved the highest degree of roof efficiency combined with economy and durability. For such structures as office buildings, power houses, theatres and other types of steel frame buildings, the reinforced concrete tile roofing has pre-eminence.

The Reinforced Tile Roof Company, Youngstown, O., operates two plants for the manufacture of tile roofing. The tile is composed of factory-made concrete of great density with reinforcement of steel rods and wire. These afford the most economical type of roof for a steel frame building having either flat or pitched roof. Every slab is made and thoroughly cured before shipment is made. They are made in standard lengths of five feet with a width of 26 inches, with an approximate weight of 18 pounds to the square foot. To suit special purlin spacing larger sizes are also made. Each slab varies in thickness according to the length of the tile; on the standard five-foot tile, the thickness at the edges is approximately 2 3/4 inches. They will stand a load of 150 pounds to the square foot.

Each slab has a panel feature which permits the roof load to be considerably lightened while the reinforcement is not interfered with in any way, thus assuring maximum strength and minimum weight. In constructing this type of concrete tile roofing the slabs are laid close together, the joints being pointed up with Portland cement. The entire upper surface is perfectly flat, smooth and even, and is the best foundation for composition waterproof covering. This type of tile can also be applied to floor construction.

Aside from being fireproof, these tile slabs furnish long resistance to deterioration, can be laid in any kind of weather, have a low initial cost, require no maintenance charges, and will last as long as the building itself.

Where the steel work is already designed with purlin spacing anywhere from four to eight feet a special tile is made to suit the spacing. All slabs have offsets at each end where they fit on the steel work, so they cannot slip off the purlins. This detail permits the tile to be laid on a sloping surface of one-quarter pitch or steeper, although most of the company's tile are laid on nearly flat roofs.
The under surface of the roof shows how a framework of steel beams supports the slabs of reinforced concrete tile.

The Beaver Power Building, Dayton, O., has a flat roof of reinforced concrete tile.

**Tests of Bond Between Concrete and Steel**

The engineering experiment station of the University of Illinois has recently made a most exhaustive study of the amount and distribution of the bond stress between concrete and steel. The results of tests of about 1,500 pull-out specimens and 110 large reinforced concrete beams are given in a special bulletin. The tests covered a wide range of ages, mixes, size of bar, length of embedment, conditions of storage, method of applying the load, etc. Both plain and deformed steel bars were used.

Bond resistance may be divided into two principal elements, adhesive resistance and sliding resistance. In all of the tests measurements were made to determine the relation of slip of bar through the concrete to the bond resistance at different stages of the tests. A considerable bond resistance is developed before a measurable slip is produced. It was found that after slipping begins there is a well defined relation between the amount of slip of bar and the bond resistance for small slips. For plain bars slip begins at about 60 per cent of the maximum bond resistance; with further slip the bond resistance increases rapidly until a slip of about 0.01 inch is reached which represents the maximum bond resistance. The amount of slip corresponding to a given percentage of the maximum bond resistance is remarkably constant for a wide range of ages, mixes, conditions of storage, etc. Slip of bar begins at a bond stress equal to about one-sixth the compressive strength of cubes made from the same concrete. The maximum bond resistance is equal to about one-fourth the cube compressive strength.

For deformed bars the relation of slip of bar to the bond resistance was not materially different from that of plain bars during the early stages of the test; during the later stages of the test the bond resistance varied widely with the type of bar and was found to depend on the area and slope of the bearing surfaces presented by the projections of the bar. Twisted square bars were found to be inferior to plain round bars on the basis of bond resistance per unit of area to the surface of the bar.

The usual method of computing the bond stress in a reinforced concrete beam does not take account of all the phenomena of bond action. Slip was first observed in the middle region of the span at loads producing a tensile stress in the reinforcement of about 6,000 pounds per square inch. As the load was increased slip of bar progressed through the outer thirds toward the ends of the beam. In the beams reinforced with plain bars end slip began at about 67 per cent of the maximum load; for the beams with certain types of deformed bars the value was 51 per cent. In the tests of reinforced concrete beams it was found that a very small amount of end slip represented critical conditions of bond stress.

**Pittsburgh Firm Secures Wheeling Contract**

The contract for the erection of a seven-story store and warehouse at Wheeling, W. Va., for Edward Wagner, wholesale grocer, has been awarded to the Fetzer-Winger Company, 910 Bessemer building, by Architect F. F. Farris.

The building will be entirely of reinforced concrete, using the mushroom, or flat slab type of construction and will cost $75,000.

The Fetzer-Winger Company secures this contract on account of its experience in this particular type of construction, having erected buildings, using the mushroom, or flat slab construction for the West Penn Railways Company at Uniontown; two buildings for the United States Aluminum Company at New Kensington; garage for W. J. Dible, at Wilkinsburg; garage for Kaufman & Baer Company, Baum boulevard. The company now has under way a five-story factory at Forbes and Hooper streets, Pittsburgh, for D. F. Shahan.
There are two kinds. No. 1 screw holes are adapted to use wherever screws are commonly used, and are threaded to receive either wood or machine screws. They are driven in, the outer or screw receiving end of screw hole, being flush with the face of the receiving material.

No. 2 screw holes are the reverse of No. 1, the inner receiving end being beneath the face of the receiving material. The screw enters it from the opposite side, instead of from the face of the receiving material, as in joining parts of furniture, fastening drawer pulls, either knobs or handles, securing box seat hinges, water closet seat hinges, and hundreds of other such places.

**ARCHITECTURAL RENDERINGS.**

Architectural rendering has in late years become more or less of a specialty, and the men who make the exhibition drawings and the color renderings for submission to clients have in the main become a specialized class, which does nothing else, and their ranks are recruited mainly from the architects' offices, but with occasional ascensions from the painters. In the old days the perspective drawing (it was not then called a "rendering") was almost invariably made in the office of the architect, or often by the architect of the building it depicted; and these old renderings, though oftentimes crude and uninteresting, were perhaps more interesting than the beautiful drawings of the present day, because they were personal documents of the designers. This older method gave of course a certain advantage in the securing of work to the architect of pictorial talent—an advantage perhaps undeserved, since the picture is not the ultimate aim of the architect. The professional renderer was developed to overcome this disadvantage.

The fact that it is now the habitual practice of most offices to have their rendering done by men outside of the office, does not mean that the proportion of men among the draftsmen in their offices who have ability in rendering has decreased, says the Brickbuilder; in fact, the contrary is the case, and not only is there a larger proportion of men who are able to render with some approach to architectural skill, but also the work of these men is of a better grade than it used to be.

Mr. Magonigle, for example, made a drawing for his proposed scheme for the Perry Memorial some years ago, which was quite as beautiful a thing as Mr. Long's wonderful drawing of the Hudson-Fulton Competition. Mr. Seymour made a rendering of the winning scheme of the Perry Memorial, which was one of the best architectural renderings we have ever seen, and, although it was a truly architectural rendering in black and white, it still was the type of drawing which could be submitted to a client.
THE CONSTRUCTION RECORD

GENERAL NEWS.

The Wheeling Board of Trade has turned over two buildings to the newly-organized Wheeling Ceiling & Roofing Company. M. L. Huneker, of Bellsire, Ohio, and W. E. Ackerman, Frank W. Nesbit, William F. McKinley, William C. Eberts and Frank A. McMahon, of Wheeling are interested.

The Frances Slag Company, Toledo, O., has increased its capital stock from $50,000 to $250,000. This company owns plants in Toledo, Detroit, Canal Dover, Ohio, and Leetonia, Ohio, utilizing slag procured from nearby blast furnaces, and also supplies slag to the roofing trade.

The Economy Furnace & Heater Company, Welston, O., has been organized by J. H. Sellers, L. U. Vogelsang, E. H. Willis, J. H. Browne and C. E. Fitzpatrick, with a capital stock of $30,000, for the purpose of manufacturing heaters for residences.

The Humphrey Pump Company, Wheeling, W. Va., has been incorporated with a capital stock of $100,000, by George A. Laughlin, Joseph C. Brady, W. S. Brady, Henry M. Russell and F. Dupont Thompson, to manufacture all kinds of pumps.

M. C. & H. A. Mayer have engaged in the contractors' machinery and supply business at 332 to 334 West Twelfth street, Erie, Pa. Both principals have been engaged in the general construction business, as members of the Mayer Brothers' Construction Company, for many years.

The Erie Mantel & Tile Company, Erie, Pa., has received, among its numerous orders, the contract for the mantel and tile work in the new residence of Dr. A. C. Wheeler, Erie, Pa.

Prices on buff pressed brick are being asked for by Samuel Jones, Grafton, W. Va.

R. W. Bishop, Elkins, W. Va., desires prices on 25,000 or 30,000 buff pressed brick.

The Board of Education, Grove City, Pa., will ask bids about July 1, on lighting fixtures, to be installed in the new $75,000 high school building.

The Lameneck Company, Mt. Vernon avenue, Columbus, O., has been awarded the contract for the steam heating system, to be installed in the school building for the Board of Education, Steubenville, O.

The following sub-contracts for the market house construction for the city of Pittsburgh, have been awarded by Henry Schenk Company, Pittsburgh, which has the general contract: Plumbing, John M. Tate, Pittsburgh; electric work, Carter Electric Company, Pittsburgh; heating, Anderson & Darragh, Pittsburgh; refrigeration, York Manufacturing Company, York; elevator, Otis Elevator Company, Pittsburgh.

E. M. Snyder & Company, general contractors, Uniontown, Pa., are desirous of representing such concerns as make skylights, ventilators, metal doors, lighting fixtures, etc.

Bids will close June 15, on installing electric work in the high school building, Monessen, Pa. Architect A. P. Cooper, Uniontown, and the Board of Education, Monessen, will receive bids.

The Board of Education, Ben Avon, Pa., is asking separate bids on the plumbing and electric work to be installed in the Dickson Avenue school.

The heating and plumbing work for the $300,000 mercantile building, Thackery street, Pittsburgh, for the Republic Bank Note Company, will be awarded separately. Bids will be taken by Architects Rutan & Russell, Magee building, Pittsburgh.

COMPLETING PLANS

FOR ELKS BUILDING

Architects H. W. Altman, First National Bank building, Uniontown, Pa., will complete plans next week for the proposed brick and steel lodge building, to be built for the B. P. O. E. Uniontown, Pa. The building will measure 40x105 feet, three stories and basement and will contain a lodge and club room, swimming pool, gymnasium, etc. The building will have reinforced concrete floors, tile and marble flooring, expanded metal lath, plumbing, heating, etc., and cost $40,000.

CLEVELAND STRUCTURE

UP FOR BIDS

Bids will be asked early next week by Architect E. F. Gibbons, 1900 Euclid building, Cleveland, on the erection of a four-story brick and reinforced mercantile building, 70x100 feet, which will be built at 856 Prospect avenue, for the Belmont Building Company, Garfield building, Cleveland. The first floor will contain store rooms. Material specifications will include cement finish floors, metal laths, fire doors, store fronts, ventilators, sidewalk lights, face brick, structural steel, etc. The estimated cost of the work is $60,000.

NOTICE TO CONTRACTORS

Sealed bids will be received by the Commissioners of Beaver County, Pa., up until 12 o'clock noon of Thursday, June 25, 1914, and will be opened at a meeting of the Commissioners to be held at a later hour, for construction work and finishing of alterations to the Beaver County Jail. Each bid must be accompanied by a certified check, as noted in specifications, as a guarantee of good faith in bidding; said check to be forfeited to Beaver county if successful bidder fails to furnish satisfactory bond and enter into contract for the price bid within ten days after award of contract.

The Commissioners reserve the right to reject any and all bids. By order of the County Commissioners.

BUILDING CONDITIONS.

The following table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Corresponding period</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910</td>
<td>52,614,000</td>
<td>1,384,000</td>
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<tr>
<td>1911</td>
<td>63,151,000</td>
<td>2,300,000</td>
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<td>1912</td>
<td>45,757,000</td>
<td>3,250,000</td>
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<tr>
<td>1913</td>
<td>71,510,000</td>
<td>3,652,000</td>
</tr>
<tr>
<td>1914</td>
<td>71,510,000</td>
<td>3,200,000</td>
</tr>
</tbody>
</table>

The County Commissioners reserve the right to reject any and all bids.
Pittsburgh.

Cuthbert Brothers Company, Bessemer building, received the contract to build a brick, stone and terra cotta fireproof store and loft building on Federal street, for private parties. Cost $85,000.

Architect A. D. Alexander, Board of Education building, has plans under way for the interior alterations to the brick school building on Fernleaf and Eccles street, Southside.

William Kalevith, Felix avenue, Crafton Heights, is contemplating the erection of a brick veneer residence, on Clinton avenue, Crafton Heights, for which he has private plans. Cost $4,000.

Edward J. Coleman, 371 Euclid and St. Clair avenue, has private plans for the erection of two brick veneer residences on Elgin avenue. Cost $5,500 each.

The contract has been awarded to George B. Zalinski, 4115 Butler street, for remodeling the brick mercantile building on Penn avenue for M. Arnfel & Sons Company, Fifth avenue and Market street.

H. Miller & Sons, Center avenue and La Place streets, received the contract for the erection of a brick and stucco addition and alterations to the residence on Winebiddle avenue, belonging to Marcus Aaron, Second National Bank building.

M. A. Harle, 3709 Butler street, received the contract for the erection of a brick mill constructed factory building on South avenue and Baltimore & Ohio Railroad, for the Union Paint Company. Cost $16,000.

A reinforced concrete swimming pool is to be built in the Carrick Park, Carrick, for the Park Commission of the borough of Carrick, for which Dominic Capecelatro, 130 Main street, Carrick, received the contract.

W. L. Merritt, 3033 Zephyr street, Sheridan, received the contract for the erection of a brick veneer residence in McKees Rocks, for Wesley Bedling, near Tabor street. Cost $5,500.

Architects Janssen & Abbott, Renshaw building, have plans well under way for the erection of a brick fireproof constructed store and warehouse on Liberty avenue for the Fort Pitt Hotel Company. Cost $100,000.

Plans are started by Architects Janssen & Abbott, Renshaw building, for the erection of a $75,000 brick fireproof constructed home for the indigent in McKeesport, for the St. Earnabas Free Home, W. H. Schoen, Farmers Bank building.

Architects Barberger & Barberger, Westinghouse building, have plans for a hotel addition and alterations on Collins avenue and Penn avenue, for the Kleman Hotel. The work will be of brick partly fireproof construction and cost $50,000.

Architects A. D. Alexander, Board of Education, Fulton building, has plans under way for alterations to the Snodgrass school for the Board of Education.

J. O. Snyder, Homestead, received the contract to build five brick and single residences on Brown Road for James Warn, Jr., Brown Station. J. S. Smith, Braddock, received the contract for the brick work. Cost $5,000 each.

A. E. Gillander, 1214 Virginia avenue, was the low bidder on the interior alterations to the Stephen C. Foster school, for the Board of Education. Cost $5,000.

S. G. Baldoenberger, 214 Highland avenue, was the low bidder on the erection of two brick residences on Winebiddle avenue for Mrs. Luella Schmidt, Al­toona, Pa.

The contract has been awarded to James L. Stuart, Oliver building, to build the $10,000 brick, stone and terracotta fireproof bath house on Tenth and Bingham streets, for the Henry W. Oliver Estate, 2376 Oliver building.

Architect A. D. Alexander, Board of Education, Fulton building, has plans in progress for the interior alterations to the brick school building on Crucible and Lorenz streets, for the Board of Education. The work consists of a new heating system and other alterations which will cost about $6,000.

Architects Janssen & Abbott, Renshaw building, will soon complete plans for a brick and stone fireproof hospital building on Sandusky street and Park Way, for the Allegheny General Hospital. Cost $90,000.

The contract has been awarded to Landau Brothers, 311 Second avenue, for the erection of a $5,600 brick and stone residence on Carson street, for Albert Schmid, 2006 Carson street.

Bids, which were being taken by the Pennsylvania Railroad Company, for the erection of a brick, steel and concrete freight station and office building in the Northside, will not close until June 18.

Architect A. D. Alexander, Board of Education, Fulton building, has plans under way for the interior alterations to the Irwin Avenue industrial school building, for the Board of Education. Cost about $5,500.

Architects Carlisle & Sharrer, Jenkins Arcade, are ready for bids on the interior alterations to the church building in Duquesne, for the First United Presbyterian Congregation. The same architects have plans for a reinforced concrete fireproof commercial garage on Darlington Road, for private parties. Cost $10,000.

Plans will probably be completed about June 16, by Architects Carlisle & Sharrer, Jenkins Arcade building, for the erection of a $2,500 fireman's house, brick construction, in Ben Avon, Pa., for the borough of Ben Avon.

The contract has been awarded to S. A. Hamel, 317 Giffin avenue, Mt. Oliver, for the erection of a brick store and apartment building, in Carrick, for F. A. Hallerbach. Cost $30,000.

On account of competing contractors neglecting to comply with the State code, regarding separate contracts for several branches of work, it became necessary for the Board of Education, Dormont, to have plans refigured. It is likely that the work will be awarded late this week.

The contract has been awarded to Harry D. Negley, 7141 Idlewild street, for the erection of two brick veneer and stone bungalows in Ardmore Farms, for private parties. Cost $5,500 each.

Architect D. A. Crone, Oliver building, has plans about completed for a brick stable addition on Dinwiddie street, for Heller & Perrin, 67 Chatham
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street, to cost about $8,000.


The contract has been awarded to the Standard Building Company, Stetrite building, Northside, to build a brick apartment building in Wilkinsburg, for Messrs. Newell & Wills, Berger building. Cost $4,400.

Walker & Curley, Bessemer building, were awarded the contract to build the school building for the Baldwin Township School Board. The work will cost $2,100.

Architects H. E. Kennedy & Company, Home Trust building, have plans completed for the alterations and addition to the theatre building on Fenna avenue, for Carl Vilsack, Penn and Highland avenue. Cost $12,000.

William Whitfield, 583 Hobart street, is contemplating the erection of three brick veneer residences on Murray avenue, for which he has private plans.

Architect J. H. Creey, Mellon Bank building, is revising the plans for the erection of a brick store and office building on Wylie avenue, for the Mellon Estate. Cost $12,500.

Architects Carlisle & Sharrer, Jenkins Arcade building, have plans about completed for a commercial garage on Darlington road, for the Darlington Road Auto Company. The company is in the market for all materials.

The contract has been awarded to George E. McKee, Alger street, for the erection of two double residences, brick construction, on McKee Place, for W. E. Wright, 257 McKee Place.

Hugh Wilson, 601 Center avenue, is contemplating the erection of an $8,000 brick residence on Lake ton road, for which no architect has been selected.

New plans will be prepared by Architect S. F. Hecket, Bessemer building, for a brick fireproof garage and warehouse on Thirty-ninth street, for the Petroleum Products Company, Grant boulevard and Ridge avenue. Cost $16,000.

Architect J. E. Ohlitz, 6280 Penn avenue, is taking sub-bids on the erection of a stone residence on Grotto street, for the Masi Brothers, Carver street.

The City of Pittsburgh is taking new bids on the street improvement work on Second avenue, which will cost about $15,000. Either wood block or block stone will be required.

Tuhl & Miller, Wabash building, received the contract for the construction of a concrete and enamel brick foot tun-

net under Grant boulevard at Washington street, for the City of Pittsburgh.

The City of Pittsburgh will take bids until June 18 on the construction of a concrete retaining wall on Prospect street. Cost $12,000.

Apartment and Dwellings.

Toledo, O. — N. B. Taylor, Colton building, is contemplating the erection of 30 frame residences on Dorr street, for which private plans have been prepared. Cost $2,500 each.

Trafford City, Pa. — William G. Weston, Brightton avenue, has private plans for the erection of two brick or brick veneer apartment buildings on Frankstown avenue. Cost $20,000 total.

Cincinnatı, O. — Architect G. W. Drack, Union Trust building, is preparing sketches for a brick residence, to be erected on Dixmyth avenue, for Casper E. Haeschl, Court House. Cost $7,000.

Architect Max Kau, Stratford avenue, is preparing plans for the erection of a pressed brick apartment building, on Northside of Valencia Place, for Lionel Kugemann, 2384 Ohio avenue. Cost $7,500.

Columbus, O. — E. E. Beckett, 674 South Ohio avenue, was the low bidder for the erection of a brick apartment building, to be erected on Nineteenth street, near Spring street, for Dr. J. H. Hamilton, 58 North Monroe street. Cost $15,600.

East Palestine, O. — The contract has been awarded to Lou Crosswell, to build a $4,000 frame residence, for W. J. Foley.

Mechanisburg, O. — Architect Robert C. Gotwald, 54 Gotwald building, Springfield, has plans completed for the erection of a brick residence for Dr. V. B. Kraut. Cost $6,000.

Tiffin, O. — Architect George Netcher has plans about completed for the erection of a brick residence, on Sandusky street, for C. J. Schmidt, 166 Hall street. Cost $25,000.

Bellevue, Ky. — Architect L. H. Wilson, 10 North Fourth street, Newport, Ky., is preparing plans for the erection of a $4,400 pressed brick residence on Ward and Grandview avenue, for Theodore Cook.

Architect L. H. Wilson, 10 West Fourth street, Newport, Ky., has plans under way for the erection of a brick apartment building addition on Van Vost and Fairfield avenue, for the Campbell County Bank. Cost $2,300.

Bramwell, W. Va. — The contract was awarded to Henry L. Brown, 1714 Samsom street, Philadelphia, Pa., to build a stone residence and garage, for Mrs. Kate R. Hewitt. Cost $25,000.

California, Pa. — The Messersamm Improvement Company, Monessen, Pa., will take bids about June 12 on the erection of two frame residences, costing $3,000 each.

Cincinnati, O. — Reitman & Reitman, Gayley building, have private plans completed for two apartment buildings, pressed brick construction, which they will erect at a cost of $10,000 each.

Wellsburgh, W. Va. — The Banks Construction Company, Clarksburg, W. Va., received the contract to build two brick residences on Commerce street, for Jasper Potts, Main street. Cost $15,500.

Cincinnati, O. — Architect C. C. Burroughs, Union Trust building, is preparing for two brick residences to be erected on the Evanswood Place, for Mrs. Josephine Simmerr, 4 Hedge Row Lane, Clifton.

Cleveland, O. — Plans are being prepared by Architect A. Sharoswix, Woodland avenue, for the erection of a frame apartment building for Cotheb & Soloman, 317 East Fifty-ninth street. Cost $6,000.

Elizabethtown, Ky. — Architects Weber, Werner & Adkins, 414 Walton street, have plans in progress for a $10,000 brick residence to be built for W. C. Montgomery.


Richmond, Ky. — Plans are being made by Architect G. C. Burroughs, Union Trust building, Cincinnati, for the erection of a $6,000 stucco residence for A. L. Donny.

Bowlesburg, W. Va. — Bids are being taken by Albert Elison, owner, for the erection of a $6,000 brick residence.

Springfield, O. — Architects A. W. Stover & Company, Fairbanks building, are ready for bids on the erection of a $4,500 frame residence for Mrs. Adeline Arthur.

Beaver Falls, Pa. — Architects Carlisle & Sharrer, Jenkins Arcade building, Pittsburgh, will take bids shortly on revised plans for an $8,000 brick residence, to be built for Louis R. Ingram.

Bids Creek, W. Va. — The Lincoln Coal Mines Company, Fairmont, will take bids next week on the erection of 12 frame residences.

Boston, Pa. — S. Wyman is contem-
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When the handle is pushed entirely down to locking position, the brass valve trips, and the liquid flows back into the tank, leaving the pump entirely free. No priming will be necessary when the pump is used again.

The piston is all brass with cup packing. The stuffing box is of the nut and gland type.

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Warehouse, Works and Office, PITTSBURGH, PA.
plating the erection of a $6,000 brick residence and garage for which no architect has been selected.

Brewster, O. — Architect J. C. Peterson, Traverse City, O., has plans under way for the erection of a $4,000 frame residence for A. X. Spidel.

Brownsville, Pa. — Architect A. C. Cooper, First National Bank building, Uniontown, has plans about completed for a $7,000 brick and stucco residence on High street, for Harry Horne.


Cleveland Heights, O. — The Kaufman-Bostwick Company, Rose building, and J. L. Havlin, 1427 East Second street, are taking bids on the erection of a $12,000 brick residence on Drummond road.

Cleveland, O. — James Lawson, 1270 Penobscot avenue, received the contract to build a frame residence on Lakeview road, for George F. Miller, 1233 Lakeview road. Cost $4,500.

The contract has been awarded to M. Weinkamer, 1010 Osierd avenue, for the erection of a double frame residence for J. Y. O'Brien, 178 Trenon road. Cost $4,500.

Columbus, O. — Architects Strible & Luns, Denig-Person building, are ready for bids on the $1,500 frame bungalow to be erected for Dr. J. B. Scott, New First National Bank building.

Fairmont, W. Va. — The contract has been awarded to Rootoeh & Holland, to build a frame residence for R. A. Johnson. Cost $3,000.

Swiger & Company received the contract for the brick work on the $4,000 brick veneer residence to be erected on Park avenue, for Murray Dickerson, who is taking bids on the veneering sub-contracts.

The contract was awarded to C. F. Minor to build a frame residence on View street, for L. O. Wilson. Cost $3,000.


Springfield, O. — Plans are about completed by Architect Roy F. Gable, Bushnell building, for the erection of a double frame residence for Miss Mary Flannery, 35 E. Madison street. Cost, $4,000.

Springfield, O. — Architect Roy F. Gable, Bushnell building, is preparing plans for a double frame residence, for John Cavanaugh, 827 South Limestone street.

Trafford, Pa. — H. C. Blystone, 405 Gilmore avenue, is taking sub-bids on the erection of a $3,500 brick veneer residence, for Frederick Densmeyer.

Uniontown, O. — Architect Harry W. Alman, First National Bank building, will have plans completed about June 15, for the erection of two frame bungalows for Harry W. Lyel. Cost $3,500 each.

Xenia, O. — Architect R. E. Hause, Dayton, will be ready for bids about June 20, on the erection of a $6,000 hollow tile and brick bungalow, for C. B. Smith.

Alliance, O. — Architect W. W. Matchett, Stark Electric building, is taking bids on the erection of a $4,000 frame and stucco bungalow for H. Lindermuth.

The contract has been awarded to Robert Mellon, 520 East Grant street, for the erection of a $5,000 brick residence for Dr. D. M. Clements, 219 East Cambridge street.

Plans are completed by Architect W. W. Matchett, Stark Electric building, for the erection of a brick bungalow for G. H. Canfield. Mr. Matchett also has plans for remodeling a tile and frame tenement and stores for Mr. Smith.

Beaver, Pa. — Architects Carlisle & Sharrar, Jenkins Arcade building, Pittsburgh, and William J. Mellon, Beaver, are taking bids on the erection of a brick residence to cost $7,500.

Ceredo, W. Va. — N. H. Vineyard, is asking bids on a brick veneer residence which he is to erect at a cost of $5,000.

Charles-town, W. Va. — W. D. Otter has plans for two brick and hollow tile residences on Queen street. Cost $6,400 each.

The contract has been awarded to A. B. Brokher, for the erection of a brick veneer residence for W. J. Carpe. Cost $4,750.


Columbus, O. — Architect C. St. John Chubb, O. S. U. Campus, is revising plans for the residence and garage to be erected on Invia avenue, for Thomas M. Mills. It will be of brick and stucco on tile construction and cost $12,000.

Covington, Ky. — Architect C. L. Hildreth, 311 W. Seventeenth street, is preparing plans for a brick apartment building on Sixteenth and Mary streets, for George Rentz, Seventeenth and Woodburn streets.

Dunbar, W. Va. — H. P. Agsten, Charleston, W. Va., received the contract to build four frame residences for F. Bernarding. Cost $9,000.

Findlay, O. — L. Hallowell received the contract to build a brick flat building for H. G. Baumgartner. Cost $6,000.

L. J. Crawford, Findlay street, received the contract to build a frame and brick veneer residence for O. N. Hanger. He is taking bids on sub-contracts.

Logan, O. — J. H. Robbins, Athens, O., received the general contract and Ralph Henry, Lancaster, O., the brick work, in the erection of a $10,000 brick residence for V. Wright.

Parkersburg, W. Va. — The contract has been awarded to R. L. Brown for the erection of a brick residence for J. J. Crotty. Cost $7,500.

Pleasant Hill, O. — Austin Curtis received the contract to build a frame bungalow for Charles and Elza Perkins.

Salem, O. — M. E. Farr is taking sub-bids on the erection of a frame residence for Dr. Hawkins. Cost $4,500.

Sebring, O. — S. M. Schofield received the contract for the erection of a frame residence, costing $3,000, for Dan Evans. Sebring Building Company will erect 10 frame cottages costing from $2,000 to $2,500 each, for H. H. Sebring.

H. E. Calhoun is taking bids on the erection of a frame residence to cost about $3,200.


Toledo, O. — The E. N. Witker Company, Spitzer building, received the contract to build a frame apartment building on Fifteenth street, for Mrs. John Prettie, 30 Fifteenth street.

Otto Horste, Catawba street, received the contract to build a $3,000 frame residence on West Central avenue, for William Ballart, 250 Kress street.

Lakewood, O. — Architect William Jochel, 906 Park building, Cleveland, has plans under way for the erection of a brick residence and garage on Detroit avenue, for J. A. Spitzig, 4083 Bridge avenue, Cleveland.

Brownsville, Pa. — R. B. Spence, South Brownsville, received the contract
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BRADFORD, PA.
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for the erection of a brick residence for Mrs. Matthew Staray. Cost $5,000.

Columbus, O. — Architect J. A. Jones, Dispatch Annex building, is taking bids on the erection of a brick and concrete school building for the Board of Education.

Fayetteville, Pa. — The contract has been awarded to Frank H. Townsend to build a brick residence on Julian street, for Door Casto. Cost $8,000.

Washington, Pa. — The contract was awarded to Pihl & Miller, Wabash building, for the erection of a stone fireproof fan house on the Mount Moreau Railroad, Mine No. 1, for the Pittsburgh Coal Company. Cost $2,500, total.


Mapletown, Pa. — Plans will be completed next week by Architect H. W. Altman, Uniontown, Pa., for enlarging and remodeling the residence of Thomas W. Hudson.

Teledo, O. — H. Slutel & Son, Maplewood avenue, received the contract to build a three-story brick apartment building on Kenilworth avenue, for Louis Hirsig, 55 S. Segar avenue. Cost $12,000.

**Educational.**

Columbus, O. — The contract has been awarded to Ernst Kroemer, Dayton, O., to build a brick and concrete high school building for the Board of Education of Marion Township. Cost $21,000.

Mantua Center, O. — The Board of Education will take bids until June 27 on the erection of a brick building and high school building for the Board of Education. Cost $21,000.

Northfield, O. — Architects Ashby, Ashby & Schilke, 178 W. Jackson boulevard, Chicago, III., has plans under way for the erection of a brick and stone high school building costing $50,000.

Ridgway, O. — The Board of Education is taking bids on a brick, fireproof and high school building, to be erected at a cost of $15,000.

Transfer, Pa. — Architects Clepper & Owens, Sharon, Pa., have plans about ready for bids on the erection of a $20,000 brick school building for the Board of Education.

Steubenville, O. — Architects Peterson & Clark will take bids about June 20 on the erection of a brick and steel fireproof high school building on North street, for the Board of Education. Cost $75,000.

Cresson, Pa. — The Board of Education is taking bids on the erection of a brick building.

Hickory, Pa. — Architect C. L. Whitaker, Dravosburg, Pa., is taking bids on the erection of a $40,000 brick high and grade school for the Mt. Pleasant Consolidated Public School Board.


Hundred, W. Va. — Architect G. H. Snider, Fairmont, W. Va., and the Board of Education, are taking bids on the erection of a $12,000 brick grade school building.

La Carne, O. — The contract has been awarded to M. Rabbitt & Sons, Nashy building, Toledo, O., for the erection of a pressed brick school building for the Board of Education. Cost $20,000.

Steubenville, O. — Guy Johnson, Toronto, O., received the contract for the erection of a brick and steel fireproof school building addition on South Fourth street, for the Board of Education. Cost $40,000.

McFeeley Brothers, received the contract to build a $40,000 brick and steel fireproof addition to the Washington school building, on Adams street, for the Board of Education.

Warrensburg, O. — E. H. Rickett, 273 Twelfth street, Columbus, has been selected to prepare the plans for the erection of a brick and steel special district grade and high school building for the Board of Education. Cost $10,000.

Alpha, O. — Architect Edward J. Mounstenhen, U. S. building, Dayton, and the Board of Education, Alpha, are taking bids on the erection of a brick, composite high school addition. Cost $8,000.

Canton, O. — Architect Willard T. Mills, McKane building, Columbus, has plans in progress for the erection of a brick, terra cotta and concrete office and school building, for the Phillips Bible Institute. Cost $8,000.

Canton, O. — Bids will be taken soon by the Board of Education, care W. C. Lane, High School building, for the erection of a brick and steel fireproof school building on North East street. The building will contain 12 rooms and cost $55,000.

Catawba, O. — Architect A. W. Storer & Company, Fairbanks building, Springfield, is ready for bids on the erection of a $7,000 brick school building, for the Board of Education of Union township.

Cincinnati, O. — Architect A. Fechheimer, Lyric Theatre building, is writing specifications for the women's building to be erected on Clifton avenue, for the University of Cincinnati. It will be of brick and terra cotta fireproof construction and cost $175,000.

Mutual, O. — Architects A. W. Stover & Company, Fairbanks building, Springfield, are ready for bids on the erection of a brick, fireproof and grade school building, for the Board of Education of Union township. Cost $30,000.

New Bedford, Pa. — Architect W. G. Eccles, Lawrence Savings & Trust building, New Castle, will be ready for bids on the erection of a brick school building for the Board of Education.

West Toledo, O. — Geisinger Kopla Company, Messenger building, Toledo, O., received the contract for the erection of a brick and stone high school building on North avenue, for the Board of Education. Cost $80,000.

Union, O. — Architects A. W. Stover & Company, Fairbanks building, Springfield, O., is taking bids on the erection of a brick grade school addition, for the Board of Education. Cost $7,000.

Cleveland, O. — The contract has been awarded to Uhl-Jaster Company, 1900 Euclid avenue, for remodeling a church into a gymnasium, for the Case School of Applied Science, 103 Chamber of Commerce building. The work will be of brick and timber and will cost $25,000.

Columbus, O. — Ernst Kroemer, Dayton, O., received the contract to build a brick and concrete high school building and high school building, for the Board of Education. Cost $21,241.

McClellandtown, Pa. — The German Township school Board, is contemplating the erection of a brick and steel fireproof school building, for which an architect will be selected about July 15.

Uniontown, Pa. — The Board of Education has selected Architect Harry W. Altman, First National Bank building, to prepare plans for a brick and steel fireproof grade school building, to be erected at a cost of $50,000. Owner and architect will take bids soon.

Brewster, O. — The contract has been set aside by E. Converse, Massillon, O., for the erection of a brick fireproof school addition for the Board of Education. Cost $13,000.

Follansbee, W. Va. — A. S. Craig & Company received the contract for the
Read About This Job, Mr. Contractor.

The cellar in the residence of Mr. Thomas Forbes, Freeport, N. Y. (shown above) was very leaky. In winter time the floor is subjected to 2-foot hydrostatic pressure. The furnace pit is a foot below floor level and subject to 3-foot pressure.

Mr. A. S. Johnson, Contractor, was called in. He uses and swears by Ceresit. The work of waterproofing was done while the water was high and two pumps were kept going night and day while the work was in progress.

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D. J. Kennedy, Pittsburgh, Pa.
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erection of a brick school building, for the Board of Education. Cost $20,000.

Lyswen, Pa. — The Board of Education has private plans for the erection of a brick mill constructed addition to the Baker School. Cost $90,000.

Monongahela, Pa. — Stephens Brothers, received the contract to build a frame addition to the school for the school board of Carroll township, at a cost of about $1,500.

New Salem, Pa. — Sketches are being submitted to the New Salem School Board for a high school building, for which an architect will be selected soon. The building will be of brick and steel fireproof construction and will cost $40,000.

Percy, Pa. — Architect J. H. Harmon, First National Bank building, Uniontown, Pa., has plans completed for the erection of a brick school building, for the Union Township School Board. Cost $18,000.

Youngstown, O. — The Board of Education is taking bids on heating and ventilating for the new school building being erected in the Lansingville district.

The Board of Education is taking bids on heating and ventilating systems to be installed in its new brick, stone trimmed, fireproof school building on Brier Hill, at a cost of $55,000.

Brecksville, O. — Rowe & Giles, Chagrin Falls, received the contract to build a two-story school building 60x64 feet, for the Board of Education. Cost $25,000.

Ridgway, O. — Bids close on the 25th inst, for building a one-story brick, fireproof school building 62x89 feet, for the Board of Education. Plans were made by Architect R. H. Richett, 274 Twelfth avenue, Columbus.

King View, Pa. — Hemminger & Christner, Scottsdale, received the contract for the carpentry work and William Keenan, Scottsdale, the brick masonry, for the new school building which will be built for the Board of Education.

Religious.

Ingomar, Pa. — Architect C. W. Hodgesdon, 810 Penn building, Pittsburgh, will take bids until June 15 on the erection of a brick and tile church for the Franklyn M. E. Congregation. Cost $10,000.

Warren, O. — Architects Fulton & Taylor, Uniontown, Pa., have been selected to prepare plans for the $100,000 brick and stone church, to be erected for the First M. E. Congregation.

Canonsburg, Pa. — The contract has been awarded to Hardy & Rankin, Central avenue, for the erection a brick church building, on North Jefferson and West College street, for the St. Paul's Lutheran Congregation. Cost $4,500.

Warren, O. — The First Methodist Episcopal Congregation will take bids until June 15, on the erection of a $10,000 brick, stone trimmed, church.

Willshire, O. — Architect B. F. Matthews, Opera House Block, Lima, has preliminary plans under way for the erection of a brick and stone church, for the First Methodist Congregation. Cost $15,000.

Dayton, O. — The Structural Concrete Company, received the contract for the erection of a parochial school building on Xenia avenue and Samuel streets, for the St. Mary's Roman Catholic Congregation. Cost $40,000.

Eric, Pa. — The contract has been awarded to Kirchner Brothers, East Ninth street, for the erection of a brick and tile parish house on East Fourth street, for the St. Patrick's Roman Catholic Congregation. Cost $35,000.

Keown Station, Pa. — The Duquesne Construction Company, Bessemer building, Pittsburgh, received the contract to build a brick convent for the Vincentian Sisters of Charity. Cost $35,000.

Springfield, O. — Architect R. F. Gable, Bushnell building, will have plans ready for bids about June 20, on the erection of a brick parochial residence for the St Joseph Roman Catholic Congregation. Cost $16,000.

Ebensburg, Pa. — The Presbyterian Church will take bids about June 15 on superstructure for a brick and stone church, to be built at a cost of about $25,000.

Piqua, O. — Architect Charles Herby, 1400 United Brethren building, Dayton, will take bids until June 15, on the erection of a $25,000 brick church for the Grace Methodist Episcopal Congregation.

Toledo, O. — John Pioch Company, Huron street, is taking sub-bids on the erection of a brick and stone church and Sunday school for the Zion Evangelical Church.

Uniontown, Pa. — Architect Harry W. Altman, First National Bank building, has plans about completed for a brick church addition, for the Lutheran Congregation. Cost $25,000.

Columbus, O. — The contract has been awarded to Knox & Phillips, 2153 West Broad street, for the erection of a brick mill constructed church addition for the Neil Avenue Methodist Episcopal Congregation. Cost $14,000.

Hastings, Pa. — L. X. Bauman, Carroltown, Pa., was the low bidder on the erection of a stone parochial school for the St. Bernard's Catholic Congregation. Cost $15,000.

Wellsville, O. — Architect S. R. Badgley, 307 Wise building, Cleveland, O., has preliminary plans for a stone or brick church for the First Methodist Episcopal Congregation. Cost $30,000.

New Comerstown, O. — The M. E. Church will take bids about July 1 on the erection of an addition 2x70 feet, also remodeling work, from private plans.

Business Buildings.

Cleveland, O. — Architect B. F. Gibbons, 1900 Euclid building, has plans under way for the erection of a brick and reinforced concrete fireproof mercantile building on Prospect avenue, for the Belmont Building Company, 299 Garfield building. Cost $60,000.

Architects Fulton & Taylor, Permanent building, will prepare plans for the erection of a brick, steel and concrete fireproof terminal warehouse on W. Ninth street, for the Home Financing Company, 219 Williamson building. Cost $45,000.

Ironton, O. — Architect Frank L. Packard, Hayden building, Columbus, O., will be ready for bids about June 17, on the erection of a brick and stone bank building on Third street, for the Citizens National Bank. Cost $35,000.

Springfield, O. — Architects Drach & Miller, Kelly building, has plans under way for the erection of a brick and steel publishing building addition for E. S. Kelly, Kelly building.

Cleveland, O. — R. D. Kohl, 170 Fifth avenue, New York city, has been selected architect to prepare plans for a brick mercantile building, to be erected on Euclid avenue and East Fourteenth street, for Linder Coy, East Ninths street.

Urbana, O. — Pickering Brothers, were the low bidders on the erection of a brick store and office building, for John S. Powers.

Columbus, O. — Architect Richards, McCarty & Bulford, Hartman building, have plans about completed for the erection of a brick and concrete store and office building, on Grant avenue, for the W. N. Ritter Lumber Company. Cost $60,000.

Logan, O. — Craig & Loomis received the contract to build a brick store and office building, for Miss Elizabeth Remple. Cost $15,118.
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Pittsburgh, Pa.
Martins Ferry, O. — The contract has been let to Shinar & Faust, to build a $4,500 frame store and apartment building, on Fifth street, for Rodger Lupton.

Sandusky, O. — George Felch & Company were the low bidders on the store and loft building to be erected on Columbus avenue, for the Dorahue Hardware Company. It will be of frame, brick, semi-fireproof construction and cost $25,000.

Tiffin, O. — C. S. Seita is contemplating the erection of a brick, mill constructed, store and office building, on Washington street.

Urbana, O. — The Uniied Box Board Company, has private plans under way for the erection of a frame storage building, on Elm street.

Big Creek, W. Va. — The Lincoln Coal Mines Corporation, Fairmont, is contemplating the erection of a frame store building.

Canton, O. — Architect E. F. Gibbons, 100 Euclid building, Cleveland, has plans about completed for the erection of a brick and steel hardening house for the Timken Roller Bearing Company.

Cleveland, O. — The Tidewater Building Company, 1111 Huron Road, received the contract for the erection of a cold storage warehouse on Bowlav Road and E. Sixth street, for the Sheriff Street Market & Storage Company. It will be of tile and cement reinforced concrete fireproof construction and cost $25,000.

Elizabeth, Pa. — The Elizabeth Planing Mill Company will start work soon on a frame store and apartment building, to be erected for William Hunt at a cost of $5,000.

Springfield, O. — W. E. Long, 17 East High street, may select an architect about July 1, to prepare plans for a brick store building, which he is contemplating having erected on High street, at a cost of $40,000.

Tarentum, Pa. — Architect Ira F. Cuthshall has plans under way for the erection of a brick and tile office and warehouse for the Tarentum Lumber Company.

Uniontown, Pa. — Architect Harry W. Altman, First National Bank building, has plans about completed for remodeling the brick warehouse on West Church street, for M. Sansone, 39 Pittsburgh street. Cost $6,000.

Youngstown, O. — The Youngstown Hippodrome Company is to have a brick and reinforced concrete fireproof arcade, office and theatre building erected for which Architects Knox & Elliott, Rockefeller building, Cleveland, will award the contract for the foundation soon. Cost $430,000.

McKeesport, Pa. — A site has been purchased by the F. W. Woolworth Company, Second National Bank building, Willet-Brady, Pa., for the erection of a brick mercantile building.

Canaal Dover, O. — Architect Frederick Bard, Banzer building, Cleveland, and A. J. Ransch, Third street, Canal Dover, are taking bids on the erection of a brick and semi-fireproof store and apartment building, on Third street. Cost $151,000.

Findlay, O. — Architect George Horn, Rawson building, has plans under way for a rear addition to the wholesale grocery store for David Kirk. It will be built of brick and steel mill construction.

Piqua, O. — Architect C. F. Bowdle, Young building, will take bids shortly on the erection of a brick and hollow tile store building, for H. N. Lilly, Citizens Bank building. Cost $4,000.

Toledo, O. — Edward Voss, Huron street, received the contract for the erection of a $30,000 terra cotta fireproof commercial building on Adams street, for the Municipal Realty Company.

Flemington, W. Va. — Architect John W. Gisley, Grafton, has completed plans for a one-story bank and office building, to be constructed for the Bank of Flemington. Bids will be taken at an early date.

Cincinnati, O. — O. A. Shaver, 4825 Wetzell avenue, Madisonville, has been awarded the contract to build a brick and concrete telephone exchange, for the Cincinnati & Suburban Bell Telephone Company.

Altoona, Pa. — Plans will soon be completed by Architects Shollar & Hersh, Union Trust building, for the erection of a brick and reinforced concrete fireproof factory building, one-story, 50x100 feet.

Coshocton, O. — The Coshocton Glove Company, has private plans for the erection of a brick mill constructed factory addition, on which work will be started about July 1.

Tiffin, O. — Engineer Charles Ernst has preliminary plans under way for the erection of a factory building for the Loomis Machine Works. It will be of brick, steel and fireproof construction, one and two stories, 200x416 feet.

Cincinnati, O. — Architect Martin Fisher, 256 Central avenue, is preparing plans for the erection of a $30,000 stone and brick factory building, for the Victor Auto Parts Company. Cost $30,000.

Toledo, O. — Schmidt Hardware Company, Spencer building, received the contract for the erection of a brick, concrete, stone and steel factory building, on Front street, for John D. Breymann, 2025 Robinwood avenue. Cost $30,000.

Alliance, O. — The J. W. Frazier Company, Illuminating building, is completing plans for a brick, steel, and reinforced concrete fireproof boiler house addition, for the Stark Electric Company.

Fostoria, O. — The Atlas Manufacturing Company is taking bids on constructing a brick, and steel semi-fireproof factory building, one-story, 50x100 feet.

Youngstown, O. — A. Potts, 416 Garfield street, is taking bids on the erection of a steel corrugated iron factory building, one-story, 50x150 feet. Cost $8,000.

Hospitals.

Alliance, O. — Willard Hirsch, Sweetland building, Cleveland, O., was selected architect to prepare plans for the erection of a brick and reinforced concrete fireproof hospital building for the Alliance City Hospital Association. Cost $50,000.

Hotels.

Martinsburg, W. Va. — Holmboe & Lafferty, Clarksburg, W. Va., have been selected architects to prepare the plans for the alterations to the Berkeley Hotel and banking room, for the Citizens National Bank. Cost $8,600.

Lima, O. — Architects Leech & Leech, Public Square, have preliminary plans under way for the erection of a $100,000 brick, stone and steel fireproof hotel building, for Altschul Brothers.

Theatres.

Charleroi, Pa. — Architect J. G. Brenton, will have plans completed about June 15 for a brick and steel semi-fireproof moving picture theatre building, to be erected on Fallowfield avenue, for Eugene Fan, 514 Fallowfield avenue. Cost $25,000.

Russells Point, O. — H. E. Tuttle, Lakeview, O., received the contract for
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the erection of a frame motion picture theatre for William Boyd, Reibold building, Dayton, O.

Columbus, O. — Architects Dawson & Holbrook, Outlook building, have plans started for remodeling the brick and stone theatre, store and office building on East State street, for W. J. & J. W. Dusenbery, Main and High streets. Cost $130,000.

State, County and Municipal.

Clarke County, O. — The contract has been awarded to Graham & Kinneer Company, Columbus, O, to do the improvement work on S. Charles Pike, for the Board of County Commissioners. It consists of 10 miles of waterbound macadam and will cost about $70,000.

Paulding County, O. — The contract was awarded to Clepper & Johnson, Hicksville, O., for the paving and grading work on the Payne Hicksville Road, for the Board of County Commissioners. Cost $7,500.

Summit County, O. — Engineer Edward Paul, City building, Akron, has plans for paving work on Loyal Oak Road, for the Board of County Commissioners. The work consists of about two miles of vitrified brick paving.

Tiffin, O. — The contract has been awarded to Scheckhoff & Son, Fremont, O., to build a highway bridge for the Board of County Commissioners. Cost $14,003.65.

Granville, O. — McGaw & McLees received the contract for the water works improvements for the village of Granville. Cost $15,000.

Steubenville, O. — The contract was awarded to Harry M. Bates to do the paving and grading work on Oregon avenue, for the city of Steubenville. Cost $19,581.

Bowing Green, O. — Architects Stewart & Sons have plans in progress for remodeling the court house for the Board of County Commissioners. The work consists of an entirely new roof; plumbing, heating and electric work; and general repair work. Cost $15,000.

Lancaster, O. — Architect Earl I. Best, Hayden building, Columbus, O., has plans well under way for a brick and stone armory and memorial building for the City of Lancaster. Cost $60,000.

Sistersville, W. Va. — Chodderdon & Bradley will do the paving work for the City of Steubenville. It consists of 7,500 square yards of brick, 5330 feet of concrete curb. Cost $9,000.

Stark County, O. — Philip Dieffenbacher & Sons, Massillon, O., was the low bidder on the road improvement work for the Board of County Commissioners. The work consists of 3.5 miles brick paving with concrete base and will cost $63,403.30.

Findlay, O. — The City of Findlay will take bids about June 25 on the paving work to be done on East Lincoln street. The work will be of vitrified brick concrete and concrete or sand curb and will cost $7,209.

Galipolis, O. — Architects Mariott Allen & Hall, Hayden building, Columbus, O., have new plans under way for the erection of a brick, concrete and terra cotta laundry building for the Ohio Board of Administration. Cost $25,000.

Oil City, Pa. — The State Armory Board, care Major A. J. Logan, Twenty-ninth and Liberty streets, Pittsburgh, Pa., will take bids until June 15 for the erection of a $30,000 brick armory building.

Piqua, O. — The City of Piqua will take bids until June 15 on one mile of waterproof macadam on the Piqua Fletcher road.

Cleveland, O. — The King Bridge Company, East Sixty-ninth street, was the low bidder on the bridge repair work for the city of Cleveland. The work consists chiefly of substructure of structural steel and wood block flooring, and will cost $100,000.

Cuyahoga County, O. — C. A. Dempsey, Noble Road, South Euclid, O., received the contract for the construction of a retaining wall on the Chagrin river road for the Board of County Commissioners.

Delaware, O. — Lambert Brothers & Wirt were the low bidders on the grading, paving, curbing and draining work on Central avenue, for the city of Delaware. Cost $17,000.

Findlay, O. — The city of Findlay will take bids about June 15, on the paving and curbing work on Main street, which will cost about $78,700.

Society and Club Buildings.

Charleroi, Pa. — The Loyal Order of Moose, No. 103, is taking bids on the erection of a brick and stone club house on McKeans avenue. Cost $30,000.

New Castle, Pa. — The B. P. O. E. is having a brick and stucco lodge building erected on Hill and Fall streets, for which the contract for the brick work has been let to W. C. Chambers & Son, and the carpentry, roofing and plastering has been let to the New Castle Lumber Company. Cost $75,000.

Uniontown, Pa. — Architect Harry W. Altman, First National Bank building, has plans under way for the erection of a brick and steel fireproof lodge building for the B. P. O. Elks. The building will contain lodge rooms, club rooms, gymnasium, hall, etc., and cost about $40,000.

Brackenridge Heights, Pa. — Architect F. C. Sauer, 804 Penn avenue, Pittsburgh, Pa., is preparing sketches for a club house to be erected for the Brackenridge Heights Country Club. It will be of frame and shingle construction and cost about $5,000.

Bucyrus, O. — George B. Hicks, South Charleston, received the contract for the erection of a brick and stone addition and alterations to the Elks Home, for the B. P. O. E., No. 156. Cost $70,000.

Springfield, O. — Thies & Thies, Bolinger building, Dayton, and William K. Shilling, Busnell building, have been selected to prepare the plans for the store and club building, to be erected on East High St., for the Knights of Columbus. The building will be of reinforced concrete fireproof construction and cost $50,000.

Tiffin, O. — Architect George W. Netcher will take bids next week on the erection of a brick, stone trim Elks' Home, on East Perry street, for the B. P. O. E., No. 94. Cost $45,000.

Miscellaneous.

Cincinnati, O. — O. A. Shawer, Madisonville, Cincinnati, received the contract for the erection of a brick and concrete telephone exchange building, for the Cincinnati Suburban Bell Telephone Company.

Monessen, Pa. — Architect J. M. Reall, Monessen Trust building, and Louis Largner, Fourth street, owner, will take bids at once on the erection of a brick and tile commercial garage, on Potts and Reed streets. Cost $7,000.

Morgantown, W. Va. — Engineer R. D. Henmon has plans under way for the erection of two sub-stations for the Morgantown & Wheeling Railroad Company.

California, Pa. — Phil & Miller, Wabash building, Pittsburgh, received the contract to build a filtration plant for the California Water Company. Two steel filter tanks and a settling tank will be constructed.

Sub-Contract Notes.

Plumbing.

Regan & Hornell, Charleroi, Pa., received contract for school building alteration, California, Pa., owner, the Board of Education, California.

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MANUFACTURED BY
received contract for residence, Wellsburg. Owner, Jasper Potts, Wellsburg.

**Heating.**

Josepah A. Langdon & Sons, Pittsburgh, Pa., received contract for school building alterations, California, Pa. Owner, the Board of Education, California.

S. M. Dick, Scottsdale, Pa., received contract for bank and office building addition and alterations, Scottsdale. Owner, First National Bank of Scottsdale.

Stanton Heater Company, Martin Ferry, O., received the contract for the school building, Follansbee, W. Va. Owner, the Board of Education, Follansbee.

**Stone Work.**

P. C. Mahone, Pittsburgh, Pa., received contract for the boiler house addition, Pittsburgh. Owner, the Duquesne Light Company, Pittsburgh.

**Electric Work.**

L. H. Nielsen, Pittsburgh, Pa., received contract for armory, alterations and addition from church, Pittsburgh. Owner, State Armory Board, Harrisburg, Pa.

Franklin Electric & Construction Company, Pittsburgh, received contract for factory building, Pittsburgh. Owner, United Oil Company, Pittsburgh, Pa.

W. H. Helney, Uniontown, Pa., received the contract for the school building, Leomont Furnace, Pa. Owner, Board of Directors, of the North Union Township School District, Uniontown, Pa.

**Lumber and Mill Work.**

Oil City Woodworking Company, Reno, Pa., received contract for school building alteration, California, Pa. Owner, Board of Education, California.


General Woodworking Company, Morgantown, W. Va., received contract for residence, Morgantown. Owner, Elmer E. Jacobs, Morgantown.

Pittsburgh Hardwood Door Company, Pittsburgh, Pa., received contract for church, Carrick, Pa. Owner, Concord Presbyterian Congregation, Carrick.

The Keystone Lumber Company, Pittsburgh, Pa., received the contract for the boiler house addition, Pittsburgh. Owner, Duquesne Light Company, Pittsburgh.

**Structural Steel.**

T. H. Brooks Company, Cleveland, O., received contract for factory building, Cleveland. Owner, Vischek Tool Company, Cleveland.

S. M. Prince, Morgantown, W. Va., received contract for residence, Morgantown. Owner, George C. Baker, Morgantown.

Riverside Bridge Company, Wheeling, W. Va., received contract for store and office remodel and addition, Steubenville, O. Owner, I. Schulzebacher, Steubenville.

John Eichley, Pittsburgh, Pa., received contract for church, Carrick, Pa. Owner, Concord Presbyterian Congregation, Carrick.

National Wire & Iron Company, Cleveland, O., received the contract for Church, Sunday school rooms and parsonage, Cleveland. Owner, Zion Evangelical Congregation, Cleveland.

C. E. Morris, Columbus, O., received the contract for the stable and garage, Columbus. Owner, the G. W. Bobb Company, Columbus.

**Plastering.**


---

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George Grundy, 605 Gerrett St., Pittsburgh.

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Shingledecker, T. F., 507 Russelwood Ave., Pittsburgh, Pa.

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Harris Pump & Supply Co., 320 Second Ave., Pittsburgh.

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Marshall Brothers, South Twenty-first and Mary Sts., Pittsburgh.

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Heating Engineers' Supply Co., Commonwealth Bldg., Pittsburgh.

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WOODWORK.
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Highland Ornamental Iron Co., 5748 Ellsworth Ave.,
Pittsburgh, Pa.
Kratzer, W. N., 856 W. North Ave., Northside,
Pittsburgh, Pa.
Lau & Hogan, Youngstown, O.
Rowland-Lanzer Co., Bessemer Bldg., Pittsburgh,
J. Wills Dalloul, Pittsburgh, Pa.
Tylor Co., The W. S., Bessemer Bldg., Pittsburgh.
Vitecek, Martin Co., Ltd., 320-30 Poma Ave.,

PARQUET FLOORS.
Bald, John M., Jenkins Arcade, Pittsburgh.
Empire Flooring Co., Jenkins Arcade, Pittsburgh.

PAVING TILE.
Hocking Valley Fire Clay Co., Nelsonville, O.
W. N. Thornburg, Builders Exchange, Pittsburgh,
Pa.

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Kennedy, D. J., Co., 6096 Frankstown Ave.,
Pittsburgh.
Pittsburgh Hardwood Door Co., Pittsburgh.
Stenger Brothers, Pittsburgh.
Kratzer, AV. N., 856 W. North Ave., Northside,
Pittsburgh.

SALT GLAZED BRICK.
Hocking Valley Fire Clay Co., Nelsonville, O.
W. N. Thornburg, Builders Exchange, Pittsburgh,
Pa.

SAFETY TREADS.
American Mason Safety Tread Co., Builders Exchange,
Pittsburgh, Pa.

SAND AND GRAVEL.
Kennedy, D. J., Co., 6096 Frankstown Ave.,
Pittsburgh.

SEWER PIPE.
Challis, D. W. & Son, Sewickley.
Hays, Aiden P., Sewickley.
Kennedy, D. J., Co., 6096 Frankstown Ave.,
Pittsburgh.

SHEET METAL WORK.

SIDEWALK LIGHTS.
Aller Group Co., 210 E. Reliance St., Northside,
Pittsburgh.
Kratzer & Co., W. N., Smallman St., Pittsburgh.
Lau & Hogan, Youngstown, O.
Mullen Brothers Company, Fulton building,
Pittsburgh, Pa.

STONE MASONRY.
Gunderson, A. H., 126 2nd Ave., Northside,
Pittsburgh, Pa.

STONE DEALERS AND CONTRACTORS.
Challis, D. W. & Sons, Sewickley.
McHale, H. C., Elizabeth St., Pittsburgh.
Storch & Sons, V. Carri, Pittsburgh.

STAIR MASONRY.
Navarro, A., 1290 Grotto St., Pittsburgh, Pa.

STAIR WORK.

STAIR BUILDERS.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL WORK.
Abbott, Eli, Builders Exchange, Pittsburgh.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL PAINTING.
Lau & Hogan, Youngstown, O.

SUSPENDED CEILINGS.
J. C. Barna, Mt. Oliver, Pittsburgh.
Carnahan, Chas., Meyran Ave., Pittsburgh.

TILE (DECORATIVE).

TRUSS METAL.

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Lau & Hogan, Youngstown, O.

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Empire Flooring Co., Jenkins Arcade, Pittsburgh.

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ESTABLISHED 1888

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504 Bessemer Bidz., Pittsburgh.

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Advertising Rates on Application.

Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.

Bids will be taken about July 1 by Architect John Graham, 300 Woodward avenue, Highland Park, Mich., on the construction of a four-story concrete assembly plant and sales room for the Ford Motor Car Company, Detroit. The building will be constructed on East Seventeenth street and Euclid avenue, Cleveland, and will measure 157x294 feet. The following building materials will be required: gravel roofimg, fireproof doors, steel rolling doors, steel sash, skylights, marble and tile, steel window frames and sash, concrete floors and roof slabs, reinforced concrete. Material specifications will include structural steel, tile roofing, ornamental plastering, face brick, etc. Bids on the general contract will be taken by the owner about August 1. The structure is to have reinforced concrete floor construction, concrete stairways, steel window frames and sash, concrete and wood walls, composition roofing, rolling steel doors, metal lath, electric work, stable fixtures, etc. Cost $140,000.

PLACE MARION SCHOOL WORK SHORTLY

Bids will close on the 26th inst. for the construction of a two-story brick and reinforced concrete school building for the Board of Education, Marion, O. The structure will be 65x96 feet and will contain 16 rooms, plans for which were made by Architects Mariott, Allen & Hall, Hayden-Clinton building, Columbus, O. Specifications call for reinforced concrete floor and roof slab construction, slate roofing, composition flooring, hollow tile partitions, fire doors, metal lath, stel1 rolling doors, terrazzo flooring, hollow brick, face brick, damp-proofing, maple flooring, interior finish of yellow pine, lighting fixtures, plumbing and heating systems, etc.

SCHOOL PLANS NEARING COMPLETION.

Plans and specifications for the proposed $85,000 high school building for the Board of Education, Salem, O., are being completed by Architect Charles Owsey, Mahoning Bank building, Youngstown, O., and bids on the work will be taken about July 1. The structure will contain 19 rooms and will be of brick, reinforced concrete and hollow tile construction. The heating and ventilating work has been awarded to the McGinnis Company, Thirty-second and Mulberry streets, Pittsburgh.

LARGE STABLE PLANNED.

The Ohio & Pittsburgh Milk Company, Forbes and Boyd streets, Pittsburgh, will build a three-story brick and reinforced concrete stable, 129x160 feet, on Hooper and Locust streets, Pittsburgh. Plans for which are about completed by Architect Charles Sharper, Jenkins Arcade, Pittsburgh. The structure is to have reinforced concrete floor construction, concrete stairways, steel window frames and sash, concrete and wood walls, composition roofing, rolling steel doors, metal lath, electric work, stable fixtures, etc. Cost $140,000.

CHURCH CONSTRUCTION IN CINCINNATI.

Bids are in and the contract will be placed late this week on the construction of a $75,000 church building for the St. Marys R. C. Congregation, Cincinnati, O. The building will be one story, 100x180 feet, with a tower 114 feet high, the construction to be of brick and reinforced concrete. Material specifications consisted of architectural terra cotta, hollow tile partitions, cut stone, structural steel, tile roofing, sheet metal work, art glass, cement finish or composition flooring, ornamental plastering, metal lath, marble and tile work, terrazzo, etc. Plans for the building were made by Architect H. J. Schlacks, 10 LaSalle street, Chicago, with Joseph E. Stein camp & Brother, 414 Walnut street, Cincinnati, acting as associate architects.
Caen stone cement is one of the building materials which seems to have been overlooked to some extent in this country until the past few years. It offers many features for high class construction work in the way of walls and ceiling work in churches, colleges, court houses, libraries, club rooms, hotel lobbies, corridors and vestibules for offices and apartments, etc. It can also be used for wainscotings, columns, pilasters, cornices, etc. While not generally known a substitute for Caen stone is now being produced by the Cleveland Builders' Supply Company, Cleveland, O., which has furnished the material for several large club houses of the stately church edifices, notable and libraries. This material is known as "Excelsior" Caen Stone Cement.

The original Caen stone was first found and quarried near the city of Caen, France. Its fineness of texture and light buff color strongly appealed to the great masters of architecture as early as the fifteenth century, during which time it was frequently used throughout France and England in many among them being the cathedrals of Winchester and Canterbury, and Henry the VII's chapel at Westminster.

To a limited extent, Caen stone has been imported and used in the United States, but owing to the delays and inconveniences of importation, as well as the cost, it is not known here to the extent that its value as a high-class building stone should warrant.

Excelsior Caen stone cement, which is a highly successful substitute for French Caen stone, is, in every important respect, an exact reproduction of the quarried stone, absolutely fulfilling the essential requirements of durability, texture and color. It is a light buff or cream color inherent in the product itself. It is solely due to the use of a finely-powdered stone, as one of the main ingredients of the mixture, reproducing the exact color and texture of the original French Caen stone, without the use of any artificial coloring.

The material is a free working, plastic material that can be readily applied by any first-class journeyman plasterer. The finished surface is secured by floating only. Scraping, dressing or sand papering is not necessary. When applied it constitutes the finished wall, providing in itself a distinctive and beautiful decorative effect. Any application of paint or color wash is not only entirely unnecessary, but undesirable.

Excelsior Caen stone cement produces an artificial stone wall practically indistinguishable from real quarried Caen stone at only a fraction of the cost. The following specifications have been adopted for applying Excelsior Caen stone cement.

Dampproofing.
When used on the interior of brick or tile walls, first apply two heavy coats of an approved damp resisting paint. This is to prevent dampness coming through the walls and staining the finished material.

Scratch Coat.
Where metal lath is required, use galvanized, ingot iron or rust proof metal lath. Apply a scratch coat of an approved brand of gypsum plaster, or lime mortar containing plenty of hair, gauged in proportions of two parts of mortar to one of cement. Scratch coat must be applied in such a manner as to secure a good clinch, scratch well and allow to set before applying brown coat.

Brown Coat.
This is to be used as a doubling up coat over scratch coat on metal lath, or as first coat on brick or tile walls. The mortar for this coat shall consist of an approved brand of gypsum plaster, or lime mortar mixed as above specified except that hair is not required. All...
lime to be hydrated. Do not use lump lime putty.

In preparing the base or brown coat, screed the same and rod in all directions to a true and even surface. Then scratch with a fine scratcher to make a good key for the Caen stone finish coat. Allow the base coat to dry thoroughly before applying the Caen stone. Allow three-sixteenth to one-quarter of an inch for Caen stone finish coat.

Finish Coat.

This material is prepared ready for use and requires the addition of pure water only. Make no addition of any other kind.

Mixing.

Use a clean, water-tight mixing box, one that has not been used for mixing any other kind of materials. Clean box thoroughly after each mixing.

Application.

Before applying Caen stone finish, soak the brown coat well with clean water to take out the suction. When the suction is very uneven apply a skim coat of slow set plaster and fine sand, covering the same with Caen stone finish, before the skim coat sets.

Floating.

Use wood float with which to lay on Caen stone, allowing it to stand for four or five hours to get its initial set. Then float with a cork or felt float, using plenty of clean water in the operation, going over it time and again to get the sand effect of real stone. It may be laid on with a steel trowel, but may not be worked down or finished with this tool, as steel has a tendency to blacken or discolor the finished surface.

Finishes.

If a dragged or imitation stone finish is desired, float in the usual way using plenty of clean water, then drag the end of the float down the wall for the finish. If a honed finish is desired, bring the wall to a true and even surface, allow it to stand until it is nearly set, then rub it down with a block of excelsior Caen stone. If a tooled finish is desired, specify the markings per inch as in natural stone.

Jointing.

After the Caen stone finish has had its initial set, and before it becomes too hard, rake out the joints with a jointer, and tuck point the same with cement. Joints may be left hollow if desired.

Cleaning Down.

When the Caen stone finish is thoroughly dry and jointed, wash it down with a solution of five per cent muriatic acid and clean water, after which rinse down with clean water using a scrub brush. This treatment brings out the true texture.

Waterproofing.

Where it is desired to waterproof, use skimmed milk, or milk diluted with water. Into one pail shake three handfuls of Caen stone cement. Apply two coats of this to the finished work with a calcimine brush. After the waterproofing has soaked in rub dry with a scrub brush. This same method may be used to restore the Caen stone or clean it, if, after standing several years it has become soiled.

Cornices.

For exterior work, excelsior Caen stone cement is made slow setting for plain surfaces, and quick setting for running cornices and casting into moulds. For running cornices, the “slow set” is gauged with the “quick set” by the usual method. For casting interior ornaments, use “quick set” only.

Covering Capacity.

The covering capacity of excelsior Caen stone cement is approximately as follows: One hundred pounds will cover 40 square feet, one-quarter inch thick.

Exterior Work.

“Exterior” Excelsior Caen stone cement is made for exterior plastering or “stucco work.” Clean all brick or tile walls of all loose mortar and dust, and wet them down well to take out all the suction. On new walls the bricklayer should rake out all joints in either the brick or tile. On old walls rake out the joints if possible, if not, drive flat headed tinner’s nails every six inches in all joints. If the walls have been painted, be sure to hack thoroughly so as to remove all the paint, and soak the walls thoroughly with water to take out the suction.

First or Scratch Coat.

After the walls have been prepared to a true and even surface, allow it to stand until it is nearly set, then rub it down with a block of excelsior Caen stone. If a tooled finish is desired, specify the markings per inch as in natural stone.
as above stated, first apply a scratch coat composed of an approved brand of Portland cement, long cattle or goat hair, clean sharp sand and a small portion of hydrated lime, mixed in the proportions of one part of cement, three parts of sand and enough hydrated lime to equal 20 per cent of the cement. This coat is to be scratched deep in both directions with a close wood or wire scratcher. Allow this coat to dry thoroughly and season before applying the brown coat.

Second or Brown Coat.

Thoroughly soak the scratch coat with water to take out all suction. Then apply the brown coat, mixed the same as the scratch coat, omitting the hair. This coat is to be screeded and rodded in all directions and brought to a true and even surface, scratched with a wire scratcher both ways, and kept damp until its final set. Then allow to dry thoroughly before applying the brown coat.

Finish Coat.

Thoroughly soak the brown coat to take out all suction. Then apply coat of “Exterior” Excelsior Caen stone cement, and add clean water only, making no addition of any other kind.

Floating.

Apply the material with a wooden float and use a felt or cork float for floating, using plenty of clean water in the operation. Walls shall be finished top and bottom at the same time to avoid joinings. If the work is in any way discolored due to rain or other causes, it can be washed down with a solution of five per cent muriatic acid and clean water, and the color will be brought out even and uniform.

Note.

The above specifications will also apply to use on metal lath. It is recommended that either galvanized, ingot iron or rust proof metal lath be used. Wherever possible the metal lath is to be back plastered with a scratch coat of Portland cement mortar mixed as above specified.


apply the brown coat, mixed the same as the scratch coat, omitting the hair. This coat is to be screeded and rodded in all directions and brought to a true and even surface, scratched with a wire scratcher both ways, and kept damp until its final set. Then allow to dry thoroughly before applying the brown coat.

ASKS RESTRAINING INJUNCTION

A bill in equity has been filed in common pleas court Allegheny county, Pa., asking for an injunction to restrain city and county officials from employing James L. Stuart as consulting and supervising engineer on the $3,000,000 joint city and county officials from employing James L. Stuart as consulting and supervising engineer on the $3,000,000 joint city and court house. The bill avers that the agreement with Stuart will obligate the city and county to pay a second time for services already contracted to be performed by the architect.

The proceedings were started by At-
FIGURES ASKED FOR ICE CREAM PLANT.

Work has been started on wrecking old buildings which occupy the proposed site for a $300,000 ice cream plant to be built for the French Brothers & Bower Company, Cincinnati, O. The new building is designed by the Tait & Nordmeyer Engineering Company, International Life building, St. Louis, Mo., to occupy a space of 125x225 feet, four stories ad basement. Bids on the construction work will be taken next week and figures on the power plant and equipment after August 1.

CLEVELAND FACTORY BUILDING AWARDED.

The George B. McMillen Company, 1794 East Fifty-fifth street, Cleveland, O., secured the contract to build a two-story brick, steel and concrete building 73x256 feet, a one-story addition 80x192 feet to the rolling mill building, and a one-story casting building 57x80 feet for the Cleveland Metal Products Company, Ivanhoe Road, Cleveland. The structural steel work has been sub-let to the Forrest City & Iron Company, Cleveland.

LAST MONTH'S BUILDING.

The building operations during May 1914 for the larger cities in Western Pennsylvania, Ohio and West Virginia, show better figures for construction than for the same period last year. The only exceptions are Erie, Pa., and Akron, O. From all the information that can be secured the present month promises to be better than any preceding months of this year. While building operations have been below normal conditions for some months, the general feeling is that within 60 days there will be a considerable new work closed. Building operations from the first of the year to the present time show considerably less valuation than in 1913, but exceed the figures shown for the corresponding period for 1910, '11 and '12.

The table compiled herewith will serve to show the amount placed in various localities:

<table>
<thead>
<tr>
<th>City</th>
<th>May 1914</th>
<th>April 1914</th>
<th>May 1913</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pittsburgh</td>
<td>3,152,200</td>
<td>4,118,200</td>
<td>841,700</td>
</tr>
<tr>
<td>Cleveland</td>
<td>2,203,815</td>
<td>2,594,100</td>
<td>1,958,040</td>
</tr>
<tr>
<td>Columbus</td>
<td>841,000</td>
<td>685,520</td>
<td>613,340</td>
</tr>
<tr>
<td>Cincin</td>
<td>1,181,700</td>
<td>964,420</td>
<td>790,580</td>
</tr>
<tr>
<td>Younges'n</td>
<td>446,450</td>
<td>470,035</td>
<td>414,870</td>
</tr>
<tr>
<td>Erie</td>
<td>201,100</td>
<td>309,180</td>
<td>315,725</td>
</tr>
<tr>
<td>Akron</td>
<td>390,650</td>
<td>659,030</td>
<td>584,400</td>
</tr>
<tr>
<td>Altoona</td>
<td>122,800</td>
<td>130,107</td>
<td>88,800</td>
</tr>
<tr>
<td>Toledo</td>
<td>702,160</td>
<td>772,150</td>
<td>480,000</td>
</tr>
<tr>
<td>Dayton</td>
<td>435,671</td>
<td>421,330</td>
<td>54,825</td>
</tr>
</tbody>
</table>

The H. R. Wyllie China Company, Huntington, W. Va., the large and well-known manufacturers of art ware and decorated dinner sets, is manufacturing a line of china domes which is something entirely new in the way of lighting fixtures, being the first made in this country out of chinaware. The line is called Artlite Perfection Indirect Illuminating System and it is said to be six times more efficient than direct illumination.

The domes are made of opaque china, of gold, making a most beautiful piece of practical ornamental pottery, that possesses unusual elegance and refinement. Artlite is believed to be the most efficient diffuser of light manufactured.

The domes are embellished in a variety of decorative motifs, most popular of which are mother of pearl, American beauty rose, Teco blue and ornate designs. They are made in the following sizes—16 inches diam., depth 5½ inches, length (including fixture) 38 inches; 12 inches diam., depth 8 inches, length (including fixture) 28¾ inches.

The design shown by this illustration—Byzantine Motif—No. 941—is a hand-painted classic filigree design in pure coin gold which encircles the dome, the base being decorated with a wide band inches diam., depth 8 inches, length (including fixture) 28¾ inches.

One excellent feature is they can be readily cleaned with no tarnish or deterioration to the decorations, as the colors are burned in the china. They are most attractive, and no doubt the demand for them will be heavy.
CONCISE BUILDING INFORMATION

Authentic Building News on New Dwellings, Stores and Offices,
Churches, Schools, Theatres, Etc.

These verified reports appear in advance of all other trade publications.

Pittsburgh.

Architects Carlisle & Sharrer. Jenkins Arcade building, have plans about completed for the erection of a brick and tile residence in Swissvale for John R. Ermer, Forbes and Boyd streets. Cost $1,400,000.

Architect W. Ward Williams, Magee building, will have plans completed about June 22 for the erection of a brick and tile residence in Swissvale for John M. Griffith, Second avenue. Cost $6,000.

The contract has been awarded to F. L. Fisher, 2004 Watson way, to build a frame and cement plaster residence addition and alterations on Beechview boulevard, for Roben Miller, Jr., 920 Maryland avenue. Cost $5,500.

Architect John A. Long, Machesney building, has plans about completed for the erection of a brick church and parsonage on Mt. Washington, for the German Evangelical Protestant Congregation.

Plans are being prepared by Architect Henry Law, Ambridge, for the erection of a $4,000 brick residence in Ambridge for Mike Mader, 640 Melrose avenue, Ambridge.

Bids have been rejected by Architect Adam McNaughton, 1411 Sheffield street, Northside, for the erection of a brick and cement plaster residence in Dormont, for H. C. Workmaster, 320 Second avenue.

Architect W. A. Thomas, Park building, has plans for a brick store and apartment building addition and alterations at 66 Roberts street, for T. Howitz, Roberts street. Cost $5,500.

Plans will probably be completed this week by Architect W. Ward Williams, Magee building, for the erection of a $7,000 brick and tile residence in Swissvale, for George H. Garcelon, 1422 La Clair avenue, Swissvale.

Architect W. Ward Williams, Magee building, has plans under way for the erection of a $4,000 brick and tile residence in Swissvale, for B. H. Chaffe, 607 Kelly avenue, Wilkinsburg.

Architect A. R. Douglas, 311 Penn avenue, Wilkinsburg, has plans under way for the erection of a $5,000 brick stable on Broad street, near Millvale avenue, for the Model Coat & Apron Supply Company, 4099 Penn avenue.

S. A. Halper, M. Oliver, is asking sub-bids on material for the erection of a brick store and apartment building in Carrick for P. A. H. Johnson, 2320 Carson street. The building will cost $10,000.

Samuel Hunter, care Independent Bridge Company, Beaver avenue, Northside, is taking bids on the erection of a brick veneer and cement plaster bungalow on Perryville avenue. Cost $4,000.

Architect Henry Law, Ambridge, has plans under way for the erection of a brick store and apartment building in Ambridge for J. F. Maloney, Ambridge. Cost $4,000.

C. A. Baldwin, 114 Marion street, was the low bidder on the erection of a brick store and apartment building in Avalon for John J. Jones, 514 California avenue, Avalon.

Rose & Fisher, Pennsylvania avenue, Northside, have the contract for remodeling a brick mercantile building in McKeensport for M. Oppenheimer, 115 Seventh avenue. Cost $5,500.

Brown Brothers, 3170 Potomac street, were the low bidders on the erection of a brick fireproof piggery addition at Marshalsea, for the City of Pittsburgh.

J. Lauer & Sons, 810 Portland street, received the contract to build a $15,000 brick residence in Beverly place for William H. Sei, Magee building, for which sub-bids are being taken by the general contractor.

McGinnis Brothers, 312 Millvale avenue, received the contract to build two brick residences on Winbridge avenue, for Mrs. Luella Schmidt, Altoona, Pa. Cost $6,000 each.

Architects Alden & Harlow, Farmers Bank building, will take bids soon on the erection of a store private garage on Grant Boulevard, for Thomas Kenyon, 1143 North avenue, Northside.

Architect D. A. Crooke, Oliver building, has sketches completed for three residences to be erected on Squirrel Hill for private parties. Cost $5,000 each.

Plans have been completed by Architect R. M. Trimble, Ferguson building, for the erection of a brick apartment building, on Windsor street, for William T. Campbell, Alger street and Beechwood boulevard. Cost $15,000.

The contract has been awarded to Louis Von Guten, Fair Oaks, to build a frame residence in Ambridge, for Mrs. John Krause, Ambridge. Cost $2,500.

Architect C. W. Klicker, Ben Avon, is taking bids on the erection of a brick double residence in Ben Avon, for the Misses Reineke Church, Ben Avon. Cost $10,000.

George R. Eichenlaub, 620 Penn avenue, received the contract to build a brick bungalow in Aspinwall for F. Schillo, West Penn building. Cost $6,000.

Architect W. E. Snaman, Empire building, has plans under way for a $3,000 brick residence in Millvale, for A. J. C. King, Millvale.

Architect James T. Senn, Fulton building, is working on plans for a $7,000 hollow tile and cement plaster residence in Andover Terrace for Dr. George A. Holliday, Jenkins Arcade.

The contract has been awarded to Joseph A. Bergman & Son, 200 Wylie avenue, for the erection of a brick fireproof addition to the school building in Dormont for the Board of Education.

Henry Busse & Company, Main and Wabash streets, received the contract for the erection of a tuberculosis hospital in Woodville for Allegheny county. The building will be of stucco on metal lath, fireproof construction, and cost $182,000.

Architect Paul W. Irwin, Renshaw building, will probably have plans completed about June 25 for a $50,000 brick and terra cotta residence on Fifth avenue near Anderson, for Andrew M. Moreland, Second National Bank building.

Plans are under way by Architect F. J. Osterling, Commonwealth building, for remodeling Campbell's Department Store on Fifth avenue. The work will cost about $100,000.

Architect A. R. Douglas, 611 Franklin town avenue, is taking bids on brick...
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store rooms to be built for the East Liberty Wholesale Grocery Company, at a cost of $25,000.

S. A. Hanel, 317 Giffin avenue, Mt. Oliver, is taking sub-bids on the erection of a $6,500 brick veneer residence in Mt. Washington, for Miss S. E. Donk.


Architect Paul W. Irvin, Renshaw building, has plans completed for a $7,000 stone residence on Briar Cliff road, for W. W. Shively, Park building.

A. F. Gailey, 6409 Frankstown avenue, was the low bidder on the erection of a brick fireproof motion picture theatre addition and alterations on Penn avenue, for Carl Vilsack, Penn and Highland avenue. Cost $12,000.

Architects H. E. Kennedy & Company, Home Trust building, are revising plans for the erection of a dual theatre and other buildings on Oliver avenue and Cherry alley, for Harry Davis Enterprise Company, Farmers Bank building.

J. G. Fullman, East End Trust building, is taking sub-bids on the erection of six brick fireproof residences on Agnew street, for Frederick Scheidler, 310 Lloyd building.

The contract has been awarded to Henry Shenk Company, Century building, for interior alterations to the Duquesne Club building, Sixth avenue.

Golden & Crick, Fifth avenue, received the contract for remodeling the brick and terra cotta store building on Wood street, for William Grabowsky, 707 Penn avenue. The work will consist of a new store front and interior alterations.

Apartment Buildings.

Altoona, Pa. — Plans are being prepared by Architects Shollar & Hersh, Union Trust building, for the erection of a brick apartment building on Union street, for Joseph Klosius. Cost $20,000.

Ashland, Ky. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, have plans under way for the erection of a $10,000 pressed brick residence for L. N. Davis, Cashier, First National Bank.

Brackenridge, Pa. — The contract has been awarded to Philip M. Anthony to build a $9,000 brick veneer residence on Walnut street, for Dr. J. C. Orris.

Buchanan, W. Va. — R. Post received the contract for the erection of a $10,000 brick residence on Center avenue, for L. Heavner.

Canton, O. — Architect Edmund Herman, Central Savings Bank building, is taking bids on the erection of a brick ordinary constructed residence on West Eleventh street for F. W. Miller. Cost $5,500.

Glen Harem, 2319 Cedar street, received the contract to build a brick residence, costing $2,500, for Mrs. Ella Killian, 1708 Third street.

Samuel Mitchell, 227 Monroe avenue, has private plans for a frame residence to be erected on Monroe avenue, for which the contract has been let to Edgar Harris, 2255 Mahoning road.

The contract has been let to B. W. Wright, 134 West Third street, to build a frame residence for M. H. Dunbar, 1728 Superior avenue. Cost $3,000.

Clarckburg, W. Va. — Architect S. W. Ford, Union Bank building, is taking bids on the erection of two brick veneer apartment buildings on Virginia street, for private parties.

Connellsburg, Pa. — The contract has been awarded to the Connellsburg Construction Company, to build a brick veneer residence on Sooth Main street, for T. J. Torrey, Trotter, Pa. Cost $6,000.

Corapolis, Pa. — C. C. Wilson, 1210 Dillen street, received the contract to build a brick and tile residence, costing $12,000, for C. B. Ferguson, 1220 State street.

Dayton, O. — Architect Edward J. Moundstapen, United Brethren building, will take bids shortly on the erection of a $4,000 frame and field stone bungalow, for E. E. Hershey, 1121 West Grand avenue.

East Palestine, O. — L. D. Crowl & Son, received the contract to build a $5,000 frame residence for Grant Wilson.

Glenshaw, Pa. — Herman Ruth, 3241 Duncan street, was the low bidder on the brick residence to be erected for John Mall.

Huntington, W. Va. — Architect Verus T. Ritter, Union Bank building, is taking bids on the erection of a brick residence on Sixth avenue, for P. W.急诊 McCullough. Cost $10,000.

W. L. Reece, owner, is taking bids on the erection of a $4,000 brick residence, on Fifth street.

Logan, O. — Architect David Riebel & Sons, New First National Bank building, Columbus, has plans completed for the erection of a $5,500 brick residence for M. H. Cherrington.

Marion, O. — The contract to build a frame, brick trimmed residence for C. M. Long, has been re-awarded to J. W. Harruff, 276 Forest street.

Massillon, O. — L. W. Gise & Son received the contract to build a $4,000 brick residence for W. D. Ballmeiser.


Parnassus, Pa. — The West Penn Construction Company, New Kensington, Pa., received the contract for the erection of a brick residence addition and garage, for J. R. Copeland, Fifth avenue. Cost $3,000.

Rochester, Pa. — The contract has been let to Meckle Brothers to build a brick residence on Adams street, for W. F. Gordon. Cost $5,000.

Architect W. Ward Williard, Magee building, has plans under way for the erection of a $5,000 brick and tile residence for Abraham Taylor, Pennsylvania street.

Springfield, O. — William Poole, 1316 Pearl street, received the contract for the erection of a brick apartment building, for C. F. McGilbray, 123 North Limestone street. Cost $10,000.

Toledo, O. — Architect Waechter, Bellman & Schrieber, Nicholas building, has preliminary plans under way for the erection of a stucco residence for Paul W. Hersch, Lincoln Apartments. Cost $7,000.

Preliminary plans are being prepared by Architect George B. Rheinfark, Gardner building, for the erection of a brick residence for J. W. Whelan, 22 Produce Exchange. Cost $8,000.

The contract has been awarded to N. D. Harris, 1763 Superior street, for the erection of a brick veneer residence for Ernest Meyers. Cost $4,500.

Architects Langdon & Hohly, Nicholas building, are taking bids on the erection of a frame and brick residence on River road, for Christopher Meyers. Cost $8,000.

Architect George B. Rheinfark, Gardner building, has plans about completed for the erection of a stucco summer cottage for J. B. Merrill, 306 Superior street.

Uniontown, Pa. — The McCormick Lumber Company, Fairchance, received the contract for the erection of a brick semi-fireproof apartment building for Morris Friedman, to cost about $25,000.

Bellevue, Ky. — Architect L. H. Wills, 10 West Fourth street, Newport, is taking bids on the erection of a brick and shingle residence for Theodore Cook. Cost $3,000.

Bluefield, W. Va. — The contract has been awarded to T. E. Walker, for the erection of a $5,000 brick residence for C. H. Pruett, North street.

Cincinnati, O. — Architect Max Kaufmann, 2241 Stratford avenue, has plans under
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The piston is all brass with cup packing. The stuffing box is of the nut and gland type.

The base is in two parts and is clamped to the cylinder so that pipe connections may be made and the base replaced without disturbing the pipe. When ordered with stop cock, the cock is threaded for hose.

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WITHEROW STEEL COMPANY
Warehouse, Works and Office, PITTSBURGH, PA.
way for a stucco bungalow and garage, for Joseph Phillips, Mt. Adams. Cost $7,000. He also has plans for a stucco bungalow costing $4,500, for P. H. Brabant Building Company, Union Central building.

Cleveland Heights, O. — The Shaker Heights Improvement Company, Williamson building, Cleveland, has private plans for a $12,000 pressed brick apartment building.

Cleveland, O. — Architect O. J. Lorenz, 5334 Broadway avenue, is taking bids on the erection of a $4,000 pressed brick bungalow, for John F. Kelly, 4317 Trumbull avenue.

Plans are being prepared by the Superior Architectural Company, Superior building, for a double pressed brick residence for Otto S. Sanagata, East Fourteenth street. Cost $6,000.

Fremont, O. — J. H. Jones is taking sub-bids on the erection of a brick apartment building, on West State street. Cost $6,500.

Shaker Lakes, O. — Plans are being prepared by Architect R. M. Hinsdale, Osborne building, Cleveland, for a $9,000 shingle residence for Charles William, Western Reserve building, Cleveland.

Uniontown, Pa. — The McCormick Lumber Company, Fairchance, Pa., received the contract for the erection of a brick semi-fireproof apartment building, for Morris Friedman, Morgantown street. Cost $25,000.

Amherst, O. — A. L. Prescott received the contract for the erection of a frame residence for Charles Schultz. Cost $3,500.

Bluefield, W. Va. — S. Greenspaur is taking bids on the erection of a $7,000 brick residence.

Frank S. Easley, Rogers street, is contemplating the erection of a brick residence, for which no architect has been selected.

Architect T. T. Carter, 221 Reese street, has plans under way for the erection of a $4,000 frame residence for D. B. Mastin.

Cincinnati, O. — Architect Joseph G. Steinkamp & Brother, 414 Walnut street, is writing specifications for a brick apartment building for C. E. Schaffner, 514 Main street. Cost $75,000.

I. Moss, Iliff avenue and Hayward street, owner and general contractor, will take bids on separate contracts soon for the erection of a brick duplex apartment and residence.

Cleveland, O. — Architect Otta Hart, 1234 Marlwove avenue, Lakewood, O., has plans completed for a frame apartment building, for H. A. Hart, 840 Detroit avenue. Cost $10,000.

Greensburg, Pa. — Crosby Brothers received the contract to build a $6,000 brick and tile residence for Miss S. Shoemaker.

Plans have been completed by Architect George H. Truxell, for the erection of a $5,000 brick and tile residence, for W. J. Rorke, 511 Main street.

Hicksville, O. — T. L. Crook, owner, is taking bids on the erection of a wood and brick bungalow which will cost about $7,000.


W. J. Fichtner, Clay avenue, is taking bids on the erection of a brick residence which will cost about $8,000.


Marion, O. — The contract has been awarded to Warwick & Stewart, 296 Barnhart street, for the erection of a frame residence on East Church street, for J. H. Hawlings, 130 West Center street.


Middletown, O. — Architects Stewart & Son, Bowling Green, O., are preparing sketches for a frame and brick residence, to be erected for Prof. N. D. O. Wilson. Cost $7,000.

Architect C. E. Oden, 213 Jacoby building, has plans for a frame residence for Fred Sutphen, 707 Lincoln avenue. Cost $5,000.

Architect J. E. Dearth, Fifth street, is completing plans for a residence to be built for F. P. Sutphen, Reiner building. Cost $4,500.

Newark, O. — Architect Howell & Thomas, 151 East Broad street, Columbus, will be ready for bids about June 24, on the erection of a $9,000 stucco tile residence for George B. Sprague, East Main street.

Parkersburg, W. Va. — L. C. Poling received the contract to build an $8,000 brick residence on Union street, for Dr. C. S. Muhleman, 611 Market street.

Charleston, W. Va. — Architect David Dick is taking bids on the addition and alterations to the brick residence on Pennsylvania avenue, for B. A. Brawley.

Cleveland Heights, O. — Charles Summers, 7000 Carnegie avenue, Cleveland, has private plans for the erection of a $5,000 frame residence for which he will take bids about July 15.

Cresap, O. — Bids are in and the contract will soon be awarded for the erection of a $12,000 brick and tile residence on State street, for C. B. Ferguson, 122 State street. George H. Truxell, Greensburg, prepared the plans.

Dunbar, W. Va. — The contract has been awarded to J. S. Rehn to build three frame residences for S. Morton. Cost $2,000 each.

Lancaster, O. — Fred Kern, owner, will be ready for bids about June 22 for the erection of a $9,000 brick, stone trimmed, residence on High street.

Middletown, O. — Fred Rhodes, 810 Sherman avenue, received the contract for the erection of a $5,000 brick residence for Bert Stewart, Sherman avenue.

Pennsboro, W. Va. — H. L. Lambert, owner, will take bids soon on the erection of a brick residence which will cost about $10,000.

Terra Alta, W. Va. — The State Board of Control, care J. S. Larkin, Charleston, W. Va., is taking bids on the erection of two frame and shingle cottages which will cost about $5,000 each.

Woodlawn, Pa. — The contract has been let to Wallis & Carley, Sharon, Pa., for the erection of four brick and frame residences for the Woodlawn Land Company, Third and Ross streets, Pittsburgh. Cost $60,000 total.


Canton, O. — B. Dice, 200 Park avenue, N. W., will build a $5,000 brick store building on Cherry avenue, for Louis Gibbs & Sons, 606 Sixth avenue, N. E.

Charleston, W. Va. — C. W. McNulty received the contract for building a steel and brick fireproof addition to the Charleston National Bank on Capitol street. Cost $25,000.

Cincinnati, O. — The Ohio Building & Construction Company, Main street, was the low bidder on the brick store building to be erected on Walnut street, for Mrs. Willa E. Smith, 240 E. Fourth street.


Plays are about completed by Architect Edw. J. Wood, Lowdnes building.
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PITTSBURGH, PENNSYLVANIA
for a brick fireproof constructed store and apartment building, for Ward Lewis. Cost $50,000.

Cleveland, O. — The contract has been awarded to Crowell-Lunhoff-Little Company for erecting a brick and reinforced concrete fireproof wholesale hardware building for the W. Bingham Company.

Architect Nicoda Petti, 11805 Euclid avenue, will take bids until June 10 on the erection of a brick and tile fireproof store, office, club and motion picture theatre building on Central avenue and East Fourteenth street, for O. G. Mcbraghe. Cost $60,000.

The Tidewater Building Company received the contract to build a cold storage warehouse for the Sheriff Street Market & Storage Company. The building will be of reinforced concrete fireproof construction and cost $125,000.

Mannington, W. Va. — Architect Edw. J. Wood, Lowndes building, Clarksburg, W. Va., has preliminary plans completed for the erection of a store and apartment building for E. G. Smith. The building will be of brick and concrete construction and cost $15,000.

Urbana, O. — The contract has been awarded to Pickering Brothers, 354 East Church street, to build a brick store and office building, for John S. Powers.

Weston, W. Va. — Plans are being prepared by Architect J. Bretermitz, Clarksburg, for a brick store and apartment building on Centre street, for J. B. McConnell. Cost $9,000.

Toledo, O. — Edward Voss, 339 Heron street, received the contract for constructing a terra cotta fireproof commercial building on Adams street, for the Municipal Realty Company. Cost $30,000.

Fremont, O. — Architects S. H. & R. H. Shively, Croghan street, will take bids soon on the erection of a brick and steel semi-fireproof store and loft building on North Park avenue, for the German Aid Society. Cost $15,000.

Greenville, Pa. — Wallis & Carley, Sharon, Pa., have been awarded the contract for remodeling the bank building for the Greenville National Bank.

Marion, O. — Architect J. J. Sloan, 120 Jefferson street, will be ready for bids about July 5, on the erection of a brick store and apartment building on Center street, for Dr. R. C. Dugan, 225 E. Center street.

Beloit, O. — George C. Quinn, Oberlin, O., will build a brick store, moving picture theatre and apartment building, for John Martin. Cost $15,000.

Braddock, Pa. — Samuel Pollock received the contract to build a brick warehouse and stable costing $10,000, for A. Markowitz.

Buchannan, W. Va.—The Traders National Bank is contemplating the erection of a terra cotta or stone, fireproof bank and office building on Main street, which will cost about $90,000. An architect will probably be selected about July 15.

Clarksburg, W. Va. — C. E. Prunty, Main street, and Architect S. W. Ford, Union Bank building, are taking separate bids on the erection of a brick and stone, terra cotta, fireproof constructed store and office building on Main street. Cost $55,000.

Columbus, O. — L. S. Stewart, 1100 N. High street, is taking bids on separate contracts for the erection of a brick and concrete office building for the Columbus Iron & Steel Company.

Llvsven, Pa. — D. C. Amick, Altoona, Pa., received the contract to build a $5,000 frame store and apartment building, for H. W. Corle.


Warren, O. — Lee Hull received the contract to build a brick and tile laundry building for the Rouse Hospital, care Warren County Commissioners.

Elyria, O. — Architect Paul Rissman, Elyria block, has plans for a brick timber store building, for Harry H. Smith, Broad avenue and Second street. Cost $15,000.

Charleston, W. Va. — Architect H. Rus Warn, Capitol street, is completing plans for a brick and semi-fireproof store and Citadel, for the Salvation Army. Cost $35,000.

Marion, O. — Architect J. J. Sloan, Jefferson street, has plans for a brick store building and apartment building and garage for Louis Puzzo, North Main street. Cost $12,000.

Parkersburg, W. Va. — Plans are being prepared by Architect James Sansberry, for the erection of a brick, slow burning construction, wholesale grocery building for the Martin-Nelly Company. Cost $60,000.

Cleveland, O. — Andrew Brothers Engineers' building, were the low bidders on the erection of a brick and reinforced concrete warehouse on East Ninth street, for the United States government. Cost $11,000.

Sidney, O. — The contract has been let to George S. Klene Construction Company, Lima, O., for the erection of a reinforced concrete and terra cotta department store for J. M. Theodick, Woodward building.

Canonsburg, Pa. — The Jewish Congregation of Canonsburg is contemplating building a brick church on Ashland avenue, which will cost about $8,000. No architect has been selected.

Columbus, O. — The contract has been awarded to Knox & Phillips, 2153 West Broad street, to build a brick mill constructed addition to the Neil Avenue M. E. Church. Cost $14,000.

Homeville, Pa. — Architect Howard Frank, House building, Pittsburgh, has plans about completed for a brick and stone or ornamental terra cotta entrance arch and a fence, for the St. Michael R. C. Congregation. The work will cost about $3,000. Mr. Frank has plans completed for the erection of a brick and concrete convenience house for the St. Michael’s R. C. Congregation.

Piqua, O. — Architect C. F. Bowdle, Young building, is revising plans for a brick church building to be erected for the Piqua Baptist Congregation at a cost of $25,000. Bids will probably be taken about June 20.


St. Louis, O. — Architect Charles F. Wright, New National Bank building, Columbus, is asking bids on the erection of a frame church building, costing $5,000, for the Disciple Church of Christ.

Roncovever, W. Va. — Bids are being taken by Architect Charles W. Elledge, Cutler building, Rochester, N. Y., for the erection of a brick, non-fireproof constructed church building for the St. Catherine Sienna Congregation.

Vandergrift, Pa. — Architect H. C. Clepper, Park building, Pittsburgh, has plans under way for the erection of a brick church addition and alterations to the First Presbyterian Church. Cost $15,000.

Warren, O. — Architects Fulton & Butler, Uniontown, Pa., will start plans soon for a brick and stone church building, to be erected for the Methodist Episcopal Congregation at a cost of about $50,000.

Carey, O. — W. H. Snyder is taking sub-bids on the erection of a brick and terra cotta parochial school for the School of Our Lady of Consolation. Cost $25,000.

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Waynesville, O. — James H. Lloyd, West Rushville, O. — The contract has a cost of about $8,000.

Portage, O. — Architect L. O. Brosie, a brick parsonage, which will be built for the Presbyterian Congregation will select an architect soon. Cost $50,000.


Sewickley, Pa. — Rose & Fisher, Pennsylvania avenue, Pittsburgh, received the contract to build a stone church and parish house for the St. Stephens Episcopal Congregation. Cost $60,000.

Akron, O. — Paul T. Cahill, Euclid building, Cleveland, has been selected architect to prepare plans for the contract to build a brick church and the alterations consist of changing the partitions. Cost $15,000.

Fremont, O. — A site has been selected on State and N. Clover street for a brick or cut stone church, parish house and parsonage for the Grace English Lutheran Congregation. Cost $100,000.

Martins Ferry, O. — H. Batson, Moundsville, W. Va., will take bids on material shortly for the erection of a brick and stone church for the Free Methodist Congregation. Cost $42,000.

Portage, O. — Architect L. O. Brosie, Highland building, Pittsburgh, will take bids soon for a school building to be erected of brick and tile semi-fireproof construction, for the St. Joseph's Parochial School. Cost $10,000.

Lorain, O. — The Emanuel Evangelical Church has plans for the erection of a brick and steel school, with which will cost about $6,000.

Ottawa, O. — Architects Langdon & Hohy, Nicholas building, Toledo, have plans for a contract to build a brick and frame church, for the First Presbyterian Congregation.

West Rushville, O. — The contract has been awarded to S. G. Henke, Lancaster, O., for the erection of a brick, stone trimmed, church building, for the Presbyterian Congregation. The building will contain an auditorium, Sunday school rooms, social rooms, kitchen, etc.

Waynesville, O. — James H. Lloyd, Xenia, O., received the contract for the erection of a brick church for the Methodist Congregation of Waynesville. Cost $15,000.

The Board of Trustees, the erection of a brick library building, for which no architect has been selected.

Canonsburg, Pa. — Plans are being prepared by Architect A. L. Taylor for the erection of a brick school building by the Board of Canonsburg. Cost $5,000.

Carnegie, Pa. — The contract has been awarded to Dashiell & Lewis, to build a brick high school building addition for the Board of Education, to contain six new class rooms, gymnasium, kitchen, assembly room, etc., and cost $45,000.

Cincinnati, O. — Architect Harry Price, 414 Walnut street, has plans started for a brick school building, to be erected on Hopkins street, for the Hebrew Free School. The building will contain an auditorium, library, offices, directors' rooms, etc., and cost $50,000.

Homestead, Pa. — Architect A. G. Wickstrom is revising plans for the erection of a brick and stone addition to the Second ward school building, for the Board of Education. Cost $35,000.

Magnetic Springs, O. — The contract has been awarded to L. R. De Lander, Marion, O., to build a brick high and grade school building, for the Board of Education. Cost $15,000.

Masontown, W. Va. — The Board of Education will have a brick, stone trimmed, semi-fireproof school building erected, for which Architect Stephen W. Ford, Clarksburg, W. Va., is preparing plans. Cost $25,000.

Salem, O. — Architect Charles Owsley, Mahoning Bank building, Youngstown, has plans nearly completed for the erection of a brick reinforced concrete and hollow tile high school building for the Board of Education. Cost $85,000.

Alpha, O. — McCain & Brothers, Xenia, O., received the contract to build a brick and stone trimmed, church building, for the Board of Education. Cost $50,000.

Charleston, W. Va. — The Central Engineering Company has been awarded the contract for building a school for the Board of Education of Charleston Independent School District. Cost $69,000.

The contract has been awarded to the Central Engineering Company for the erection of a brick high school building on Elizabeth street, for the Board of Education of Charleston Independent School District.
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Painesville, O. — Architect F. N. Downer, City Hall, has completed plans for a $7,000 school building, brick fireproof construction, for the township Board of Education.

Daggsahonda, Pa. — The contract has been awarded to J. H. Gregory, St. Marys, Pa., for the erection of a school building for the Ridgway Township School Board.

Fochester, Pa. — The Rochester School District is contemplating the erection of a fireproof high school building, costing $75,000, for which no architect has been selected.

Bowling Green, O. — The Steine Construction Company, Fremont, O., was the low bidder on the erection of a brick and stone fireproof science building for the Board of Trustees of Northwestern Ohio Normal School. The building will include a chemical, physical and biological laboratory, lecture room and storage room.

Rockland Township, Pa. — The Board of Education of Rockland township is taking bids on the erection of a high school building.

Atlasburg, Pa. — The Smith Township School Board and Architect C. L. Whitaker, Dravosburg, Pa., are taking bids on the erection of a brick grade school building, which will cost about $30,000.

Fairmont, W. Va. — Architect H. Rus-Warne, Capitol street, Charleston, W. Va., has plans started for the erection of two brick, slow burning school buildings and two dormitories, for the State Board of Control, who will take bids about August 1.

Montpelier, O. — A bond issue for $75,000 has been passed this insuring the erection of a two-story brick and stone school building for the Board of Education. The architect has not been selected.

Clarksburg, W. Va. — Engineer Sidney B. Martin, Penn building, Pittsburgh, has plans about completed for the construction of a brick and steel fireproof central power plant, for the Clarksburg Gas & Electric Company. Cost $100,000.

Middletown, O. — The contract has been awarded to Caldwell & Iseminger to remodel the brick power plant of the Wrenn Paper Company. The work consists of tearing out the old partitions and installing new boilers.

Canton, O. — Architects Guy Tilden & Son, Schaeffer Block, may revise the plans for a brick and steel factory building, to be erected on Cedar avenue, for the Cotnam & Win & Wire Works, 1069 Cedar avenue. Cost $25,000.

Clarksburg, W. Va. — D. E. McNicol Pottery Company has private plans in progress for the erection of a brick or cement block pottery plant, which will cost $40,000.

Louisville, Ky. — Plans are being prepared by Architect Val P. Collins, Paul Jones building, for the erection of a reinforced concrete factory building for private parties. Cost $25,000.

Cincinnati, O. — The general contract has been awarded to Roche-Bruner Building Company, Johnston building, for the erection of a brick reinforced concrete fireproof soap factory addition for the Andrews-Jergens Company.


State, County and Municipal.

Auglaize County, O. — The Pan American Bridge Company, New Castle, Ind., was the low bidder on the bridge to be constructed for the Board of County Commissioners. The work will require a steel truss, two span, 60x110 feet, and crescented wood block floor, and will cost $20,000.

Cincinnati, O. — The Connelly Construction Company, 315 East Eighth street, received the contract for the sewer work, to be done in the Madisonville District No. 2. Cost $74,000.

Kenmore, O. — The contract has been awarded to E. McShaffrey & Son, Akron, O., to do the sanitary sewer work for the Village of Kenmore. Cost $130,000.

Minster, O. — A. S. Fox, Callahan building, Dayton, received the contract to construct a left bridge for the Board of County Commissioners. Cost $1,200.

St. Marys, O. — I. E. Smith, Richmond, Ind., received the contract to construct a bridge on South street, for the Board of County Commissioners. The bridge will be of reinforced concrete, two spans.

Akron, O. — J. C. Devine, Alliance, received the contract for the construction of a railroad spur for the city of Akron. The spur will be 1,300 feet in length, and will require piling, oak timber, two deck plate girder bridges, reinforced concrete, abutments, crushed stone, etc.

Clarksburg, W. Va. — Bush & Kellar received the contract for alterations and repair work to the post office building for the United States government. Cost $10,000.

Theatres.

Altoona, Pa. — A Notepolis, Eleventh avenue, will select an architect about July 1 to prepare plans for a brick fireproof theatre and office building.

Columbus, O. — The contract has been awarded to William Kolb, 144 East Bolton street, to build a $20,000 brick semi-fireproof nickelodeon on East Main street, for Carl G. Ludwig, 115 South High street.

Newport, Ky. — Architect Werner, Werner & Adkins, 414 Walnut street, Cincinnati, have plans for a brick addition and remodeling the theatre building on Ninth and Monmouth streets, for the Colonial Theatre Company.

Butler, Pa. — George Schenk received the contract to build a brick and stone theatre building on Main street, for C. E. Carlson, Main street. The building will contain two stories, three offices, billiard room, barber shop, bowling alleys and auditorium; and will cost $30,000.

Marion, O. — The contract has been awarded to C. J. Phelps, East Center street, to build a brick, semi-fireproof motion picture and vaudeville theatre for the Marion Photo Play Company. Cost $20,000.


Sebring, O. — Plans will be ready soon for erecting a two-story brick, steel and frame motion picture theatre building, for O. H. Sebring. The building will measure 40x70 feet and was designed by Architects Clepper & Owen, Youngstown, O.

South Charleston, O. — George B. Hicks secured the contract to build a one-story hollow tile and stucco motion picture theatre building, for Foster Houston, the work to cost $80,000.

Manufacturing.

Cincinnati, O. — Architect Ward Baldwin, 528 Walnut street, has plans for a brick cooperage shop for the Cliff ton Springs Distilling Company. Cost $10,000.
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Cleveland, O. — The Ohio Wood Preserving Company was the low bidder on the bridge repair work for the city of Cleveland. Cost $100,000.

Fremont, O. — Ziegler & Beardon, received the contract to do the paving and curbing work on Fine and Jefferson streets, for the Board of Public Service. The work will consist of 1,300 feet vitrified brick paving and sand stone curb. Cost $14,000.

Miami County, O. — The Board of County Commissioners have private plans under way for installing a steam heating system in the infirmary building. Cost $5,000.

Wood County, O. — The Board of County Commissioners is taking bids on the road improvement work on Erie Brand Road.

Hillsboro, O. — S. T. McMilan, Hillsboro, and R. A. Masterson, Mansfield, were the low bidders on the erection of a pressed brick armory building for the Ohio National Guard Armory Board, 215 Hayden building, Columbus. Cost $20,000.

Massillon, O.—The McGarry & Stowe Company, Akron, received the contract for the paving and curbing work on Wooster street, for the Board of Public Service. The work will be of brick, with stone curb and will cost $22,097.80.

Hazard, Ky. — L. C. & T. S. Todd, Richmond, Ky., were awarded the contract to build a two-story brick jail building, 45x73 feet, for the Perry County Commissioners.

East Taylor Township, Pa.—Bell, Bochel & Company, Altoona, Pa., were awarded the contract for road construction from Ebensburg to Johnstown, to be brick block on concrete foundation. The work is for the State Highway Department.

Miscellaneous.

Cleveland, O. — The contract has been awarded to Hankin-Conkey Construction Company, Cuyahoga building, for the erection of a recreation building, for the Cleveland Worsted Mills Company. The building will have brick and steel frame, slow baring construction, six stories and basement, 60x144 feet. It will contain club rooms, library, dining room, kitchen, gymnasium, baths, etc., and cost about $200,000.

Canton, O. — The Pennsylvania Company Lines West, Pittsburgh, will take bids until June 22, on the erection of a brick, terra cotta trim, steel hollow tile and reinforced concrete passenger station, on South Market street, which will cost about $50,000.

Altoona, Pa. — The contract has been awarded to William Linker Company, Need building, Philadelphia, to build a concrete and brick abattoir for the Altoona Packing Company. Cost $65,000.

Alliance, O. — The Pennsylvania Lines West, Pittsburg, and the City of Alliance, will construct a subway on Arch avenue, costing about $77,000, for which all bids will be taken by the City of Alliance.

Canton, O. — Architect Edmund Herrman, Central Savings Bank, will close bids this week on the erection of a concrete reinforced garage on North Fifth street, for G. M. Montgomery, 104 South Market street. Cost $30,000.

Cleveland, O. — F. H. Vogel, Ridge road, Brooklyn, Cleveland, received the contract to build a brick and reinforced concrete fireproof chemical laboratory on Washington avenue, for Cremer & Case, 1699 Superior avenue, N. W. Cost $8,000.

Columbus, O. — A. F. Durant, Town and Fourth streets, will take separate bids on the construction of a two-story brick garage, plans for which were made by Architects Dawson & Holbrook, Outook building, Columbus.


Society and Club Buildings.

Ashland, Ky. — The B. P. O. E, care O. A. Ginn, 505 Greenup street, is taking bids on the erection of a brick fireproof club building.

Bluefield, W. Va. — Suiter & Crews received the contract to build a brick and frame club house for the Bluefield Country Club.

Maysville, Ky. — Architects Weber, Werner & Atkins, 414 Walnut street, Cincinnati, have plans for a brick and terra cotta trim fireproof lodge building for the J. O. O. F. Ringgold Lodge. Cost $30,000.

Sharon, Pa. — The L. O. O. M., No. 292, care S. E. Baehl, will take bids about June 26, on the erection of a brick and terra cotta lodge building on South Main and State street. The building will contain a lodge room, social rooms, offices, etc., and will cost $26,000. Separate contracts will be awarded.

Alliance, O. — The Alliance Masonic Temple Company will soon select an architect to prepare plans for a brick, stone trimmed, Masonic Temple, to be erected at a cost of $50,000.

Cleveland Heights, O. — The contract has been awarded to the Walsh Contracting Company, Cleveland, O., for the erection of a stucco on hollow tile club house for the Shaker Heights Country Club.

Cleveland Heights, O. — The Walsh Construction Company, Citizens building, Cleveland, received the contract to build a club house for the Shaker Heights Country Club. The building will be of stucco on hollow tile construction and cost $7,000.

Parsingsburg, W. Va. — Architect F. L. Packard, Hayden building, Columbus, O., has plans about completed for a brick, terra cotta and marble fireproof construction Masonic Temple, for the Masonic Association. Cost $125,000.

Youngsville, Pa. — Architect J. V. Kinneer, Ridgway, Pa., has plans about completed for the erection of a brick lodge and office building for the I. O. O. F. No. 500. Cost $5,000.

Hamilton, O. — Architects F. C. Mueller, Rentschler building, has plans for a reinforced concrete and brick fireproof Elks Temple for the Hamilton Lodge No. 93, B. P. O. Elks. Cost $75,000.

Hospitals.

Cleveland, O. — The contract was awarded to W. B. McCullister, 2163 East Thirty-first street, for the erection of a brick, steel and reinforced concrete fireproof constructed hospital building, on Detroit avenue, N. W., for the St. John's Hospital. Cost $150,000.

Fremont, O. — A company is now being formed to build a brick, concrete and steel fireproof hospital building, to cost $150,000. Mrs. Webb C. Hayes is interested in the proposed project.

Indian View, O. — Architects Tietig & Lee, Lyric Theatre building, Cincinnati, have plans under way for a brick hospital building for Dr. C. H. Buser, R. F. D. No. 10, Madison avenue, Madisonville, Cincinnati. Cost $8,500.

Lakewood, O. — Architect Paul T. Schill, Enclit building, Cleveland, will take bids until June 22 on the erection of a brick and reinforced fireproof hospital building for the Lakewood Hospital. Cost $810,000.

Hotels.

Franklin, O. — W. S. Roof was the low bidder on the erection of a brick ho-
THE CONSTRUCTION RECORD

THE GARBER-EDER COMPANY
WABASH BUILDING
Engineers and Contractors,
Concrete Foundations, Steel Erection.

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J. R. STEEL, Representative
BUILDERS EXCHANGE, - - PITTSBURGH
BELL PHONE: 4080 GRANT

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Mr. Architect
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and Wiring of All Descriptions.

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"BOSTWICK DIAMOND "A" EXPANDED METAL"
"BOSTWICK TRUSS-V-RIB"
AND
BOSTWICK WALL PLUGS

BOSTWICK CORNER BEAD

BOSTWICK Y WALL TIES

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THE BOSTWICK STEEL LATH CO. - - - - - Niles, Ohio.
and 'filed to furnish the linoleum for the city of Pittsburgh. Agreement made ALLEGHENY COUNTY, PA. * Liens Filed for Labor and Material Furnished. Emiley streets. Cost $9,000.

Canton, O. — Architect H. J. Wagner is revising plans for remodeling the hotel for Bast Brothers, Market street. The work will cost about $15,000.

Ronconrte, W. Va. — W. J. Roderick is taking bids on the erection of a brick hotel addition to cost about $10,000.

Martinburg, W. Va. — Architects Holnboe & Lefferty, Empire building, Clarksburg, is about ready for bids on the erection of a brick hotel addition for the Berkeley Hotel. Cost $7,800.

NO-LIEN CONTRACTS.

Conradson & Hill vs. Trustees of the Elizabeth Steel Magee Hospital of the city of Pittsburgh. Agreement made and filed to furnish the linoleum for building at the corner of Halket and Emiley streets. Cost $9,000.


George H. Soffel Company, a corporation vs. Shenley Farms Company. Agreement made and filed to do plumbing work in residence No. 36, of Shenley Farms, Grant Boulevard. Contract price $1,825.


Cubberti Brothers vs. Fidelity Title & Trust Company. Agreement made June 4, and filed June 9, to erect building on Federal street. Contract price $70,600.


Sub-Contract Notes.

Stone Work.

P. H. McMahon, Pittsburgh, received contract for the battery and store room building, Pittsburgh. Owner, Duquesne Light Company, Pittsburgh.

John Rowe, Bedford, Ind., received the contract for the post office building, Piqua. O. Owner, United States government.

L. W. McHenry, Mt. Pleasant, Pa., received contract for school building, King View, Pa. Owner, School Board of Upper Tyrone township.

Roofing.

Miller Brothers, Scottdale, Pa., received contract for store and apartment building, Scottdale. Owner, M. Domna, Scottdale.


Breeze Brothers Company, Cincinnati, O., received contract for store and ice cream factory building, Dayton, O. Owner, A. J. Welty, Dayton.


P. LeGouillon, Pittsburgh, received contract for two residences, Charleston, W. Va. Owner, W. D. Guyer.

P. LeGouillon, Pittsburgh, received contract for stable and garage, Pittsburgh. Owner, Uniondale Cemetery Company.

Mill Work.


Morgan Lumber Company, Charleston, W. Va., received contract for two residences, Charleston. Owner, Payne & Glover, Charleston.

Eggers Lumber Company, Uniontown, Pa., received contract for residence, Uniontown. Owner, C. L. Garland, Uniontown.

Pittsburgh Hardware Door Company, Pittsburgh, Pa., received contract for store and apartment building, Imperial, Pa. Owner, George B. Cratsley, Imperial.

Hearing.

W. J. Scholl Company, Youngstown, O., received contract for theatre building, Eas Liverpool, O. Owner, Clepper & Ower, Youngstown.


Anderson-Darragh Company, Pittsburgh, received the contract for theatre, Uniontown, Pa. Owner, Charles L. Gorley, Uniontown.

M. D. Hastings, Scottdale, Pa., received contract for store and apartment building, Scottdale. Owner, M. Domna, Scottdale.

Roofing.

McNulty Brothers, Pittsburgh, received contract for stable and garage, Pittsburgh. Owner, Uniondale Cemetery Company, Northside, Pittsburgh.


J. H. Whiteman, Wapakoneta, O., received the contract for the parochial school, Piqua. O. Owner, St. Mary's Roman Catholic Congregation, Piqua.
"ATHENA"
SALT GLAZED BRICK
Smooth and Rock Faced
Encaustic Paving Tile.

THE
HOCKING VALLEY FIRE CLAY CO.
Nelsonville, -- Ohio.
Daily Capacity, 40,000

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"THE PROOF
OF THE PUDDING IS IN
THE EATING"

It would be well for all Building Material Concerns to use space in the Construction Record, and get paying inquiries.

"THE CONSTRUCTION RECORD"
Booth Brothers, McKees Rocks, Pa., received the contract for store and apartment building, Imperial, Pa. Owner, George B. Cratesley, Imperial.

R. F. Heine, Johnstown, Pa., received contract for bank remodel, Johnstown. Owner, Dollar Savings Bank, Johnstown.

**Electric Work.**


**Structural Steel.**

W. N. Kratzer & Company, Pittsburgh, Pa., received contract for parochial school, Braddock. Owner, Sacred Heart, Roman Catholic Congregation, Braddock.


W. N. Kratzer, Pittsburgh, Pa., received contract for stable and garage, Pittsburgh. Owner, Uniondale Cemetery Company, Northside, Pittsburgh.

**Plumbing.**

Frank Welker, Connellsville, Pa., received contract for residence, Connellsville. Owner, J. D. Draper, Connellsville.

**Ornamental Iron.**


**Lighting Fixtures.**


---

**GENERAL NEWS.**

C. H. Smith, Morgantown, W. Va., secured the contract to build the new structure for the Board of Control at Institute, W. Va., is asking sub-bids on cut stone work, brick work, roofing, fireproofing, plastering, etc.

W. C. Allen, Natrona, Pa., desires estimates on brick work, steel, concrete, plaster, mill work, cut stone work, etc., for school house construction in Erie.

The ornamental iron work for the $20,000 building, to be constructed for the H. J. Heinz Company, Northside, Pittsburgh, will be furnished by E. E. Werttheimer, Diamond Bank building, Pittsburgh. The marble and tile work was secured by the Logan Company, Peoples Bank building, Pittsburgh.

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**BUILDING CONDITIONS.**

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded</th>
<th>Corresponding period 1913</th>
<th>Corresponding period 1912</th>
<th>Corresponding period 1911</th>
<th>Corresponding period 1910</th>
<th>Corresponding period 1909</th>
<th>Week ending Jun 17, 1914</th>
<th>Week ending Jun 17, 1914</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corresponding period 1913</td>
<td>76,785,000</td>
<td>48,180,000</td>
<td>50,250,000</td>
<td>37,633,000</td>
<td>18,675,000</td>
<td>46,363,000</td>
<td>4,067,000</td>
<td>5,275,000</td>
</tr>
<tr>
<td>Corresponding period 1912</td>
<td>58,135,000</td>
<td>46,363,000</td>
<td>37,633,000</td>
<td>24,623,000</td>
<td>11,884,000</td>
<td>2,920,000</td>
<td>6,075,000</td>
<td>7,100,000</td>
</tr>
<tr>
<td>Corresponding period 1911</td>
<td>55,334,000</td>
<td>40,965,000</td>
<td>32,250,000</td>
<td>20,363,000</td>
<td>11,200,000</td>
<td>2,500,000</td>
<td>5,900,000</td>
<td>7,500,000</td>
</tr>
<tr>
<td>Corresponding period 1910</td>
<td>46,363,000</td>
<td>36,480,000</td>
<td>27,785,000</td>
<td>18,675,000</td>
<td>9,920,000</td>
<td>1,884,000</td>
<td>4,875,000</td>
<td>5,500,000</td>
</tr>
<tr>
<td>Corresponding period 1909</td>
<td>40,965,000</td>
<td>32,250,000</td>
<td>24,623,000</td>
<td>16,534,000</td>
<td>8,400,000</td>
<td>6,075,000</td>
<td>4,067,000</td>
<td>4,875,000</td>
</tr>
</tbody>
</table>

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**STEEL COMPANY ENLARGING.**

The Andrews & Hitchcock Company, Youngstown, O., has started excavations for an addition to its furnace plant. The new work will consist of a new 350-ton blast furnace, boiler house 60x100 feet and engine room 50x200 feet, also two new hot blast stoves. The steel plate work for the proposed improvements has been awarded to the William B. Pollock Company, Youngstown, while the structural steel for the new buildings will be furnished by the American Bridge Company, Pittsburgh.

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**NOTICE TO CONTRACTORS**

Sealed bids will be received by the Commissioners of Beaver County, Pa., up until 12 o'clock noon of Thursday, June 25, 1914, and will be opened at a meeting of the Commissioners to be held at a later hour, for construction work and finishing of alterations to the Beaver County Jail. Each bid must be accompanied by a certified check, as noted in specifications, as a guarantee of good faith in bidding; said check to be forfeited to Beaver county if successful bidder fails to furnish satisfactory bond and enter into contract for the price bid within ten days after award of contract.

Checks of unsuccessful bidders will be returned to them immediately on the awarding of the contract. The check of the successful bidder will be returned to him immediately upon the execution of the contract. Satisfactory bond, approved by the County Commissioners, for the full amount of the contract price will be required of each successful bidder for the various branches of the work as listed below, upon which separate bids are to be submitted as follows:

- General Contract Construction
- Heating and Ventilating Plant
- Steel Jail Equipment
- Plumbing and Gas Fitting
- Electric Light and Power Equipment

Plats and specifications and full information can be secured at the office of Carlisle & Sturrer, Architects, 7119 Jenkins Arcade, Pittsburgh, Pa., and at Commissioner's Office, Court House, Beaver, Pa.

The Commissioners reserve the right to reject any and all bids. By order of the County Commissioners.
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Risinger Manufacturing Co.
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Send two-cent stamp for illustrated pamphlet giving detailed description of various trips. Address L. G. Lewis, Gent. Passenger Agent, Detroit, Mich.

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CENTURY BUILDING
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We can do it for this price because we make so many property reports that it requires a force of title examiners constantly at this work and nothing else.
Being specialists they make them accurate and quickly.
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COLD STORAGE DOORS

CEMENT COATING

CONCRETE FOUNDATIONS
Garber-Eder Co., Wheeling Bldg., Pittsburgh.

CONCRETE SIDEWALKS
Fryer, Thos. R., 11th and Broadway, Wheeling, W. Va.

COMPOSITION FLOORS
American Mason Safety Tread Co., Builders' Exchange, Pittsburgh.

CONTRACTORS' PUMPS
Harris Pump & Supply Co., 320 Second Ave., Pittsburgh.

CORNICE WORK
J. Willis Daizell, Pittsburgh, Pa.

ELECTRICAL CONTRACTORS
Center Electric Co., Oliver Bldg., Pittsburgh.

ELEVATORS AND DUMB WAITERS
Marshall Brothers, South Twenty-first and Mary Sts., Pittsburgh.

ELEVATOR DOORS
J. Willis Daizell, Pittsburgh, Pa.

EXPANDED METAL
Bostwick Steel Lath Co., Niles, Ohio.

FIREPROOF DOORS AND PARTITIONS
J. Willis Daizell, Pittsburgh, Pa.

FIRE ESCAPES

FLOOR SURFACING
Bald, John M., Jenkins Arcade, Pittsburgh.

GYPSUM BLOCKS
J. Willis Daizell, Pittsburgh, Pa.

HARDWOOD DOORS
Carnahan Mfg. Co., Loogootee, Ind.

HARDWOOD FLOORS
Bald, John M., Jenkins Arcade, Pittsburgh.
Foundation Co., Jenkins Arcade, Pittsburgh.

HARDWOOD RAILING
Carnahan Mfg. Co., Loogootee, Ind.

HOUSE PUMPS

HEATING APPLIANCES
J. B. Steel, Fulton Bldg., Pittsburgh, Pa.

HEATING (HOT WATER-STEAM.)

INTERIOR TRIM

IRON FENCING

IRON ROOFING AND SIDING

JOINT RANGERS
Las & Hogan, Youngstown, O.

LIGHT IRON FURRING
J. C. Raxendell, Mt. Oliver, Pittsburgh.

LIGHTING FIXTURES

LINOLEUM

MANTLES AND TILES
Hyde-Murphy Co., Ridgeway, Pa.

MILL WORK
Carnahan Mfg. Co., Loogootee, Ind.

METAL DOORS
Las & Hogan, Youngstown, O.

METAL LATH
Bostwick Steel Lath Co., Niles, Ohio.
Carnahan Mfg. Co., Loogootee, Ind.

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J. C. Raxendell, Mt. Oliver, Pittsburgh, Pa.
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ORNAMENTAL IRON WORK.

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PARQUET FLOORS.

PAVING TILE.

PLASTER BOARD.

PRIVATE WATER SYSTEMS.

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Hahn Brothers, 305 Wabash Bldg., Pittsburgh, Pa.
Seager Brothers, Pittsburgh, Pa.
Scott A. White, Pittsburgh.
South Hills Hardware Co., West Liberty, Pittsburgh.

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SEWER PIPE.
Challis, D. W. & Son, Sewickley.

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STAIR BUILDERS.

STRUCTURAL STEEL WORK.

SUSPENDED CEILINGS.
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TILE (DECORATIVE).

TRUSSES.

VAULT LIGHTS.

WAREHOUSE DOORS.

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Ceresit Waterproofing Co., Chicago, Ill.

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WATER STRIPS.
Chamberlin Metal Weather Strip Co., Pittsburgh, Pa.

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CONSTRUCTION RECORD
Vol. 51, No. 22
June 27, 1914

"WHALEBONE" - The Ideal Wall Tie

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No order too small. No contract too large.

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Mathews Gravity Lumber Conveyor
Mathews Gravity Carrier Company
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is the modern way. Saves half the time and labor. Send for illustrated catalogs

Mathews Gravity Lumber Conveyor
Mathews Gravity Carrier Company
Ellwood City, Pa.
**Hardwood Floors**

**Better than Carpets**

We Lay, Finish and Polish, Complete, First Class Hardwood Floors of all Kinds.

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It is laid in paste form, on a cork cushion and can be applied over old wood floor, cement, iron, etc., as well as used for new work.

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**Chas. G. Hanny & Co.**

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IRON STAIRWAYS and PORCHES FIRE ESCAPES, ELEVATOR ENCLOSURE ARTISTIC GRILLE WORK, IRON FENCING.
TO ENLARGE POWER PLANT.

The Massillon Gas & Electric Company, Massillon, O., is asking bids on the erection of a large brick and steel addition to its power plant, to cost $145,-000. The company is asking bids on high pressure piping, pipe covering, steel window frames, feed water pumps, etc. The contract for turbines has been awarded to the Westinghouse Machine Company, Pittsburgh.

DEVOSS WILL DESIGN PORTSMOUTH SCHOOL.

The Board of Education, Portsmouth, O., has decided to accept the plans of Architect W. A. Devoss, Portsmouth, calling for a two-story brick and stone fireproof school building, 78x125 feet, which will be constructed at a cost of $60,000. Mr. Devoss is now working out the details for the structure and will have plans ready for bidders about August 15. The building is to have reinforced concrete floors, composition roofing, steam heating, electric lighting, etc.

START PLANS FOR GRAFTON SCHOOL.

The citizens of Grafton, W. Va., voted favorably on the bond issue to permit the Board of Education to build a $90,000 high school building. Architect Frank L. Packard, Hayden building, Columbus, O., has prepared the plans for the proposed work which will call for a three-story brick and concrete structure with reinforced concrete roof and floor slab construction. Full details of the work have not been decided upon.

NEW OFFICE BUILDING AT BLUEFIELD.

The Flat Top National Bank, Bluefield, W. Va., is to have a one-story brick and limestone bank and office structure, 40x80 feet built, for which the general contract has been awarded to Hoggson Brothers, 7 East Thirty-fourth street, New York City. Sub-bids will be taken on the work about July 9, these to consist of banking fixtures, cabinet work, slag roofing, interior marble and tile work, steam heating system, etc.

CANTON SCHOOL TO BE AWARDED.

Bids are to close July 7 on constructing a two-story brick and reinforced concrete grade school building, for the Board of Education. The plans, as designed by Architect George Hammond, 4220 Prospect avenue, Cleveland, call for a building 50x100 feet, to contain 12 rooms, assembly room, manual training and domestic science departments, etc. Material specifications call for structural steel, face brick, metal doors, reinforced concrete floor slabs, fireproof partitions, heating and ventilating system, etc.

DEPARTMENT STORE FOR WHEELING.

The contract for erecting a brick terra cotta and semi-fireproof department store, to be built for Stone & Thomas, 302 Main street, Wheeling, is to be awarded at an early date. This building will be 84x103 feet and will have composition roofing, terra cotta, cut stone, marble and tile work, metal ceilings, structural steel, face brick, reinforced concrete work, freight and passenger elevators, vacuum cleaning system, steam heating and electric lighting. Plans for the building were made by Architect F. F. Farris, Schaulbach building, Wheeling.

TECH SCHOOL SOON TO BE AWARDED.

Bids will close Monday next on separate contracts for constructing two additional wings and collonade at the Carnegie Institute of Technology, Schenley Park, Pittsburgh. Each wing will be five stories with basement and mezzanine measuring 58x139 feet and to be constructed of brick, stone and terra cotta. Plans for the proposed work were made by Architect Henry Hornbostel, New York City, K. M. Hood, local representative. The various materials specified in the construction work include face brick, cut stone, tile, marble and tile work, gypsum block, reinforced concrete slab partitions, ornamental iron, steel window frames, structural steel, architectural terra cotta, etc.

BUILDING CONDITIONS.

The following statistical table compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Date</th>
<th>Contracts Awarded</th>
</tr>
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<td>368,032,000</td>
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<tr>
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<td>July 24, 1913</td>
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Work is rapidly progressing on the erection of the theatre building at Columbus, O., for Horace L. Chapman, Wyandotte building, Columbus, O. It is believed that the building will be ready for occupancy early in September. The new structure will be three stories in height, having a frontage on High street of 80 feet and a depth of 188 feet. It will contain store rooms on the first floor with the upper floors being used for offices. The theatre section is to occupy the rear portion of the building.

The theatre entrance will be in the center of the ground floor and will lead into a lobby decorated with ceramic tile and stucco treatment overhead. Across the rear of the theatre will be a foyer with a manager's office, with retiring rooms on the left, while on the right will be a stairway leading to the balcony, checker rooms, etc. A new feature in this theatre construction will be the placing of two boxes on each side of the auditorium between the first floor and balcony level. Sixteen dressing rooms are to be constructed in a wing detached from the stage and equipped with all modern appliances. The ground floor or auditorium will have a seating capacity of 700 while the balcony will contain 400 seats.

A fan blast system of heating and ventilating will be used, the air to be changed six times every hour. The interior of the theatre will be decorated with stucco and fresco treatment. There will be no wood used in the construction work. An indirect system of illumination will also be employed.

The building, which was designed by Architects Dawson & Holbrook, Outlook building, Columbus, will be devoted to high class vaudeville and motion pictures. All of the stage will be so arranged that legitimate performances may be given. The contract for the erection of the building was recently awarded to J. W. Heckert, Ruggery building, Columbus.

RELATION OF CONTRACTOR TO BUILDING SUPPLY MAN.

The first thought in purchasing supplies for a building is, what dealers have the quality of goods that we wish to buy, and as a rule there are many of them. After these have been selected, the next thought is, what dealers can give the “service” demanded, and now we eliminate all but a very few. Right here let it be said that the word “service” is the biggest word today in the building world, the one big link that ties the supply man to the contractor, and the contractor to the architect and owner, many times regardless of price. Consider what this word “service” signifies to the contractor: In the first place, can the manufacturer of brick, cement or other material furnish the supply man with the goods of such quality and quantity as may be demanded by the contractor? In the next place, is the business of the supply man of such magnitude and importance to the manufacturer that he will furnish him with the goods as required? Now, then, has the supply man sufficient facilities, such as storage yards and storage buildings, to carry in stock a reasonable amount of the material to be purchased in case of emergencies, such as late shipments, railroad delays and unforeseen demands by the contractor, etc.? Has he the organization and system to handle his deliveries with promptness? And, not the least important, does he visit the different buildings for which he is supplying the material at frequent intervals to keep in touch with the requirements, so that he may more surely be able to supply the future demand, which in building construction at the best are exceedingly variable on account of bad weather, strikes, structural changes by the architect, etc.? And last, but of great importance, are he and his salesmen sufficiently well known to the architects in the community so that he can, in cases where the quality or shape or kind of material is questioned by anyone connected with the building give his opinion and help to straighten out a matter which, if not promptly decided, will cause the builder loss from delay?

A dealer should constantly keep himself informed as to the progress of the manufacturers towards better materials of whatever sort he is offering the building public. He should be the first to detect and advise the building public of the falling off in quality of the manufactured article. He should also be on the alert to see that architects are informed when specifying materials which of two or more equally good materials is the cheapest transportation or other cause making for ease of delivery at the least cost.

An efficient dealers organization should have in it an expert freight rate and railroad man, through whom the dealers customers can keep in touch with the movement of shipments at all times, thereby cutting down to a minimum, delays due to slow movement of cars on the rails and overcharges by the rail-
roads on the delivery of shipments.

The dealer who is thoroughly ac-
quainted with the railroad business, as
far as transportation of freight is con-
quered, can be of great value in the col-
lection of claims, the adjustment of

damages, etc.

Considering this whole question of
"service" there are too many dealers
who feel that when they have placed an
order entrusted to them with the fac-
tory their responsibility ceases; that
they have a right to fall back on the
excuse, when goods do not come as
soon as expected or when they are of a
quality that is below what was intended,
"Well, it is not our fault, but the fac-
tory's." Such an attitude certainly tends
to drive the contractor to direct deal-
ings with the manufacturer. On the
other hand, a dealer can earn the profit
many times over paid to him by the com-

munity. It is the tendency of the con-
tactor to purchase direct from manu-
facturers and it is up to you to prove
that you are necessary to his organiza-
tion.

Now comes the question of prices.
After eliminating all dealers not quali-
ifying as to material and service, we ask
the remaining few for quotations. After
obtaining these there are several things
to be considered before making our pur-
chase. Suppose, for example, we are
buying brick. We have two quotations
at $9.00 per thousand and one at $9.25
per thousand. The brick are all of equal
quality, but the one at $9.25 per thou-
sand we find is 5 per cent larger than
either of those at $9.00 per thousand, and
as the price of the larger brick is only 3
per cent greater we purchase the brick
which, while the highest in price per thou-
sand, is the cheapest when in the wall.

In purchasing material of any
kind there is much to be considered be-
side the unit price, but the majority of
contractors consider the original unit
cost of the material more than they do
the ultimate unit cost of the material in
place at the building, and I think the
dealers, especially those who carry a high
class of goods, can well afford to spend
a considerable part of their time in try-
ning to convince the contractor that ulti-
mate cost of material in place and ser-
vice in obtaining that material, are the
two big economical factors in his deal-
ings with the supply man.

It is very essential for the building
supply man, in order to be eventually
the most successful, to establish a reputa-
tion for carrying high class material
and to maintain such prices for that ma-
terial that he will show a good profit at
the end of the year, over and above in-
terest charges, losses in business, de-
preciation, etc., and there is no reason
why this cannot be done if there is loyal
cooperation between the members of
this association. While the writer is a
builder and looking for low prices,
nothing is lost by paying a fair profit on
my material, provided competitors can-
not purchase lower than I can. I do not think, however, that the qual-
ity of material on which a dealer may be
submitting a bid should be seriously con-
sidered in naming his prices to the
builder. He should also consider the
builder’s reputation for fair dealing and
for prompt payment. If you dealers
would make a more marked distinction
between those of the builders who are
honestly attempting to maintain a high
standard in the building business, pay
our bills, treat our clients, and at the
same time our sub-contractors and deal-
ers, fairly and with justice, you would be
helping us and, at the same time, help-
ing yourselves by tending to eliminate
by such discrimination the two classes
of builders who are hurting all of us
connected with the building business—
the "pirates," who makes his profit by
making charges against his sub-contrac-
tors and supply men that are exorbitant
and sometimes without foundation, and
the unintelligent, financially irrespon-
sible builder, who does not figure his
work correctly and when confronted
with a loss, simply lies down completely
or attempts to skin the job to such an
extent that all parties connected with the
work finally suffer both financial loss
and loss of reputation.

Builders who realize their responsi-
bility to the dealers and encourage the
dealers to efficiency in every way, and
dealers who realize their responsibility
to the builders and the clients whose
business they handle, are the results that we are all in this
building business most interested in and
most anxious to obtain.

WORK TO BE AWARDED.

The contract for building an eight-
story publication building for the
Pittsburgh Gazette Times will likely be
awarded separately the latter part of
this week. The work includes the
wrecking of the present six-story build-
ing, on Strawberry alley, Grant boule-
vard and Pentland street. The new
building will be 80x101 feet, eight stories
high and will be constructed of brick,
stone and terra cotta, the designs for
which were made by Architect E. B.
Lee, Peoples Bank building, with J. P.
Piiper, Oliver building, acting as as-
soicate architect. Material specifi-
cations require abg roofing, tile parti-
tions, tile flooring, terra cotta, Kalamein
doors, maple flooring, steel rolling
doors, sidewalk lights, ventilators and
skylights, etc.

BUSY CONTRACTORS.

J. H. Toupet, Pittsburgh, a well-
known contracting engineer, has be-
come associated with Beil & Conley,
5931 Penn avenue, Pittsburgh, who are
now carrying on a general fireproofing
and building construction work under
the name of Toupet, Beil & Conley.
A downtown office has been opened at
1428 Oliver building, with Mr. Toupet
in charge. The firm has just closed a
contract to do all the concrete work on
the Y. M. C. A. building, Youngstown,
O., fireproofing the new garage of the
Spring Garden Automobile Company,
Northside, Pittsburgh; constructing a
garage for J. D. Herd, Center avenue,
Pittsburgh; building the Chalmers ga-
rage, Pittsburgh; garage for R. A. Speer,
Pittsburgh; six residences on Wood-
mont and South Negley avenues, for
Otto Halbert and constructing five
houses on Chislet street, Pittsburgh.
Standards of Building Construction

Recommendations of Special Committee.

Conferences held recently at Chicago by the National Fire Protection Association, in annual convention, undoubtedly will be the beginning of a number of radical changes in future construction. In the first place, the term “fireproof” will be tabooed hereafter whenever reference to type of construction is made. “Fire resistive” will be the term substituted. In the next place, it was the purpose of the committee, of which Ira H. Woolson, consulting engineer of the National Board of Fire Underwriters, is chairman, to rationalize and popularize the principles of fire-resistive construction, embracing all standards which have thus far been adopted by the association.

The special committee's recommendations were drafted merely as a framework for future action by the national body, but so thoroughly has the work been done by the experts comprising the committee that it was the general belief that the recommendations eventually will find themselves in a formal standardization code covering the entire country.

The committee in their recommendations urge the discontinuance of the term “fireproof” on the ground, that it has in the past been erroneously applied to buildings and materials of a more or less fire-resistive or incombustible nature, and in its indiscriminate use has produced much misunderstanding, and has often engendered a feeling of security entirely unwarranted. Instead, the term “fire resistive” is suggested, which, however, is to be applied to all structures or materials which will satisfactorily resist the effects of a serious fire in accordance with the classification given below.

New Terms.

"Incombustible," if the committee's suggestion is followed, will be a term applied to structures or materials that will not readily ignite and burn when subjected to fire, while “non-inflammable” will refer to material which may burn when subjected to fire, but will not support flame.

The question naturally arises as to how the basis of these standards will be today, than any other combination inter­

Support flame.

subjected to fire, while “non-inflammable” will not readily ignite and burn when applied to structures or materials that are used for executive administration, sale and storage of merchandise. These are to be listed as follows:

Places of worship—Churches, synagogues, temples, etc.

Educational institutions—Colleges, schools, seminaries, etc.

Institutions for culture—Art galleries, libraries, museums, etc.

Places of amusement—Theaters, assembly halls, amusement pavilions, exposition and fair buildings, motion picture halls, skating rinks, etc.

Places for social intercourse—Lodges, dancing academies, etc.

Institutions for sick and infirm—Hospitals, sanatoriums, etc.

Penal and reformatory institutions—Prisons, houses of correction, etc.

Benevolent institutions—Orphanages, homes for incurables, etc.

Resident buildings—Including all buildings in which people are voluntarily housed or lodged.

The latter class includes all buildings sub-divided, as follows:

Places for transient lodging—Hotels, apartment hotels, club houses, etc.

Places for permanent lodging—Tene­

ment, apartment, lodging and rooming houses, nurseries, etc.

Private residences.

The final classification deals with business buildings, a term which embodies places where actual business is conducted and which are used for executive administration and for the manufacture, sale and storage of merchandise. These are to be listed as follows:

Places for executive administration—Office buildings, etc.

Places for manufacturing purposes—Factories, workshops, printing houses, powder mills, grain elevators, breweries, distilleries, slaughter and packing houses, canneries, gas producers, blasting furnaces, foundries, etc.

Places for sale of merchandise—Mer­

cantile establishments of all kinds, stores, restaurants, etc.

Places for receiving, handling and storing merchandise— Freight stations, docks and wharves, car barns, stables, cold storage and warehouses, etc.

Fire-Resistive Furnishings.

The committee recommends fire-resistive buildings, and adds:

All solid partitions to be of metal lath and cement plaster; terra cotta, brick, magnesia or other incombustible material and all doors with trim shall be of
The use of electricity is recommended in preference to gas for illuminating.

MOVING A STEEL BRIDGE IN 30 MINUTES

Table Tops Only Exception.

In order to reduce the fire hazard due to inflammable goods, it is recommended, where large quantities are stored, to have more than one room and that the area of no such room exceed 500 square feet, unless the goods are packed or stored in separate enclosed fire-resistive shelving or closets, in which case the area of stock or storage room is not to exceed 5,000 square feet, unless equipped with automatic sprinklers in which case it is not to exceed 10,000 square feet.

ENLARGING MINE CAR PLANT.

The Hockensmith Wheel & Mine Car Company, Penn Station, Pa., has private plans for an addition to its assembling shop, to be 100x110 feet, and a new machine shop 90x400 feet. Both of these buildings will have concrete foundations, which work will be done by the company. Bids on the superstructure will be taken early next spring. The company plans to have reinforced concrete floors, composition roofing, steel window sash, structural steel frame, steel rolling doors, electric lighting fixtures, etc. The estimated cost of the work is $100,000.
Architect A. L. Miller, 924 Chislett street, has plans for a brick residence on Fortieth street, for W. W. Keil, 4022 Butler street. Cost $6,000.

J. H. Trimble & Brother, 2222 Chateau street, received the contract for the interior alterations to the department store on Sixth avenue and Smithfield street for the Oliver Estate, Oliver building. The work consists chiefly of removing present stairway, installing new passenger elevators, etc., and will cost $10,000.

D. H. Lash, 720 Grandview avenue, was the low bidder for the erection of a brick residence in Mt. Lebanon, for A. S. Reese.

Architect S. A. Marstellar, Garrison building, is taking separate bids for remodeling a frame and stucco residence on Ameib street and Baam boulevard, for Dr. J. Alfred Tucker, Pittsburgh Life building. Cost $5,000.

Architect A. B. Sayler, Empire building, has bids in and will award separate contracts soon for the erection of a brick, cement plaster and tile block containing seven residences on Janeyce street, for Mrs. Josephine A. Garber, 601 Emerson street. Cost $25,000.

Architect W. N. Zortman, Bessemer building, has plans under way for a brick veneer store and apartment building in Dormont, for private parties. Cost $9,000.

C. L. Mohney, Sterrit building, was the low bidder on the interior alterations to the Humboldt School building, Twentieth and Sarah streets, for the Board of Education. Cost $5,000.

E. F. Guhrick, 6468 Forbes street, received a contract to build a $11,000 brick residence in Wilkinsburg, for private parties.

Architects Vrydaugh & Wolfe, 348 Fifth avenue, have been selected to prepare plans for the erection of a brick, fireproof school building in McKeesport. Cost $100,000.

The D. E. Worley Construction Company, Jenkins Arcade building, was the low bidder on the erection of a $2500 office building on Twenty-fourth street, for the J. S. McCormick Company, Twenty-fifth street.

Architect Paul W. Irwin, Renshaw building, will take bids until the 29th inst. on the erection of a stone residence on Briarcliff road, for W. W. Schally, 521 Holmes street. Cost $7,000.

William T. Powell, 504 Fourth avenue, received the contract for the erection of a brick barn at Marshalsea for the City of Pittsburgh. Cost $15,000.

Brown Brothers, Potomac street, Dormont, were awarded contract to build a brick fireproof piggery addition at Marshalsea for the City of Pittsburgh.

Architect A. D. Alexander, Fulton building, has plans about completed for the alterations to be made in the Snodgrass School, for the Board of Education.

J. Laeter & Sons, 810 Portland avenue, are ready for sub-bids for the erection of a brick residence on Beverly Place, for William H. Seif, Magee building.

The contract has been let to Rose & Fisher, Pennyslvania avenue, Northside, for building a high school building in Ben Avon, for the Board of Education. The building will be of brick, fireproof construction and will contain an auditorium, public library and 10 rooms.

The Duquesne Construction Company, Bessemer building, received the contract to erect a brick and stone fireproof gymnasium building in Brookline, for the Toner Institute. Cost $11,000.

Cuthbert Brothers Company, Bessemer building, received the contract for the erection of brick and stone fireproof top addition to the Columbia Hospital on Penn avenue and West street, Wilkinsburg, to cost $3,000.

Architect W. C. Dowler, Arrott building, has plans under way for a brick and stone fireproof grade school building, in Ingram, for the Board of Education. The building will contain 14 rooms and an auditorium, and will cost $100,000.

Nickel Brothers, 222 Pearl street, received the contract to build a brick residence on Millvale avenue, for George Herman, Yew street.

A Hansold, 230 Breading street, Ben Avon, is taking sub-bids on the erection of a brick residence and garage in Ben Avon. Cost $15,000.

Charles H. Drummond, 4100 Main street, is contemplating the erection of a $12,000 brick store and apartment building on Penn avenue, near Main street.

Plans are being prepared by Architect C. E. Moffit, Masonic Temple, McKeesport, for the erection of a brick residence addition and alterations and garage on Darlington Road, for Dr. F. T. Nason, 637 Walnut street, McKeesport.

The Central District Telephone Company, Seventh avenue, will take bids shortly on the erection of a brick fireproof telephone building addition and alterations in the Schenley Exchange, for which the revised plans are about completed.

Frank Pressler, 595 Center avenue, is contemplating the erection of an $8,000 brick veneer bungalow and garage in Aspinwall. No architect has been selected.

Heller & Perrin, 87 Chatham street, will probably take bids this week for the erection of a brick store addition on Dinwiddie street. Cost $8,000.

Bids are in and the contract for building a two-story brick veneer store and residence for Mrs Mary Navaro, Grotto street, will be awarded soon. Plans were made by Architect F. A. Parks, 3433 Kincade street.

The Dunzinger Broom Company, 88 Roberts street, is taking separate bids on the erection of a brick broom factory addition, on Roberts street, to cost $5,000.

Architect Paul W. Irwin, Renshaw building, is writing specifications for a brick and ornamental terra cotta residence, to be erected on Fifth avenue, near Amboy, for Andrew M. Moreland, Second National Bank building. Cost $50,000.

Architect S. S. Beeman, McCormick building, Chicago, Ill., has plans completed for a brick church addition, to be erected on Clyde street, near Fifth avenue, for the First Church of Christ Scientists. Cost $8,000.

The contract was awarded to Samuel...
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N. Murphy, Monongahela Bank building, for the interior alterations to the Foster school, for the Board of Education. The work consists of remodeling, plumbing, etc.

John A. Crisman, 7401 Hermitage street, was the low bidder on the brick stable to be built in Yale Alley, for the Liberty Baking Company, at a cost of $6,500.

F. L. Fischer, 2004 Watson Way, received the contract for the school alterations in the Morningside School, which will cost about $4,000.

Architects John T. Conde, 1005 Fifth avenue, and John E. Kanzer, Renshaw building, have plans for a brick and stone church for All Saints R. C. Congregation, Wilson avenue, Etta. Cost, $800,000.

The contract was awarded to Michael Senge, 5272 Keystone street, for the erection of a $2,500 office building on Twenty-fourth street, for J. S. McCormick Company, Twenty-fifth street.

Ellis M. McClain, 708 Walnut street, Wilkinsburg, is taking bids on the erection of a brick veneer residence in West Pittsburgh, to cost about $4,000.

Architect John P. Brennan, Old City Hall, Northside, is writing specifications for remodeling the public comfort station, Federal and Ohio streets, for the City of Pittsburgh.

Architect A. K. Miller, 804 Penn avenue, is writing specifications for the brick motion picture theatre building, to be erected in East Pittsburgh, for Alphonse Fritsch, Electric avenue, East Pittsburgh. Cost $1,000.

James L. Stuart, Oliver building, secured the contract to build a brick and concrete bath house on Tenth and Bingham streets, for the Henry W. Oliver Estate. Cost $10,000.

The Board of County Commissioners of Allegheny county is taking bids on the bridge to be constructed over Thompson Run. It will be of reinforced concrete with elliptical arch.

The City of Pittsburgh is taking bids on rebuilding the concrete retaining wall on Brownsville avenue and Rounnoke street, to cost about $8,000.

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**Apartments and Dwellings.**

**Altoona, Pa.** — The Altoona Concrete Construction & Supply Company received the contract for the erection of an apartment building for Julius Blumenthal. It will be of brick, slow burning construction and cost $25,000.

**Cincinnati, O.** — E. J. McKinney, 1225 Dewey avenue, received the contract for the erection of a brick and stone residence and garage for Mrs. Anna Bankes, 2024 Colerain avenue. Cost $8,000.

**Cleveland, O.** — Architect A. Sharrowy, 4005 Woodlawn avenue, has plans completed for a brick apartment building, for J. Bissell, 433 Orange avenue, who will take bids about June 25. Cost $600.

Architect George E. Rudolph, 5217 Woodlawn avenue, has plans for a $10,000 brick apartment building for A. E. Brester, 6005 Central avenue.

**Cleveland, O.** — Architect J. Howard Hicks, Dennis Block, will close bids this week on the erection of a $4,000 brick and stucco residence on Ninth avenue, for Jesse Watts, Fourth avenue.

**Cleveland, O.** — Architect L. J. Dean, Foster building, is revising plans and will take new bids at once on the erection of a $4,000 brick and stucco residence on Ninth avenue, for C. H. Doehller, Fifth street.


**Oil City, Pa.** — Julius Schwartzkopf, 6 Harriot avenue, will take bids until July 1 on a brick veneer residence, to be erected on Pearl avenue.

**Washington Court House, O.** — Architect J. Howard Hicks, Dennis Block, will close bids this week on the erection of a frame and brick bungalow on Main street, for J. A. Hays. Cost $3,000.

**Charleston, W. Va.** — The contract has been awarded to Stark & Allen to build a brick apartment building on Quarry street, for Dr. A. C. Ray. Cost $24,000.

**Cleveland, O.** — Architects Frank B. Meade, & James Hamilton, 1602 Garfield building, will take bids July 1 on the erection of a plaster on hollow tile residence for J. H. Cassidy, care architect.

**Owensboro, Ky.** — Architect J. C. Peterson, Traverse City, Mich, has plans under way for a brick apartment building for L. R. Caseman. Cost $9,000.

**Springfield, O.** — The contract has been awarded to William Poole, 1716 Pearl street, for the erection of a brick apartment building for C. F. McGilvary, Lagonda avenue. Cost $10,000.

**Toledo, O.** — William Jackson, Collingwood avenue, received the contract to build a frame duplex apartment building on Scottwood avenue, for F. E. Cotrell, 314 Jefferson avenue.

**Weston, W. Va.** — The old building on Main street is being torn down in preparation for the new brick residence, to be erected for J. S. Turner. Cost: $30,000.

**Wildwood, Pa.** — Edward A. Bittner, Glenshaw, Pa., received the contract to build a gardener's cottage and barn, frame and tile construction, for George Wittmer, Jr. Cost $6,000.

**Windber, Pa.** — The Windber Lumber Company received the contract to build 10 miners' residences, frame construction, for the Berwind White Coal Company.

**Akron, O.** — S. H. Mault, 38 Grand street, will build a frame residence on Bloomfield street, from private plans. Cost $3,000.

**Frank Sisters, 423 Carrol street, has private plans for the erection of a $4,000 frame residence on Canal street, for which George Kepner, 739 May street, has been awarded the general contract.

**W. R. Reiter, 793 Princeton street, received the contract for the erection of a $2,000 frame residence on Portage Path, for W. C. Johnson, 361 Holliday street.

**John Duffy, 363 Perkins street, has private plans for the erection of a frame residence on Warren Court, for which the contract has been let to John A. Lavery, 300 Kings Court.

**C. M. Brainard, 14 N. Summit street, will build a frame residence on Belvidere street, from private plans. Cost $2,000.

**Circleville, O.** — L. R. Young has private plans under way for the erection of a brick residence to cost about $4,500.

**Cleveland, O.** — The contract has been awarded to the Fath Construction Company, 4103 Perkins avenue, for the erection of a brick apartment building on Lake avenue, for L. C. Baldwin, 1331 West Eighty-third street.

**Crawtree, Pa.** — R. R. Palmer, Greensburg, Pa., received the contract for the erection of three frame superintendents' residences, for the Jamison Coal Company. Cost $3,000 each.

**Frankfort, O.** — Architect John
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Schweitzer, Court House, Chillicothe, has plans about completed for the erection of a brick veneer residence for Charles Cory, Rosaboth, O. R. F. D. No. 1. Cost $5,500.


Toledo, O. — Dr. Herbert H. Smead, Parkwood avenue, has purchased a site on Parkwood avenue, for the erection of an $8,000 brick residence, for which no architect has been selected as yet.

Beaver Falls, Pa. — Frank Carrin, 2102 Seventh avenue, received the contract for the erection of a brick residence on College Hill for D. D. Douthett, Twenty-third street. Cost $3,500.

Cincinnati, O. — Architect Max Kau, 2241 Stratford avenue, has plans under way for a stucco bungalow on Prospect Place, for P. H. Braham Building Company, Union Central building. Cost $5,500.

Cleveland, O. — Architects Izant & Frink, Illuminating building, have plans for a brick residence on Pasadena avenue, for J. T. Kermond, 1408 East Eighty-fifth street. Cost $7,500.

Cleveland Heights, O. — Plans are being prepared by Architects Izant & Frink, Illuminating building, for a frame residence on Superior street, for F. S. Stumberger, 2961 Mayfield Road. Cost $6,000.

Columbus, O. — Architect Jacob Goldsmith, Wheeler building, is writing specifications for a brick residence, to be erected on Clifton avenue, for F. P. Chapman, 277 Woodland avenue. Cost $10,000.

Indiana, Pa. — E. M. Lockard, received the contract for the erection of a brick and tile residence, for Dr. G. E. Simpson, 39 South Ninth street, to cost $14,000.


Springfield, O. — The contract has been awarded to K. G. Walker, 509 Diebert avenue, for remodeling the apartment building of Dr. E. W. Sacket, 309 Bushnell building.


Apollo, Pa. — S. M. & M. W. Kiebler, Saitsburg, Pa., will soon start work on remodeling and building an addition to the frame residence for Calvin Hamet.

Huntington, W. Va. — Architect L. J. Dean, Foster building, is planning a brick and tile bungalow on Fifth street, for W. L. Rees. Cost $4,000.

Lakewood, O. — Architect William Koethl, Park building, Cleveland, O., is taking bids on general and separate contracts for the erection of a brick residence and garage on Detroit avenue, for J. A. Spitzig, 4008 Bridge avenue, Cleveland.

Mechaniscburg, O. — Dr. V. B. Kraut will take bids soon on the erection of a brick residence to cost about $6,000.

Port Clinton, O. — Architect S. H. & R. H. Shively, Sandusky, O., have plans about ready for bids on the erection of a $8,000 brick veneer residence, for A. A. Wanger.

Belleair, O. — Architect John C. Wood has plans for a frame apartment building, to be built for Dan Kaper, at a cost of $6,000.

Huntington, W. Va. — Dr. A. E. Kesser is taking bids on the material for the erection of a pressed brick apartment building to cost $20,000.


Toledo, O. — William Bossart, 1117 Delancey street, was the low bidder on the erection of a brick veneer apartment building for Harry Silverman, East Side Department Store. Cost $12,000.

Belleair, O. — Architect John C. Wood has plans for a frame apartment building, to be erected on Jefferson street, for Mrs. Miller Able at a cost of $6,000.

Cleveland, O. — The contract was awarded to W. A. Koler, 2877 East One Hundred and Sixteenth street, for the erection of a $7,000 brick residence for Dr. A. N. Seidel, 2796 Woodhill road.


Portsmouth, O. — Edward Stevens is taking bids on the erection of a $6,000 brick and stone residence.

Business Buildings.

Cincinnati, O. — S. F. Fisher, 311 Main avenue, Elmwood Place, will build a brick store and apartment building for Mrs. May Bottenhorn, 210 Main avenue, Elmwood Place, Cincinnati.

Architect Anton Reig, 2554 Vine street, has plans for a brick store building for Henry Geisler, 333 West Sixth street. Cost $15,000.

Colver, Pa. — Hess Bros received the contract to build a brick addition to the store building of the Ebensburg Coal Company, Colver. Cost $18,000.

Huntington, W. Va. — Architect L. J. Dean, Foster building, has plans about completed for four brick store rooms on Teath street, for Dr. J. R. Lesage and Dr. J. Vickers. Cost $6,000.

Uniontown, Pa. — The contract has been awarded to W. E. Priest for the erection of a brick produce storage building for E. E. Strickler, 78 S. Mt. Vernon street. Cost $20,000.

Wheeling, W. Va. — G. W. Beltz & Son, Nineteenth and Eoff streets, received the contract for remodeling the store building of P. Welz Company, 1118 Market street. Cost $8,000.

Amherst, O. — Charles Ebbs and A. B. Baker, Elyria street, are contemplating the erection of a brick office and post office building, for which an architect will be selected soon. Cost $7,000.

Cincinnati, O. — The contract has been awarded to David Gordon, 747 W. Seventeenth street, to build a brick and steel bake shop addition on Eighth and Depot street for Behr Mansfield, 834 West Sixth street. Cost $10,000.


Oil City, Pa. — E. M. Crouch, Oil City, E. M. Crouch, Oil City, has plans for a brick and tile bungalow, to be erected on Broad street, for the Grabler Manufacturing Company. The building will cost $15,000.

Cleveland, O. — Architects Christian, Schwarzenberg & Gaede, 900 Euclid building have new sketches under way for a brick and steel office building, to be erected on Broadway avenue, for the Grabler Manufacturing Company. The building will cost $15,000.
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street, for the Old City Lodge of I. O. O. F. No. 598. Cost $75,000.

Dayton, O. — Architects Schenck & Williams, Arcade building, will have plans ready for bids about July 15 on the erection of a reinforced concrete and terra cotta mercantile building on Jefferson street, for George Shaw, 1126 East Third street.

Steubenville, O. — Architectis Peterson & Clark have plans under way for plans for the erection of a brick and stone building, for W. H. Lowe. Cost $50,000.

Circeville, O. — The Second National Bank is contemplating the erection of a brick bank building on West Main street, for which an architect has been selected.

Cleveland, O. — Architects Fulton & Taylor, Permanent Bank building, have plans under way for the erection of a brick and reinforced concrete fireproof building, and the Donahoe Hardware Company, Leader-News building, Cleveland. Cost $15,000.

Marblehead, O. — Architects Lehman & Schmitt, 625 Garfield building, Cleveland are writing specifications for a brick and reinforced concrete fireproof building, for the Kelly Island Lime & Transfer Company, Leader-News building, Cleveland. Cost $6,000.

Parker'sburg, W. Va. — The contract has been awarded to L. H. Vought & Company, 340 Madison avenue, New York city, for remodeling the Union Trust & Deposit Company's bank building on Seventh and Market streets.

Sandusky, O. — George Feick & Company will build a frame and brick semi-fireproof store and loft building, for the Donahue Hardware Company. Cost $25,000.

Williamsburg, Ky. — J. L. Whitchard is contemplating the erection of a brick business building, for which an architect will soon be selected.

Akron, O. — The Carnical Construction Company, Hamilton building, was awarded the contract to build a brick and reinforced concrete store and apartment building, for J. T. Enright, 9 East Bucbiil avenue. Cost $15,000.

Huntington, W. Va. — Architects C. C. Compton, Donora, Pa., has plans for a brick business building, for the Martinsburg Installment Company. Cost $30,000.

Cleveland, O. — Architect E. H. Goldfin, Reserve Trust building, has plans for an addition and alterations, to the brick store building, belonging to J. H. Dubsky & Brother, 4143 Pearl Road. Cost $8,500.

Canal Dover, O. — The contract has been awarded to H. M. Taylor for the erection of a brick semi-fireproof store and apartment building, on Third street, for A. J. Rausch, Third street, a cost $15,000.

Donohue, O. — G. C. Overdoff, Blairsville, Pa., received the contract for the construction of a frame store building, for the Superior Supply Company. Cost $5,000.

Akron, O. — Plans are being prepared by Architects Fichter & Brooker, Second National Bank building, for a bank and office building to be erected on High and High streets, for the Permanent Savings & Trust Company. The building will be of brick fireproof construction and cost $75,000.

Edgewood, W. Va. — Architect F. F. Parls, Schmidbach building, Wheeling, will take bids June 30 on the erection of a brick and tile fireproof convention for the West Rushville, O. — The合同 has been awarded to S. Q. Hanke, Lancaster, O., for the erection of a brick church building, for the First Presbyterian Congregation. Cost $16,000.


Edgewood, W. Va. — Architect F. F. Parls, Schmidbach building, Wheeling, will take bids June 30 on the erection of a brick fireproof building on Tenth street, for Dr. H. C. Miller, 2018 Eighth avenue.

Cleveland, O. — The contract has been awarded to F. W. Klein, East Nineteenth street, to build a brick store and apartment building and a bakery and restaurant on East Twenty-fifth street, for Fred Lasch, 4602 Broadway. Cost $125,000.

Hillards, O. — H. I. Romick received the contract for the erection of a brick bank building for the Merchants & Farmers Bank.

Ironon, O. — Architects Howard & Merrier, 8 East Broad street, Columbus, are preparing sketches for a brick, concrete and terra cotta store and hotel building, to be erected for the Commercial Club at a cost of $125,000.


Springfield, O. — Architect William F. Schilling, Bushnell building, has plans for a $60,000 stone, brick, and steel fireproof bank building, for the Springfield Building and Loan Association.

Wheeling, W. Va. — The Taylor Produce Company, is taking bids on the erection of a brick, tile, mill constructed wholesale produce house.

Religious.

Shadyside, O. — Architect John Wood, Bellerique, O., is taking bids on the erection of a $25,000 brick and stone church building, for the Shadyside Methodist Episcopal Congregation.

West Rushville, O. — The contract was awarded to J. O. Hanke, Lancaster, O., for the erection of a brick church building, for the First Presbyterian Congregation. Cost $16,000.


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Ohio Convent. Cost $25,000.

Ebensburg, Pa. — The Presbyterian Congregation is taking bids on the erection of a brick and stone church building, costing $20,000.

Ambridge, Pa.—Architect H. A. Lord, Charles street, has plans nearly completed for the erection of a brick and stone church building for the Orthodox Grecian Church of the Holy Ghost.

St. Louisville, O. — Architect Charles F. Wright, New First National Bank building, Columbus, O., has preliminary plans for a frame or brick church building, for the Disciple Church of Christ. Cost $6,000.

Ashville, O.—Plans are under way for a brick or brick veneer church building for the United Brethren Congregation, for which the contract has been let to Homer Friddle. Cost $30,000.

Columbus, O. — Architect A. J. Stanhope, 116 S. LaSalle street, Chicago, III., has plans under way for a stone church for the First Church of Christ Scientists. Cost $75,000.

Ebensburg, Pa. — The Presbyterian Church will take bids at once on the erection of a brick and stone church building, to cost about $25,000.


Johnstown, Pa. — Architect W. R. Myton, Lincoln building, has plans completed for the erection of a brick and stone church addition on Ohio street, for the Moxham United Brethren Congregation. Cost $25,000.

Marion, O. — The Second Church of Evangelical Association is contemplating the erection of a frame or brick church building on Greenwood and North streets, to cost about $6,000.

Warsaw, O. — The contract has been awarded to H. J. Grant, Kokomo, Ind., for the erection of a brick, stone trim church, for the First Methodist Episcopal Congregation.


Educational.

Boswell, Pa. — The Boswell School Board is taking bids on the erection of a brick addition to the grade school building. It will contain six rooms and cost $25,000.

Canal Dover, O. — The Board of Education is taking bids on the erection of a brick, concrete, and stone school building. The building will contain a physical and chemical laboratory, domestic science room, gymnasium, auditorium, etc., and will cost $150,000.

Cleveland Heights, O. — Architects Walker & Weeks, 1920 Euclid building, Cleveland, have plans under way for the erection of a brick and reinforced concrete fireproof high school building, for the Board of Education. The building will include an auditorium with stage, domestic science department, etc., and will cost $190,000.

Granville, O. — The Board of Education is taking bids on installing a heating and ventilating system in the school building. The work will cost about $10,000.

Huntington, W. Va. — V. E. Taylor received the contract to make alterations to the Cabell school, for the Board of Education. Cost $10,000.

Leisenring, Pa. — Architect Andrew E. Cooper, First National Bank building, Uniontown, will have plans ready this week for bids on the erection of a brick high school building addition for the Dunbar Township School Board. Cost $25,000.

Midland, Pa.—The contract has been awarded to George Fike to build a brick and steel grade school building for the Board of Education. Cost $22,000.

St. Clairsville, O. — Architect F. F. Farris, Schmulbach building, Wheeling, will revise plans and the Board of Education will take bids later on the erection of a brick fireproof grade and high school building, to cost about $60,000.

Bridgeport, O.—Architect F. F. Farris, Schmulbach building, Wheeling, will revise plans for a brick, fireproof high and grade school building, to be erected for the Board of Education at a cost of $65,000.

Franklin Boro, Pa. — The contract has been awarded to Lincoln Overhoff, Johnstown, Pa., for the super-structure of a brick and steel fireproof grade school building addition, for the Board of Education. Cost $15,000.

Huntington, W. Va.—V. E. Taylor received the contract for the alterations of the Holderby school building, for the Board of Education. Cost $12,000.

The contract to build an addition and alterations to the Douglass school building, for the Board of Education, has been let to V. E. Taylor. The addition will be of brick and stone and cost about $25,000.

Swanton, O. — Architect J. W. Mair, Nasby building, Toledo, O., is ready for bids on the erection of a brick grade school building, for the Board of Education. Cost $10,000.

Youngwood, Pa. — The Youngwood School Board will take bids about July 1 on the erection of a brick grade school building, costing about $21,000.

Clarksburg, W. Va. — Architect J. Howard Hicks, Dennis Block, Washington Court House, O., is taking bids on the erection of a brick township high school building for the Board of Education. Cost $15,000.

Grafton, W. Va. — Architect Frank L. Packard, Hayden building, Columbus, O., has plans started for a high school building to be erected for the Board of Education. The building will be of brick and concrete construction and cost $90,000.

Xenia, O. — Architect H. W. Owens, 726 Detroit street, has plans under way for a brick kindergarden school and dormitory for the Ohio Soldiers and Sailors Orphans Home.

Beechville, O.—Rowe & Giles, Chagrin Falls, O., received the contract for the erection of a brick school building, for the Board of Education. Cost $25,000.

Chillicothe, O. — The Board of Education is contemplating the erection of a brick and concrete grade school building, for which it has not selected an architect.

Conesville, O. — The Board of Education is contemplating the erection of a brick and concrete grade school building, to cost about $25,000.

Dayton, O. — Scheen & Williams, Arcade building, were selected architects to prepare plans for a grade school building, to be erected for the Board of Education. It will be of brick construction and cost $12,000.

Perry Township, O. — Architect J. Howard Hicks, Dennis Block, Washington Court House, O., is ready for bids on the erection of two township high and grade school buildings for the Board of Education. The buildings will be of brick construction and cost $60,000.

Wheeling, W. Va. — The Board of Education, Washington County District, Fulton Station, Wheeling, will erect a brick grade school building on Fifth and Center streets, for which plans are being prepared by Architect George S. Moorey, Schmulbach building. Cost $35,000.

Martins Ferry, O. — The contract has been awarded to T. L. Harris, Wheeling, W. Va., for the erection of a brick, semi-fireproof school annex on Sixth street, for the Board of Education. Cost $30,000.

Portsmouth, O. — W. A. DeVoss, First National Bank building, has been
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631 WABASH BUILDING, - - - PITTSBURGH, PA.
selected to prepare plans for the erection of a brick and stone fireproof grade school building, for the Board of Education. Cost $60,000.

Springdale, O. — Architect Press C. Dowler, Arrott building, Pittsburgh, Pa., has plans about completed for a brick school annex to be erected for the Board of Education. Cost $32,500.

Clymer, Pa. — Architects Reed & Link, Conemaugh, Pa., have plans for a brick school building, for the Clymer School Board, to cost about $10,000.

Sissing, O. — Anderson & Kramer, New Castle, Pa., received the contract to build a brick and stone school building, for the Board of Education. Cost $4,000.

Wheeling, W. Va. — J. W. Beltz & Son, Wheeling, was the low bidder on the rebuilding of the Chaplin Street high school building, for the Board of Education. The work will be of brick fireproof construction and cost $60,000.

New Boston, O. — Architect W. A. Devoss, First National Bank building, Portsmouth, O., has plans about completed for a new brick and stone high school building addition, to be erected for the Board of Education. Cost $23,000.

Canal Dover, O. — Architect Frederick Baird, Bangor building, Cleveland, O., and Isadore Weber, are taking bids on the erection of a brick and reinforced concrete fireproof motion picture theatre and apartment building, to cost about $18,000.

Canal Dover, O. — The Union Lumber Company received the contract for the erection of a brick and reinforced motion picture theatre and apartment building for Isadore Weber. Cost $12,000.

Bellaire, O. — Architect George H. Dieringer, North Huron street, Wheeling, has new plans for a theatre building, to be erected for J. Turnbull. The building will be of brick fireproof construction and cost $20,000.

Manufacturing.

Delaware, O. — The erection of a brick foundry building is contemplated by a company which is now organizing, of which Robert Greer, of the Greer Road Machine Company is manager.

Logan, W. Va. — Engineer F. R. Welser, Hibs building, Washington, D. C., has plans about completed for the erection of a brick and steel fireproof central power station for the Logan Lighting Company. Cost $500,000.

Springfield, O. — The contract has been awarded to the McAlhiney Construction Company, Mitchell building, for the erection of a brick factory building addition for the Springfield Brass Company.

Cincinnati, O. — Architect Joseph G. Gernert, Bohlin building has plans for a brick, reinforced concrete and structural steel fireproof mill and warehouse building on Sixth and Harriet streets, for Early & Daniel Company.

Indiana, O. — The erection of a $100,000 brick and steel fireproof rubber factory building is under contemplation by a company which is being organized, care Harry McCreery, Ninth and Church streets.

Delphos, O. — The Andrews Paving Company, Hamilton, O., received the contract to do the paving on Second street, for the City of Delphos. The work will be of asphaltic concrete and cost $4,000.

Erie, O. — The Liebel-Imney Construction Company received the contract to remodel the city hall for the City of Erie. Cost $3,000.

Summit County, O. — Eckroad, Harbaugh & Payne, Akron, O., received the contract to do the grading and paving work on the Akron-Kent road for the Board of County Commissioners.

Athens County, O. — Abner Juniper Athens, O., was the low bidder on the grading and paving work to be done on McArthur road, for the Board of County Commissioners. Cost $40,305.41.

Champaign County, O. — Tomlinson & Baker Company, Chillicothe, O., were the low bidders on the grading and paving work on the Piqua road, for the Board of County Commissioners. Cost $14,800.38.

Gallipolis, O. — The Ohio Board of Administration, care Thomas E. Davey, president, Columbus, O., is taking new bids on the erection of brick and concrete cottage costing about $6,500.

Wayne County, O. — The McMillan Construction Company, Lima, O., was the low bidder on the grading and paving work on the Wooster-Massillon road for the Board of County Commissioners.

Erie County, O. — The Board of County Commissioners will probably award contract soon for the grading and paving work in Berlin township. The Buckeye Construction Company, Norwalk, O., was the low bidder on the brick and concrete work; the Massillon Bridge & Structural Company, Massillon, O., the low bidder on the bridge superstructure; and Friend J. Hays, Cleveland, O., the low bidder on the sub-structure.

Apollo, O. — The Boro of Apollo is contemplating the erection of a brick garbage crematory to cost about $3,000.

Chillicothe, O. — Architect John Coulter, Marietta Pike, will take bids shortly on the rebuilding of a brick fire station on Second street, for the City of Chillicothe.

Hamilton County, O. — Charles Staab, 1229 Third street, Reading, was the low bidder on the bridge structure and concrete floor to be built for the Board of County Commissioners. Cost $14,226.

Moundsville, W. Va. — The contract was awarded to W. H. Batson for the erection of a Post Office building for the United States Government. The building will have stone facing, fireproof construction.

New Philadelphia, O. — The City of New Philadelphia is taking bids on the grading and paving work to be done on North Seventh street. The paving will be of brick with a concrete base.

Trumbull County, O. — B. F. Hewitt, Jefferson, O., received the contract for the grading and paving work on the Youngstown-Conneaut Road, for the Board of County Commissioners. Cost $23,000.

Bellaire, O. — Criswell & Gates received the contract for the rebuilding of the filtration plant for the City of Bellaire.

Erie Harbor, Pa. — John B. Breyman, Toledo, O., received the contract for the dredging to be done for the United States Government.

Trumbull County, O. — The Rochester Bridge Company, Rochester, N. Y., was the low bidder on the erection of a bridge superstructure and concrete floor for the Board of County Commissioners. Cost $50,000.

Lancaster, O. — The City of Lancaster is taking bids on the erection of a brick and stone armory and memorial building, to cost about $50,000.

Society and Club Buildings.

Ashland, Ky. — Sanders Fearing received the contract to build a brick fireproof club building for the B. P. O. E. Lodge, which cost $20,000.

Canton, O. — Shattuck & Hussey, 9 East La Salle street, Chicago, Ill., will prepare the plans for a brick fireproof Y. M. C. A. building for the Young Men's Christian Association. Cost
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Telephone Court 1453. 421 Wood Street. Pittsburgh.

Martins Ferry, O. — Architect F. F. Furis, Schuabach building, Wheeling, is taking bids on the erection of a brick and steel store, motion picture and lodge building, for the Odd Fellows & Red Men’s Association. Cost $25,000.

Ford City, Pa. — The contract has been awarded to Henry Shaffer Lumber Company, Kittanning, Pa., for building a brick club house for the F. O. E. No. 605. Cost $10,000.

Johnstown, Pa. — Architect H. M. Rodgers, Johnstown Trust building, has been selected to prepare plans for the erection of a brick and reinforced concrete fireproof lodge building for the Knights of Pythias.

Canton, O. — The Young Men’s Christian Association has selected a site on Second street, N. W., for the erection of a brick fireproof building. Cost $20,000.

Charleroi, Pa. — The Charleroi Lumber Company was the low bidder on the erection of a brick and stone club house for the Loyal Order of Moose, No. 105. Cost $30,000.

Dayton, O. — Architects Frentinger & Musselman, Reibold building, have plans nearly completed for a $70,000 brick and steel lodge building, to be erected for the Dayton Aerie Fraternal Order of Eagles, No. 121. The building will contain cafe, billiard room, heating room, cold storage rooms, auditorium, stage, social rooms, lobby, etc.

Indian View, O. — Plans are being prepared and bids will be taken soon on the erection of a frame addition to the tuberculosis hospital for the Rockhill Sanitarium. Cost $9,000.

Bluefield, W. Va. — Architect H. E. Shuffelberger will have plans ready for bids about July 15 on the erection of a $10,000 brick fireproof orphanage building, for the Litz Orphanage.

Brush Lake, O. — The Brush Lake Sanitarium Company is contemplating the erection of a brick sanitarium. The work will consist of a building to contain 80 rooms, power plant, several frame cottages, docks, bathing beaches, etc. The work will cost $150,000.


Braddock, Pa. — Architect C. W. Miligan, Carl building, Wilkinsburg, Pa., has plans for a brick hospital addition for the Braddock General Hospital. Cost $100,000.

Columbus, O. — Dr. F. F. Lawrence, 328 State street, had Architects Stribling & Lum, Denig Ferson building, are taking bids on general and sub-contracts for the erection of a $25,000 brick, concrete and terra cotta hospital building on East Town street.

Portsmouth, O. — Architect W. A. Devoss, First National Bank building, has plans for a brick and concrete semi-fireproof hospital addition, to be built for the City Hospital at a cost of $12,000.

Alliance, O. — Architect William Hirsch, Swateland building, Cleveland, O., is planning a brick and reinforced concrete fireproof hospital building, to be erected for the Alliance City Hospital Association. Cost $50,000.

Titusville, O. — Architect W. S. Brown, 911 Walnut street, Martins Ferry, O., has plans for a frame hotel, to be erected for private parties. Cost $4,500.

Uniontown, Pa. — The South Penn Building Company received the contract for rebuilding the brick hotel building on Main street, for the McClelland House. Cost $15,000.

Mt. Sterling, Ky. — Architects Weber, Werner & Atkins, 414 Walnut street, Cincinnati, O., are writing specifications for a brick and steel fireproof hotel building, to be erected for H. C. McKeever. Cost $100,000.


Put in Bay, O. — Dewson & Holbrook, Outlook building, Columbus, O., were selected architects to prepare plans for the erection of a brick and concrete fish hatchery for the Ohio Fish & Game Commission. Cost $30,000.

Scottdale, Pa. — Architect P. C. Dowler, Arrott building, is making plans for a $10,000 brick and tile fireproof garage on Stoner street, for Albert Keister, Pittsburgh street. Samuel Holmes received the contract for the concrete foundation. Separate contract will probably be awarded by the owner.

The Grand Opera House Company is contemplating remodeling its building on East Eighth street, consisting of rebuilding the dressing room, new scenery and curtain.

Cleveland, O. — William Moore, 1278 West Fourth street, was the low bidder on the erection of a brick garage for the City of Cleveland.

Ligonier, O. — Plans are being prepared by Architect H. H. Giesey, Mellon Bank building, Pittsburgh, for the erection of reinforced concrete railroad shops for the Ligonier Valley Railroad Company. Cost $90,000.

Orrville, O. — C. A. Wyer has private plans under way for a frame stable which he is contemplating erecting on Vine street.

Oak Harbor, O. — Architects S. H. & R. H. Snively, Sandusky, O., have preliminary plans under way for the erection of a brick telephonic exchange for the New Ottawa Telephone Company.

Akron, O. — Architects Fischer & Brooker, Second National Bank building, have plans completed for the erection of a brick fireproof fire station for the Board of Public Service. Cost $65,000.

Buffalo Junction, Pa. — The Pennsylvania Railroad Company, Pittsburgh, is contemplating the erection of a brick freight station, to cost about $10,000.

Cleveland, O. — The contract was awarded to the Hunkin-Conkey Construction Company, Cuyahoga building, for the erection of a brick and steel frame recreation building for the Cleveland Worsted Mills Company. Cost $200,000.

Toledo, O. — Architect Wachter, Bellman & Schreiber, Nicholas building, is completing specifications for a brick and terra cotta public garage, to be erected for Roberts-Toledo Serving Station, at a cost of $50,000.

Cleveland, O. — W. I. Thompson & Son, 6110 Euclid avenue, received the contract for the erection of a brick and reinforced concrete fireproof railroad shops for the Cleveland Railway Company, Leader News building.

Imperial, O. — Engineers Harrepp, Hopkins & Taylor, Second National Bank building, Pittsburgh, have plans under way for the coal development to be done for the Montour & Lake Erie Coal Company, at a cost of about $50,000.

Architects Howard & Merrimans, 8 East Broad street, Columbus, O., will ask bids within a short time on the lighting fixtures and furnishings for the high school building at Pickin, O., for the Board of Education.
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ALLEGHENY COUNTY, PA.

The Great Can Company, a corporation vs. the Buena Vista Land Company, a corporation. Building in the Twenty-sixth ward. Cost $100,000.


NO-LIEN CONTRACTS.

John H. Trimble & Brothers, of Pittsburgh, vs. the Henry W. Oliver Estate. Agreement made and filed to make alterations in Kautmann-Baer building on Sixth avenue and Smithfield street. Cost not given.

Iron City Heating Company vs. Oliver Estate. Agreement made and filed to install direct and indirect gravity steam heating system for bath house in Southside. Contract price $849.


James L. Stuart vs. Oliver Estate. Agreement made and filed to erect bath house at Tenth and Bingham streets, Southside. No contract price stated.

Samuel Pollock vs. Benne Markowitz. Agreement made and filed to build warehouse and stable in Pine Way Alley, Braddock, Pa., for $1,208.

Sub-Contract Notes.

Sheet Metal Work.


Rowland and James D. Clark, Pittsburgh, received contract for mercantile building, Wheeling. Owner, Cocey-Bentz, Wheeling.

West Virginia Plumbing & Heating Company, Charleston, W. Va., received contract for high school addition, Charleston. Owner, Board of Education.

Roofing.

Hahn Brothers, Pittsburgh, Pa., received contract for laundry building, Pittsburgh. Owner, Mohn Brothers, Northside, Pittsburgh.

Lumber and Mill Work.

Ebensburg Lumber Company, Ebensburg, Pa., received contract for two residences, Ebensburg. Owner, Daniel J. Davis, Ebensburg.

The Standard Floor Company, Pittsburgh, received contract for residence, Pittsburgh. Owner, M. C. Rinhart, Pittsburgh.

The Montpelier Lumber Company, Clarksburg, W. Va., received contract for store and apartment building, Clarksburg. Owner, Frank R. Moore, Clarksburg.

Ebensburg Lumber Company, Ebensburg, Pa., received contract for two residences, Ebensburg. Owner, Daniel J. Davis, Ebensburg.

Weigl Lumber Company, Loraín, O., received contract for the town hall, Bay, Ohio. Owner, Village of Bay, Ohio.

The West Side Lumber Company, Elyria, O., received contract for an irrigation building, Elyria. Owner, Board of County Commissioners, Elyria.

The Yellow Pine Lumber Company, Charleston, W. Va., received contract for high school building addition, Charleston, W. Va., Owner, The Board of Education, Charleston.

Plastering.

A. G. McCreevey, Swissvale, Pa., received contract for residence, Swissvale. Owner, J. P. McKearney, Swissvale.

Fred Lingenfelscher, Pittsburgh, received contract for residence alterations and addition, Pittsburgh. Owner, Reuben Miller, Jr., Pittsburgh.

Elmer Shirey, Greensburg, Pa., received the contract for residence, New Alexander, Pa. Owner, C. S. Patterson, New Alexander.

W. T. Taylor, Charleston, W. Va., received contract for high school addition, Charleston. Owner, the Board of Education, Charleston.


T. M. Madden, Pittsburgh, Pa., received contract for laundry building, Pittsburgh. Owner, Mohn Brothers, Northside, Pittsburgh.

Electric Work.

Citizens Gas & Electric Company, Johnstown, Pa., received contract for stores and garage, Johnstown. Owner, Jacob Kress, Johnstown.

Dunleith Electric Company, Jeannette, Pa., received contract for parochial school, Penn Station, Pa. Owner, Roman Catholic Congregation, Penn Station.

The Charleston Electric Supply Company, Charleston, W. Va., received contract for high school addition, Charleston. Owner, the Board of Education, Charleston.

Pittsburgh Electric & Construction Company, Pittsburgh, received contract for private garage, Pittsburgh. Owner, Mrs. W. S. McIntosh, Pittsburgh.

Elevators.


Structural Steel.

Schoenberger & Sons Company, Cincinnati, O., received contract for bank addition, Charleston, W. Va. Owner, Charleston National Bank, Charleston.

Marble and Tile Work.

The Pen-Marble & Tile Company, Pittsburgh, Pa., received contract for high school building, Grove City, Pa. Owner, Board of Education, Grove City.


Concrete Work.

Thiele Construction Company, Johnstown, Pa., received contract for store and garage, Johnstown. Owner, Jacob F. Kress, Johnstown.


Structural Iron and Steel.


Des Moines Steel Company, Pittsburgh, Pa., received contract for school building addition, Arnold, Pa. Owner, the Board of Education, Arnold.

Des Moines Steel Company, Pittsburgh, Pa., received contract for stores and apartment building, Scottsdale, Pa. Owner, J. T. Brennen, Scottsdale.

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HOUSE ADDITION

Architects Samuel Hannaford & Sons, Hubert Block, Cincinnati, are preparing sketches for a $60,000 addition to the Business Men's Club, Ninth and Race streets, Cincinnati. This addition will be 10 stories in height, measuring 96x90 feet and will contain bed rooms, gymnasium, swimming pools, auditorium, offices, bowling alleys, etc.

NEW CAR SHOPS AT LIGONIER.

Plans are now being made by Architect J. H. Giesey, Mellon Bank building, Pittsburgh, for six buildings of reinforced concrete construction, to be built at Ligonier, Pa., for the Ligonier Valley Railroad Company. These buildings will comprise machine shop, roundhouse, boiler rooms, wood-working shop, blacksmith shop, and general repair shop. Plans will be completed about July 30 at which time bids on the general contract will be taken.

KRATZER'S MANY CONTRACTS.

W. N. Kratzer & Company, Smallman street, Pittsburgh, have lately taken the following contracts: Fabricated structural steel for eight buildings, for additions to the Pfeifle Minded Institute, Folk, Pa., approximately 325 tons; Crystal Block & Coal Company, fabricated steel work for three sub-stations; New York State Barge Canal, 356 checkered recess covers, composed of steel angles and checkered plates; fabricated structural steel work for the Neville Township school; United States Government steel work for service bridge, Dan No. 15, Ohio river; fabricated steel work for Sacred Church, Braddock, Pa.; Mercer Plastered Steel Company, fabricated steel, also the doors and windows for two factories, for plant at Mercer, Pa.; garage and stable building, Uniondale Cemetery; West Leechburg Steel Company, addition to furnace mill building; I. O. O. F. Temple, Oil City, approximately 400 tons; Lehigh-Wires-Barre Coal Company, structural steel for mine supports, etc.

GENERAL NEWS.

The ornamental plaster work on the new $100,000 building, for the First Presbyterian Church, Charleston, W. Va., has been awarded to the Hunter Construction Company, Youngstown; the concrete work will be done by Toupet, Ball & Colley, Pittsburgh.

J. Willis Dalzell, House building, has been awarded the contract for the interior wood work in remodeling the third floor of the Malley building, Oliver avenue, Pittsburgh; also the wood work to be used in refitting the Laird show windows on Liberty avenue.

Charles Boehmer & Son, general contractors, have opened new quarters at Rialto and Gang streets, Northside, Pittsburgh.

The Board of Education, Pitscairn, Pa., which is building a $100,000 school building, have let the following work: plumbing and electric work to the Lamison Plumbing Company, Indiana; heating to the Columbus Heating & Ventilating Company, Pittsburgh; Maclagan & Company, Indiana, have the general contract and are placing sub-contracts.

H. L. Kreisler, 3301 Penn avenue, Pittsburgh, building the power plant at New Martinsville, W. Va., for the United States Government, has awarded structural work to the John Eichley, Jr., Company, Pittsburgh; ornamental iron to Sommerville Iron & Bronze Company, Pittsburgh; tile roofing to the Ludovici-Celadon Company, Pittsburgh; mill work to the Pittsburgh Hardware Door Company; heating to C. A. Turner, Parkersburg, W. Va.; plastering to B. S. Abbott, Belleair.

D. J. Kennedy & Company, Pittsburgh, have just received the contract to supply all the sand and gravel to be used in constructing the new Ford assembling plant on Center avenue, Pittsburgh. The company also received the contract to furnish Ceresit waterproofing for the walls and foundation work.

The New Kensington Fiber Plaster Company, New Kensington, Pa., has just established an office and display room at 965 Barnes street, New Kensington, where a complete line of materials handled will be on exhibition. The company carries Bay State Trus-Con, Ceresit waterproofing, Steel-Crete, Boatswick "Truss-Loop" Lath and kindred materials.

THE CONSTRUCTION RECORD

CONCRETE HOUSES.

Pittsburgh Crucible Steel Company Prepares to Erect More at Midland.

The Pittsburgh Crucible Steel Company, built last year at Midland, Pennsylvania, a number of concrete houses for employees, and these have proven so satisfactory that more will be erected this coming season. The houses are of concrete throughout, including the walls, floors, balustrades, chimneys and roof. The six-inch floors are carried over the exterior walls to give a two-inch belt course, setting off the building architecturally. The houses are of two stories and basement consisting of four rooms and bath, with electric light, water, sewer and natural gas connections. The outside dimensions are 19x29 feet with 12-inch foundations and nine-inch walls.

The standard steel forms employed on this work are made of two plates of No. 14 garage steel, 2½ feet wide and 99 inches long, connected and reinforced by riveted angles. Their length is equal to the clear depth of one story, in this case, eight feet. In order to provide for the extra height required of the outer forms to take care of the thickness of the floor system, longitudinal form units are used and tied together by ½-inch steel rods which also act as reinforcing for the floor. When the wall forms are removed the longitudinal plates are left in place for the support and alignment of the next story.

The separate adjacent units are tied together by means of angles fitting into slots cut in the stiffening angles, which serve to align the forms so that it is unnecessary to tie them together by wires or rods which would leave holes in the walls. As soon as the wall forms are filled and the concrete sufficiently hardened they are removed and supported horizontally on posts to serve as forms for the concrete floors. The forms for the window sills, water tables, cornice, coping, parapet, pilasters, and chimneys, consist of plates of five different sizes. A rather wet 1:2:4 mixture is used and the entire story cast continuously, creating sufficient pressure against the steel forms to produce a smooth seamless surface on the concrete.

The new forms now being manufactured consist of specially rolled one-piece plates. This eliminates the rivets that often give trouble on account of rusting out and also mar the concrete surface. The idea throughout has been to have house forms rather than merely wall forms, yet to obtain great leeway in design.

The reinforcement in the exterior walls consists of ½-inch round rods spaced on one-foot centers in both directions. The floors have a double reinforcing consisting of ¾-inch rounds on nine-inch centers with every fourth rod tied into the walls.

Work was done by the company's own labor under the direction of its superintendent of construction, H. H. Rankin. The total cost of the houses was between $1,100 and $1,200 and it is thought that with more experienced workmen this can be materially reduced. The steel forms are patented by Frank D. Lambie, of the American Building Corporation, New York.
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Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, for a two-story and basement grade school building, which will be complete about August 1. The building will have auditorium, recreation room, dining room and kitchen, school rooms, etc. The material to be specified will include reinforced concrete floor and roof slabs, slate roofing, sheet metal work, rolling partitions, ornamental plaster, cut stone, oak trim, marble and tile work, art glass, electric work, steam heating system, etc.

PLANNING CLEVELAND

DENTAL SCHOOL

A four-story brick and reinforced concrete building, 60x112 feet, is to be constructed for the Western Reserve University, Cleveland, from plans which are now being prepared by Architect Franz Warner, Hippodrome building, Cleveland. The estimated cost of the work is placed at $80,000. The structure will have composition roofing, steam heating, electric wiring, etc., etc.

CONTRACT AWARDED FOR AKRON WAREHOUSE

The Summit Wholesale Grocery Company, Akron, O., has just placed the contract with John Crisp & Son, Akron, for building a five-story brick, steel and reinforced concrete building, 70x92 feet, to be used for warehouse purposes. The plumbing, heating, electric wiring and elevator work will be awarded separately by the company which is now taking bids.

COLUMBUS MASONS

TO HAVE BUILDING

Plans are nearing completion by Architect George S. Mooney, Schmidt building, Columbus, O., for a two-story and basement brick and stone fireproof temple, which is to be constructed on North High street, near Smith Place, for York Lodge No. 353 F. & A. M. Material specifications will include reinforced concrete floors, structural steel, slate roofing, ornamental terra cotta, cut stone, concrete and brick construction, metal lath, etc.

SELECT ARCHITECT FOR COLUMBUS CHURCH

The Fifth Avenue United Presbyterian Congregation, Columbus, O., has selected Architect J. B. Martin, East Liverpool, O., to prepare plans for a two-story brick and stone edifice, 94x120 feet, which is to be constructed on Fifth avenue and Wall street. A two-story brick parsonage is also to be constructed. Bids on the work will be taken by the owners about August 1. The building will have auditorium, recreation room, dining room and kitchen, school rooms, etc. The material to be specified will include reinforced concrete floor and roof slabs, slate roofing, sheet metal work, rolling partitions, ornamental plaster, cut stone, oak trim, marble and tile work, art glass, electric work, steam heating system, etc.

ESTIMATES FOR BANK BUILDING

The Peoples National Bank, Ellwood City, Pa., will have a one-story brick, stone and terra cotta bank building erected from plans which are now nearing completion, by Architect T. H. Scott, Machesney building, Pittsburgh. This structure will measure 46x60 feet and will have slate roofing, fireproof reinforced concrete floors, wrought iron and cast iron door entrances, marble and tile work, yellow pine flooring, rubber tiling, low pressure steam heating system, electrical work, etc.

WHEELING SCHOOL

PLANS COMPLETED

The plans for the grade school building, to be built at Fulton, Wheeling, W. Va., which are being prepared by Architect George S. Mooney, Schmidt building, Wheeling, will be completed this week. The building will be erected for the Board of Education of Washington County District at a cost of $35,000, and will be 64x74 feet, two stories and basement, containing eight rooms. It will have composition roofing, structural steel frame, concrete floors and stairways, metal lath, fireproof material, mechanical heating and ventilating system, etc.

AKRON HOSPITAL TO BE AWARDED

Bids are in and the contract for building a $100,000 structure for the Peoples Hospital Association, Akron, O., will be awarded shortly. Plans for the building were made by Architect F. W. Hagloch, Akron, the work to call for structural steel frame, ornamental fire escapes, composition roofing, terrazzo flooring, rubber tile flooring, gypsy block partitions, skylights, reinforced concrete work, yellow pine trim, structural tile, sheet metal work, waterproofing, etc. The heating and plumbing will be separate contracts.
Making Walls Dampproof

One of the most important points to observe in building operations is that if keeping dampness out of all parts of the structure. George Metson, one of the leading members of the Royal Institute of British Architects, states that dampness may be due to any one of six different causes, first, by there being no damp-proof course; second, the damp rising from the ground; third, the damp earth against the walls; fourth, the rain seeping in through porous walls and copings; fifth, driving rains against walls, and, sixth, by burst pipes or leaks in roofs and other causes avoidable by a proper state of repair being maintained. Beyond this last cause it is a costly operation to attempt any remedy after the building is occupied. For instance, the cost of inserting a damp-proof course into a wall constructed without one is about five or six to one, according to the material used, as compared with the cost of putting one in at the time the building is being erected.

The provision of a damp course is in many towns a necessity, as most building laws require one. Some of the materials in common use are a double course of slate in cement, sheet lead, hard brick, glazed tile, asphalt, felt, etc. The chief point to observe is that the damp-proof course covers the whole of the wall and in the case of slates they should be of a strong quality and correctly laid to break joints, properly bedded, above and beneath with cement. Where such damp courses have to be inserted the cost of cutting out the brick may be so high that in many instances the best Stoneware of itself is practically non-absorbent but when glazed is emphatically so. This material can also withstand heavy loads. Fig. 2 shows this type of damp-proof article, and Fig. 3 a part of a damp course formed of this material.

The perforations through the slabs are of great use, forming an excellent method of ventilating the underside, and particularly the corners and spaces under the wooden joints of ground floors so necessary if dry rot is to be avoided. Once more the bricklayer can spoil the efficiency of this damp-proof course in the jointing of the blocks or slabs. The groove or perforation at the joint is apt to become filled with mortar when moisture from the courses of brickwork beneath the glazed slab may rise up through this mortar in these vertical joints into the brickwork above and thus defeat the object of the glazed tile course at every nine inches of its length. This defect is easily avoided by the foreman seeing that no mortar is put to this vertical joint, but that the hole or perforation is left quite clean and free from any joint.
ing material. An attempt to overcome this difficulty on some jobs is often made by filling up the end grooves x and y in Fig. 2 with cement, but the cement as used is rarely of itself dampresisting, so that this method cannot be said to get over the difficulty. Again, the cement joint may crack, when moisture can rise by capillary attraction, so it is much wiser to leave the perforations unfilled.

Asphalt as a damp-proof course is the best of all materials used for that purpose (excluding sheet lead on account of its greater cost). It is easily laid, is elastic to a certain extent and yet able to withstand great pressure. There is also an entire absence of joints and this is a particularly good advantage as the joints in all other damp-proof courses are their weak points. At the same time care should be taken that the asphalt used is not too brittle. Some squeeze under a comparatively small load, while others are but a mixture of coal tar, pitch and sand.

Before any asphalt is laid the brick work should be leveled, also it should be dry and brushed clean, leaving the joints well flanked up with mortar. The course of brick to receive the asphalt damp-proof course should be laid with the frog downwards; in all other positions it is generally laid uppermost to insure it being filled up. The asphalt course should be of an even thickness, 7/8 inch or 3/4 inch, as may be specified and to insure this correct thickness screeds must be fixed to the top edges of the length of the walls when the molten asphalt is poured on and surfaced with wooden floats.

In order to make quite sure of the perfectness of the jointing necessary say, from the leaving off of one day to the commencing on the following one, the last foot or 18 inches of the night work should be left but one-quarter inch thick, allowing the next morning's work to complete the thickness insuring a waterproof joint.

Asphalted felts are serviceable as damp-proof course but care should be taken to see that the one used has a real claim for that purpose. Some simple tests to judge the quality and usefulness of some of the felts are as follows: Fold up the corners in such a manner as to form a tray and if such tray retains water for 21 days, leaving the under side of the felt perfectly dry, the sample may be accepted; pull the sample to pieces to see that each and every fiber is thoroughly coated with asphalt or bitumen. This last is important as in the position in which it is to be used its edges would harbor insects if the felt was not saturated with bitumen to prevent rottind. This liability to rot is one of the great disadvantages of felt as damp-proof courses.

Regarding dampness rising from the ground provide a layer of cement concrete rammed solid, at least six inches thick to be put over the site to seal the ground. The number of voids in soils, as also their power to hold water, varies but it may be said that all contain more or less quantities of "ground air" at the surface and "ground water" below. As the latter rises or falls, according to the heaviness of the rainfall, the ground airs of the soil rise and fall and on occasions are expelled from the ground. The ground air is often drawn from the soil by the greater warmth of the rooms over the site.

It is possible that in basements the floor may be below the standing level of water, when, in addition to preventing the water entering the side walls, it may be desirable to make the basement practically a water-tight tank. In cases where great pressure of water is found it may even be necessary to reinforce the concrete over the site in order to prevent it being lifted by the upward pressure of the water. Figures 8, 6 and 7 show several methods of making basements water-tight.

In these illustrations may be seen methods of scaling the basement side walls against dampness coming in by reason of the damp earth being against them. Some provision is always necessary when the lowest story of any building is below the surface of the ground. Several forms of cavity walls and dry areas are shown in Figures 8 to 13.

Care should be taken to observe that mortar fallen into the cavity between the two thicknesses of brickwork does not defeat the object of the hollow ways by allowing moisture to be drawn across it and up the interior wall by capillary attraction, as shown in Fig. 10.

Dampness of Parapet Walls.

Parapet walls are generally built of facing bricks—at any rate, on one side; and this class of brick is more frequently porous than that used for the general brickwork, so consequently it behoves the architect to find some means for preventing water penetrating downwards through the brickwork forming the parapet. One method is to build the whole of the parapet wall in cement-mortar and even better still, to insert one of the damp-proof courses already mentioned. Even when stone copings replace brick-on-edge and tile creasing the same need for keeping water out obtains, the stone being porous. Where it is possible it is preferable for the slate to go over the gable ends of walls and form verges rather than have parapet walls to them.

Driving rains are a very common cause of dampness in buildings, particularly where the latter are in exposed positions. This condition may be met by building with hollow walls or by tile hanging them. Where the need of prevention of dampness from this cause has been overlooked one should resort to covering the walls with slate or tiles afterwards. Some builders apply hot boiled oil to the brick walls with a large paint or similar brush.
weather should be chosen for this kind of work, preferably a sunny day when the walls will be warmed by the sun.

Hot tar and melted pitch have been employed for the same purpose, in the same manner, and often to improve the appearance of the wall cracked shells or clean sand is thrown on to the tarred surface before it has set hard.

Treatment of Brickwork.

Another method that has been tried is to give the brickwork a coat of soft soap, followed by a coat of blue. There are also fluids specially made for the purpose of filling the pores or voids in the bricks and so stopping their porosity.

Lack of proper maintenance forms the sixth cause of dampness in buildings and is unhappily the most common of all. The ways in which slates or tiles get cracked or broken are countless. Workmen repairing or renewing glass in skylights, cleaning out gutters, telephone linesmen, are all responsible for such breakages.

It is not, however, only by cracked or broken slates that rain water is let into the most vulnerable part of a building—the roof; it is sometimes caused by an absence of proper lap in the slating in the first place. The insufficiency of lap may not be all over the roof, and even if it is it may not be necessary to strip the lot, but rather, as a trial, it would be best to strip a patch about four feet super, around where the water is penetrating and to give an extra lap to the tiles or slates if able to do so, or pieces of zinc can be inserted between the slates, pushed up as far as the nails will allow, but not showing below the edge of the slate.

Slaters may vary the lap, and they frequently do this. Starting with the specified lap at the bottom, they gain the confidence of the clerk of works at the outset, and he is perhaps thereby induced not to pay the strictest attention to the slating work, and is consequently “dillled” by loss of lap higher up the roof. However, the fault is not as bad as it could be, as if there is to be any change in the lap it is more necessary to have a larger one at the bottom than at the top of the roof, as the greatest volume of water collects at the bottom end.

Another cause of water finding its way through a slated roof is that the underdrains course is often too narrow, leaving a space instead of giving a lap, and as this is the lowest end of the roof, where the water collects in larger quantities, and where consequently, the best lap is needed, rain soon finds its way through, but instead of plastered ceilings indicating the leakage, the water soaks into the brickwork, and appears soon after in stains on the paper of the walls of the room.

Cause of Leaky Roofs.

Often roofs become leaky by reason of the timbers of the roof setting, or by the insufficiency of strength to support the roof covering and workmen at the time of repair or the additional weight of snow at other times. In such cases the roof should be strengthened by strutting or hiring it up.

The use of narrow strips of slate held in position by one nail instead of using slate and a half or double plates is a cause of leaks in roof, the small strips frequently being displaced. The careless holing of lead work in hips and valleys may lead to drops of water entering the roof, as also the use of slates holed incorrectly and reversed end for end.

On zinc or lead flats rain often drives or is drawn by capillary attraction over badly constructed rolls. The cloak of the lead covering of a roll should always be on the opposite side to that of the prevailing wind or rains. If flats are liable to be much walked on battens should be placed on them after the manner of snow gratings, and the same precautions should be adopted in slated roofs by providing cat or duck-ladders for access to the various parts of the roofs.

Other Causes of Dampness.

Other causes of dampness are leaky or choked-up gutters. Both defects are heralded by falling or running water, and there is no excuse for gutters remaining in their bad condition long enough to cause real dampness to the walls. In searching lead gutters for defects, it is necessary to wipe the inside surface dry to find the crack, which will generally be noticed by water oozing from it.

Other items in a building requiring periodical inspection to avoid dampness entering are skylights, the timbers and putty of which rot with time unless properly coated with paint at regular intervals; and, lastly, it is necessary to keep all drains in good and clean working order.

AWARDING SUB-CONTRACTS FOR SCHOOL.

Joseph A. Bergman & Son, 301 Wylie avenue, Pittsburgh, who have secured the contract to build a two-story wing to the Dormont School building, Pittsburgh, have awarded the plumbing work to Moss & Blakely, Pittsburgh; heating to the Pittsburgh Heating Company, and electric work to the Dormont Electric Company, Dormont, Pittsburgh.
slots cut in the rails at intervals of one foot, and can be withdrawn without disturbing the side rails. On one of the largest sideway and curb and gutter jobs in the country, the forms were moved ahead three times in 10 hours. You will readily see that the forms worked out to great advantage on a job of this size, and paid for themselves time and again. They were always ahead of the concreting gang.

If the contractor has given some attention to the form costs, it is not a hard proposition to convince him that steel forms are best; but to a contractor of this class the present article is superfluous, for he has already bought steel forms long ago.

The contractor who is contemplating buying steel forms must bear in mind some features that will tend to increase their efficiency and desirability. Particularly is this true regarding the class of forms that this article is devoted to. These features are: Simplicity, rigidity, and economy in handling. The forms must be simple in design; devoid of all loose parts, such as bolts, wedges, keys, toggles, levers, etc., that get lost and cause loss of time in finding substitutes. The connections must be of such a nature that an automaton can assemble them with ease. If the contractor looks for and can find that kind of form, and buys them, he is assured of returns that will compensate him many times over.

KNOWLEDGE OF LIME MORTARS SAVES MISTAKES.

Brickwork endures only according to the proportional strength and quality of the bricks of which it is composed, the mortar that binds them, and the manner of the bonding. It has often been demonstrated that failure in brick wall construction is rarely due to the weakness of the brick, but to that of the mortar. A knowledge of the essential qualities of good lime mortars will be of great assistance to the builder of brick structures. The main function of mortar in brickwork is to unite the brick into one substantial mass; and in so doing, all the crevices between the brick will necessarily be filled up.

Secondarily, the mortar acts as a cushion to take up all the inequalities of the brick-surface. The strength of the mortar is therefore the prime consideration; the filling of the crevices to keep out air and water is a matter of good workmanship; the thickness of the joint determines the effectiveness of the cushioning and pressure-distribution.

All the limes come, of course, from limestone; but, according to the purity of the limestone, we obtain by calcination—common lime, hydraulic lime and "natural" hydraulic cement. When the limestone is nearly pure carbonate of lime, common lime is the product. If the limestone contains from 10 to 20 per cent of clay, hydraulic lime results from calcining. With from 20 to 23 per cent of clay, the limestone yields a "natural" hydraulic cement.

Common lime, or "air-lime" requires air-exposure in order that it may set or harden. It will not harden under water. Hydraulic lime and cement will both harden under water.

Common lime is the result of the burning of a pure or nearly pure limestone, in which process the carbon dioxide is driven off, and calcium oxide remains. When water is applied to fresh lime, it is absorbed with avidity. The absorption is attended by great heat, steaming, and the breaking-down of the lime mass. If the slaking—as the work of absorption is called—is carried on perfectly, all the lime is reduced to a fine powder, with a volume two or three times that of the original lime, the increase of bulk being proportional to the limestone's purity.

The lime, being slaked, is ready to be made into mortar. A lime paste is formed; and to this, sand is added. The sand prevents the shrinkage of the lime in the air on the calcium oxide in the veneing the shrinking of clay brick. The sand particles assist (by their coarseness) the action of the carbon dioxide in the air on the calcium oxide in the mortar. A very important advantage of the sand mixture is that it reduces the mortar cost.

Very poor limestones produce flat limes, almost white and slaking to an insoluble four. Where silica, alumina, and other impurities are present, lean limes result; and to this, sand is added. These are yellowish or grayish in color. They slake slowly.

If the limestone is nearly a pure calcium carbonate, the lime is known as a high-calcium lime. If the limestone contains over 10 per cent of magnesia, the lime is known as magnesian or dolomitic lime. The high-calcium limes are called hot or quick limes; and the magnesian limes are known as cool or slow. These terms refer to their action in contact with water. In slaking the hot limes, it is better that all the water should be added at once; with the cool limes, the water should be added only gradually. In the latter case, too rapid addition of water would cool the lime mass and stop the slaking, as much less heat is evolved in the breaking-down of magnesian limes. They set more slowly, but finally gain more strength, than the high-calcium limes.

The proper slaking of lime requires knowledge and close attention. Many mortars are low in bonding efficiency, owing to want of care in their making. Builders are regarding with increased favor the hydrated limes that are available. These are slaked to a dry powder in the factory, are perfectly slaked to maximum volume, and are ready for immediate use.

A good lime should be free from impurities, such as cinders, etc., and should slake readily in water to a smooth paste and without any residuum.

The quality of the sand used in mortar-making has a marked effect on the strength of the product. In the specifications, the essentials demanded are expressed in the sentence: "The sand shall be sharp, clean and coarse." Ocean and lake sands are to be preferred to glacial sands, as a rule, the latter containing, frequently, large quantities of soft and easily decomposed constituents. Sharpness is considered desirable, because the angular grains of sand invite more ready adhesion to the lime or cement, and offer an arching resistance to compression. Sharp sands, however, present more voids in the mass; and efficiency of mix demands a greater proportion of lime or cement. As few sands have grains of marked sharpness, and the minimum degree of sharpness is not specified, the fulfillment of the specification in this regard is for the most part disregarded. The purchaser gives most attention to the sand's cleanness and coarseness. Sand, if clean, will not show tendency to form lumps by compression in the hand while damp. If the sand does not dirty the hands to any marked degree during its handling, it may be considered clean. Foreign matter, such as wood chips, leaves, paper, etc., cannot be permitted in mortar sands. The presence of clay particles in the sand may be said to be injurious to rich mortars and cements, and beneficial to lean mortars, when in proper proportion, of course, to the degree of leanness.

Coarseness of sand insure easy mixing and the use of the least quantity of cementing material. As a general statement, the coarser sands produce the strongest mortars. The quality of mortar, the thoroughness of the mix, and the percentage of voids would all have to be taken into account in any special consideration of mortar strengths.

TAKING BIDS ON MATERIAL.

Croswell & Sherman, 1921 East Fifty-seventh street, Cleveland, O., who have the contract to build the $1,000,000 art museum for the Cleveland Museum of Art will take bids on the mill work, glass_interior marble, painting, decorating, etc. The ornamental iron work has been placed with the W. S. Tyler Company, Cleveland; skylights, Rietier & Thesmacher Company, Cleveland.
M. O'Herron & Son, First and McKean streets, received the contract to build a retaining wall on Prospect street and Troy Hill road, Northside, for the City of Pittsburgh. The work will cost $12,000.

The steel work for the new building of the Pittsburgh Gazette Times has been awarded to the American Bridge Company. Other contracts will be awarded in a few days.

Booth & Flinn, Forbes street, have been awarded the contract to wreck the building on the site of the proposed court house and city hall building on Ross, Diamond and Fourth avenue, the firm’s bid being $28,250.

Bids will soon be asked by the City of Pittsburgh on building an addition to the insane asylum at Marshalltown. The work will call for two additional wings, each 80x112 feet, brick construction. Plans were made by Architect John P. Brennan, City Hall building, Northside.

Bids close on the 6th inst. for building an addition 48x74 feet, to the church building of the U. P. Congregation, Ben Avon, plans for which were made by Architect R. M. Trimble, Ferguson building.

New plans are being made by Architect Adam McNaughton, 1411 Sheffield street, Northside, for a 2½-story brick and cement-plaster residence, to be built in Dormont for H. C. Workmaster, 520 Second avenue.

Architect J. J. Jones, Westinghouse building, will take bids shortly on the erection of a brick and stucco residence on Anderson street, for Howard G. Owens, 5650 Douglas avenue.

James L. Stuart, Oliver building, was the low bidder on the structural steel and the erection for a hotel building to be built on Fifth avenue, Cherry alley and Oliver alley, for the William Penn Hotel Company.

Architects George S. Orth & Brother, Farmers Bank building, have been selected to prepare plans for a brick fireproof high school building, to be erected in Homewood for the Board of Education. Cost $250,000.

Cuthbert Brothers Company, Bessemer building, received the contract for interior alterations to the brick high school building, on South Fifteenth and Sarah streets, for the Board of Education. Cost $7,500.

Architects Alden & Harlow, Farmers Bank building, have been selected to prepare plans for a brick fireproof high school building, to be erected on South Hills, for the Board of Education. Cost $2,530,000.

F. L. Fisher, 2004 Watson Way, received the contract for the interior alterations to the Humboldt school building on Twentieth and Sarah streets, for the Board of Education. Cost $17,800.

The contract has been awarded to J. H. Nicklas, 111 West McIntyre avenue, Northside, for the erection of a brick and concrete warehouse on Hopkins street, for the Conroy-Prugh Company, 1430 Western avenue.

W. L. Stewart, East End Trust building, has private plans for four brick residences to be erected on Hobart street, at a cost of $8,000 each.

The contract has been awarded to Ross K. Seiton, 510 East Diamond avenue, Northside, for the erection of three brick veneer and shingle residences in Wilkinsburg, for H. C. Walker, 1410 Pennsylvania avenue, Northside, Pittsburgh.

Bids will soon be taken for the completion of a brick orphanage and home on Perryville avenue, for J. M. Gisky Orphanage and Home, Perryville avenue. Cost $7,000.

A. F. Gandy, 649 Frankstown avenue, received the contract to build a motion picture theatre addition and alterations on Penn avenue, for Carl Vishack, Penn and Highland avenues. Cost $12,000.

Plans are under way by Architects A. C. Storer, 1311 Duquesne Avenue, Carrick, for alterations to be made in the school building in Mt. Oliver, for the Board of Education. Cost $3,000.

W. T. Powell, 508 Fourth avenue, received the contract to make the interior alterations to the elementary school building, on the Northside, for the Board of Education. Cost $8,762.

The work will call for two additional stories.

The contract has been awarded to the Cuthbert Brothers Company for the Board of Education, and as soon as these are approved by the State Board officials bids on the work will be requested. The building will cost $175,000.

L. H. Feltabom, 1001 Heberton avenue, will soon start work on building a block of 12 two-story brick residences on Penn and Dennison avenues, for Mrs. Anna Miller, 123 South Fairmont avenue.

Architects Simpson & Isles, Wabash building, will complete plans next week for a 2½-story double duplex residence, to be built on Avalon street, Schenley Heights, for James Dunn, Thirteenth and Pike streets.

Bids are in and the contract will likely be awarded on the 4th inst. for remodeling and enlarging the residence of Charles M. McNally, Brightton and School streets, Ben Avon. Architect John England, Jr., 7401 Perrysville avenue, Northside, prepared the plans. The work will cost $12,000.

The contract for building the freight station and office building for the Pennsylvania Railroad Company, Federal and Church streets, Northside, will be awarded to J. E. & A. L. Pennock, Land Title building, Philadelphia.

Architects Simpson & Isles, Wabash building, will complete plans for a 2½-story double duplex residence, to be built at Ardmore Farms for C. C. Fisher. Cost $7,000.

Plans will be taken for the erection of a double residence in Dormont, for Charles Huepel, 17 Climax street. Architect Charles Bickel, May building, prepared the plans.

Architect W. H. Glicker, 1Le Monitor avenue, Ben Avon, will prepare new plans for the double residence which is to be built on Dickson avenue, Ben
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Plans have been completed and bids will be taken by Architect W. G. Watkins, Westinghouse building, and the Model Gas Engine Company, Farmers Bank building, on the erection of a two-story brick and tile residence to be built on Lexington avenue.

J. Willis Dalzell, House building, received the contract to furnish all the Ebsary gypsum block required in constructing the new addition to the Carnegie, Pa., high school building.

Charles Boeckner & Son, Rialto street, Northside, have been awarded the contract to build a 2½-story brick and tile residence on Simon street, Northside, for Henry C. Herchenroether, Northside Market House.

It is expected that plans will be completed next week by Architect Carlton Strong, Union Bank building, for the elementary school building to be built on Bedford avenue and Erie street, for Board of Education. The building will be 150x270 feet, two stories high. Bids will be asked for in a short time.

Fred Rothenbach, Lowrie Lane, Northside, has work well under way on remodeling a store and apartment building at 863 West Ohio street, for the Hayworth Estate. The store will be used by Joseph Pendolf.

Architect C. L. Whitaker, Dravosburg, has plans for a $4,000 store and residence, to be built at Hays Station, for W. E. Thompson, Hays Station.

Bids will close on the 6th inst. for building a one-story brick club house on South Thirteenth street, for the Excelsior Club, 94 South Thirteenth street, plans for which were made by Architect E. M. Lang, 804 Penn avenue.

Architect A. L. Miller, 924 Chislett street, is asking bids on the construction of a 2½-story brick residence on Fortieth street, near Butler, for F. W. Kelly, 4022 Butler street.

The Schenley Heights Methodist Episcopal Congregation has purchased a site on Iowa and Bryn Mawr streets, on which it expects to erect a brick or stone church building, to cost $20,000. An architect will be selected about July 20. James E. Mercer, 25 Magee street, and William Dean, 2174 Center avenue, are interested.

Architects Clark & Frampton, Ballowell building, have completed plans for a two-story brick and tile residence, to be built on Squirrel Hill, for private parties.

J. Lauer & Sons, 810 Portland street, are asking sub-bids on the erection of a $25,000 residence, to be built on Beverly place, for William H. Seif, 324 South Atlantic avenue.

Apartments and Dwellings.

Cincinnati, O. — Architect Oscar Schwartz, Union Central building, has plans for a 2½-story pressed brick apartment building, to be constructed on Cleveland avenue, Avondale, for private parties.

Sketches are being made by Architect Max Kan, 224 Stratford avenue, for 12 2½-story brick apartments, to be built on Walnut Hills, Hyde park and other suburbs, for the National Housing Company, Union Trust building.

Cleveland, O. — Bids are being asked by Architect A. F. Janowitz, Permanent building, for the erection of a three story brick apartment at 1896 E. Seventieth street, for private parties. Estimated cost $25,000.

S. Van Winkle, 248 W. Eighth street, has the contract to build a two-story frame residence on West One Hundred and Fifth street, for B. F. Thunhorst, 3811 Archwood avenue.

Sewickley, Pa. — D. H. Morrison received the contract to build a two-story brick residence for John Houston, 324 Logan street. The work will cost $10,000.

Brightwood, Pa. — Miss Sarah E. Weir, 5836 Beacon street, Pittsburgh, is asking bids on the erection of a hollow tile and stucco bungalow and garage, to cost about $10,000. Plans for the work were made by Architects Boyd & Stewart, Century building, Pittsburgh.

North East, Pa. — Architect Paul W. Irwin, Renshaw building, Pittsburgh, will finish plans next week for the two-story stone and cement plaster residence to be constructed for C. H. Jacobs, at a cost of $8,000.

East Pittsburgh, Pa. — A brick and cement plaster residence to cost $4,500 is to be built for Mrs. Emma Vandermaat, Crafton, Pa., plans for which are being made by Architect Paul W. Irwin, Renshaw building, Pittsburgh.

Montgomery, O. — Architect Anton Rieg, 2554 Vine street, Cincinnati, is preparing sketches for a 2½-story frame residence, to be built for Henry Birkmeyer, near Montgomery Pike. Cost $7,000.

Warren, Pa. — The Warren Construction Company, Jamestown, N. Y., received the contract to build a brick residence to cost $8,000 for K. M. Andrews.

Freepoint, Pa. — Bids are being asked by J. H. Crile on the erection of a two-story brick residence, to cost about $3,000. Private plans.
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Pt. Mitchell, Ky. — Plans are being made by Architect C. L. Hildreth, West Seventeenth street, for a 2½-story brick residence, to be built for Mr. Reichler. Cost $8,000.

Covington, Ky. — A 2½-story brick flat is to be constructed on Scott street, for Jerry Illon, Holmes place, plans for which are in the hands of Architect C. L. Hildreth, Covington.

Architect Howard McClure, Gerke building, Cincinnati, is working on plans for two 2½-story brick residences to be built on Oakland avenue, for George Strenken, 131 Cutnell street.

Toledo, O. — The contract for building a 2½-story frame and brick residence on River road, for Christopher Meyers, Wade hotel, has been awarded to William Bossert, 1117 Delancey street.

Lewisburg, O. — A 1½-story brick bungalow is to be built by H. B. Smith, who is having plans made by Architect Philip Fiedler, 10 E. McMillan street, Cincinnati.

Tallmadge, O. — An $11,000 stucco on hollow tile residence is to be built for private parties from plans, which are being prepared by Architect W. W. Sablin, New England building.

Lancaster, O. — Architects Howell & Thomas, 131 E. Broad street, Columbus, have been selected to prepare plans for a two-story brick bungalow, for F. M. Davis.

Wheeling, W. Va. — W. A. Wilson, 1209 Main street, has private plans for three brick residences to be constructed on Coal street. Each will cost about $8,000.

Dubois, Pa. — Architect W. H. Overdorfi, is asking bids on the erection of a two-story brick residence, to be built on Spring street, for J. F. Rowan.

Lee Goldstein, North Main street, contemplates the erection of a 2½-story brick and tile residence for which no architect has been selected.

Architects Harrington & Howard will finish plans soon, calling for a 2½-story brick and tile bungalow, to be built on Scribner avenue, for Henry Moot. Cost $4,000.

Akron, O. — D. H. Boyer, 324 St. Clair street, received the contract for the erection of a brick and hollow tile bungalow on Arch street, for George J. Renner and R. C. Deibel, 247 North Forge street.

Barberton, O. — Architects Henry & Murphy, Doyle Block, have preliminary plans under way for a double residence to be built for A. A. Moore at a cost of $7,000.

Buckhannon, W. Va. — Theodore Sansbury, Parkersburg, W. Va., has been selected architect to prepare plans for a brick veneer residence to be built for Dr. C. S. Starhers, Main street. Cost $5,000.

Beaver Falls, Pa. — Marmist Brothers, New Brighton, Pa., were awarded the contract to build a brick residence for Louis R. Ingram, to cost about $8,000.

Cleveland, O. — Architect A. F. Janowitz, Per‹man building, has plans completed for a brick apartment building to be erected for Sam Cohen, Woodland avenue, at a cost of $8,000.

Findlay, O. — Architects Mills, Rhines, Bellman & Nordhoff, Ohio building, Toledo, O., are taking bids on the erection of a frame, stucco and brick residence on Lima street, for W. E. Stephenson, 320 East Lima street. Cost $10,000.

Freeport, Pa. — H. Lockart is taking bids on the erection of a brick residence to cost about $5,000.

J. E. Myers received the contract to build a $5,000 brick residence for A. C. Bell.

Lancaster, O. — Howell & Thomas, 131 E. Broad street, Columbus, were selected architects to prepare plans for a brick residence to be built for C. F. Kirk, Farmers Citizens Bank building. Cost $8,000. The same architects were selected to prepare plans for a $5,000 brick residence, to be erected on Fifth avenue, for Dr. Walter Scott.

Worthington, O. — Architect M. H. Blake, 335 West Eighth street, Columbus, have plans about completed for a bungalow, stucco on metal lath construction, to be erected for Charles B. Wolfe, East Monnt street. Cost $6,000.

Lancaster, O. — Separate and general bids are being taken for the erection of a two-story brick residence, to cost $10,000, for Joseph Maitos, West Main street. Plans were made by Architect W. T. Mills, McMillan building, Columbus.

Columbus, O. — Myron A. Smith, 631 Oak street, will ask for separate bids on the erection of a two-story brick and cut stone residence to cost $15,000. The plans were made by Architect Forrest B. Rush, Brandon building.

Henry T. Kaiser, 901 West State street, received the contract to build a two-story brick and tile residence on Third and Michigan avenues, for Mary A. Weiselden. Cost $7,000.


Bridgeville, Pa. — The residence of Joseph Saperstein, Washington avenue, is to be remodeled from plans which are being made by Architect A. A. Rehman, Bridgeville. Bids will be taken next week.

Dubois, Pa. — E. W. Webster, East Long avenue, will award separate contracts for building a two-story apartment building, to cost $20,000. Plans were made by Architects Harrington & Howard, Dubois.

Hills Station, Pa. — Victor Louis, Bridgeville, was the low bidder for constructing a frame residence for John Billotte. Architect A. A. Rehman prepared the plans.

Natra, Pa. — John A. Walter, Upper street, has private plans for a three-story brick apartment building, 48x50 feet, on which bids will be taken about July 15.

Toledo, O. — Architects Langdon & Hobly, Nichols building, has preliminary plans for a 2½-story brick residence, to be built on Parkwood avenue, for Dr. Herbert H. Smoak, Parkwood avenue. The work will cost $8,000.

Akron, O. — W. R. Reiter, 795 Princess avenue, has the contract to build a frame residence on Grand avenue, for W. C. Johnson, Hollinger avenue.

Perry Swineheart, 18 League street, has awarded to W. D. Grathouse, 1251 Andrus street, the contract to build a frame residence at 571 Dayton street.

Work has been started by W. M. Clark, 629 Edgewood avenue, on the erection of a frame residence for F. E. Chalker, West Exchange street.


St. Marys, O. — A parsonage is to be built for the First Baptist Congregation, this to be of brick and stucco construction. No architect has been selected.

Deweyville, Pa. — J. Cook & Son, received the contract to build a 2½-story frame residence for Harry Cook, Sharon. Cost $3,500.

Cincinnati, O. — Architect J. Clay Simmons, 2643 Colerain avenue, has plans for a 1½-story brick double bungalow, to be built on McMillan street, for Mrs. M. L. Hamm, Highland and McMillan streets.

Cleveland, O. — Bids are now being asked by Architect Theodore Conner, 988 Park building, for building a four-story brick, hollow tile and reinforced concrete apartment building, on Fairchild avenue, for Mrs. McKeown. The
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Bids will be taken about July 9, for constructing a two-story brick tenement on Parkwood avenue, by Morris & Cornsweet, Society for Savings building. Plans were made by Architect S. H. Weis, 1632 Schofield building.

Plans are nearing completion by Architect R. H. Hinsdale, 371 Osborn building, for a two-story stone residence and garage, to be built on North Woodland Road, for Rush J. Wall, 1081 West Eleventh street. Bids will be taken next week.

Dayton, O. — The John Rouzer Company, Wyandotte street, received the work of building a $15,000 residence on Stoddard avenue, for Theodore Neumann, 1125 East Third street.

Butler, Pa. — A. N. Lloyd is asking bids on the construction of a one-story brick bungalow on East Pearl street. Plans were made by Architect William Foster, Butler.

Gates, W. Va. — Branscome & Green, Gary, W. Va. secured the contract to build 25 frame residences for the Crystal Block Mining Company.


W. Z. Murphey, Butler, will take bids until the 10th inst. for constructing a 2½-story brick residence on Brady street, to cost $12,000. Plans were made by Architect H. E. McMannus, 135 North Main street.

The same architect prepared the plans for a two-story brick residence, to be built on New Castle street, for J. E. Cradele, who will take bids until the 6th inst.

Ingomar, Pa. — E. Wilson is asking bids on the erection of a two-story brick vernor residence, to cost about $4,000.

Clarksburg, W. Va. — Architects Harrington & Howard, Deposit National Bank building, DuBois, Pa. is working on sketches for a Swiss chalet type of residence, to be built near Clarksburg, for private parties.

St. Marys, Pa. — Brein & Smith, St. Marys, received the contract to build a 2½-story brick residence on Center street, for Frank Robacker, 549 Center street.

Wexford, Pa. — Two residences, brick vernor construction, are to be built from private plans for E. Meuberg, who is asking bids on the work.

Martinsburg, W. Va. — Spinkie Brothers, Commerce street, contemplates the building of a one-story brick printing establishment, 50x150 feet, to cost $12,000. No architect has been selected.

Toledo, O. — The Shaw-Thorne Company, having the contract to build a three-story brick steel building, 126x150 feet, for the Toledo Fish Company, will soon ask for sub-bids on the work.

Urbachville, O. — J. H. Luckey has been awarded the contract to build a three-story brick building 55x65 feet, to contain offices, store and apartments for B. D. Nicola, 1011 Williamson building, Cleveland. Cost $30,000.

DuBois, Pa. — Architects Harrington & Howard, Deposit Bank building, will take bids at once on interior alterations to a one-story building for the Deposit National Bank, the work to cost about $20,000.

Newark, O. — Work will be started about August 1 on building a store and apartment building on Old Canal street, for J. C. Motz, care Newark Trust Company. The work will likely be done by W. B. Patton, 29 Pearl street, Newark. Plans for the building are being made by Architect Charles Moore, 79 Riley street.

Columbus, O. — Good & Winters, 407 Worthington street, secured the contract to construct a one-story brick store building, 30x90 feet, for Henry Mason, Dawson & Holbrook, prepared the plans.

Newark, O. — The contract for constructing an office and bottling plant for the Consumers Brewing Company, awarded to E. Eliot, Hayden-Clinton building, Columbus. The office building will measure 30x39 feet and the bottling plant 35x100 feet.

Akron, O. — Architect Fred W. Elliott, Chamber of Commerce building, Columbus, is taking bids on the erection of a brick, steel and concrete store, picture theatre and hotel building, for F. S. Ozer & Lowrey, 276 West Thirtieth street, Los Angeles, Cal.

Bellaire, O. — Architect John C. Wood has plans under way for remodeling a brick store and apartment for J. F. Anderson.

Logan, O. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, O. are preparing sketches for a brick fireproof store and office building, to be erected for A. L. Brown, at a cost of $26,000.

Portsmouth, O. — Plans are under way by Architect W. A. De-Voss, First National Bank building, for a brick store and apartment building, to be erected for O. D. Shinn. Cost $12,000.

Springfield, O. — Plans are being prepared by Architect Roy F. Gable, Bushnell building, for remodeling a brick store building, for E. W. Carter, 538 West High street.

Martinsburg, W. Va. — Plans will be started soon by Architects Holahoe & Lafferty, Clarksburg, for a brick and stone addition and alterations to the banking room, for the Citizens National Bank. Cost about $25,000.

South Charleston, O. — Architect Robert Gotwald, Gotwald building, Columbus, for constructing a two-story brick and stone bank building, 44x100 feet, for the Citizens National Bank. The work will run about $35,000.

Trouton, O. — Bids will be asked about July 10 by Architect Frank L. Packard, Hayden building, Columbus, for constructing a two-story brick and stone bank building, 44x100 feet, for the Citizens National Bank. Work will run about $35,000.

Cleveland, O. — No date has been set for closing bids on the erection of a one-story brick, steel and reinforced concrete warehouse for the Schuster Company, 2214 E. Fourth street. Bids are being taken by Architect Gustave Bohm, 1627 Williamson building.

August Haase, 9028 St. Clair avenue, received the contract to build a two-story brick, steel and reinforced concrete cafe building on East Sixth street, for the Gund Brewing Company.

Charleston, W. Va. — William A. Abbit, Charleston, will construct a store and office building on Kanawha street, for Mrs. A. Boirasky on a percentage basis. Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, will take sub-bids on all the work.

Akron, O. — John Crisp & Son, Amadale street, were awarded the work of constructing a five-story brick, steel and reinforced concrete warehouse for the Summit Wholesale Grocery Company. The work will cost $45,000.

Duquesne, Pa. — Architect C. J. Whitaker, Dravsburg, is asking bids on the general contract for an addition and alterations to the store and apartment building of Samuel Wiess. No date has been set for closing bids.

Xenia, O. — The Xenia National Bank is having sketches made by Architects Dexter & McClure, Canby building, Dayton, for remodeling its building. The work will consist of tile floors, new bank fixtures, vault, etc.

Ellwood City, Pa. — Bids are to be taken about July 10 by Architect T. H. Scott, Macheney building, Pittsburgh, for constructing a one-story and basement bank building, for the Peoples National Bank. This will measure 46x60 feet and will be built of brick, stone and terra cotta.

Wheeling, W. Va. — H. W. Fair & Son, Wheeling, were awarded the contract to build a six-story brick and terra
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Apartments will be included in a new erection of a three-story brick and terra cotta department store on Market street, for Stone & Thomas. J. R. Butts & Sons Company, Wheeling, have secured the mason work.

Celina, O. — The Citizens Bank is to be remodeled from plans which have been made by Architect W. C. Pollock, 402 Garfield building, Cleveland. No date has been set for closing bids.

Oil City, Pa. — A. T. Sherwood, Oil City, secured the contract to build a three-story storage building for the Carnegie Transfer & Storage Company. The building was designed by the E. E. Bailey Company, and will be 60x100 feet.

Cleveland, O. — The contract for building a two-story brick store and apartment building, for Henry J. Kaufman, Payne avenue and East Nineteenth street, has been placed with Atenson Brothers, 4811 Carnegie avenue. The building will contain five suites and two stores.

Bids close July 12 for constructing a two-story brick store and apartment building for the Junction Realty Company, 14066 St. Clair avenue. Plans for the structure were made by Architect R. A. Conkey, 9610 Pierpont avenue.

Andrews Brothers, Engineers' building, were awarded the contract to build a warehouse at the foot of East Ninth street, for the United States Government.

Specifications are being made by Architect Paul Matzinger, Lenox building, for a two-story brick store building, to be constructed on Woodward avenue, for William Kohs, 113 the Arcade. Cost $80,000.

Akrón, O. — The Carmichael Construction Company, Hamilton building, received the contract to build a three-story brick fireproof store building for M. O'Neill, 370 West Market street. Cost $85,000.

Cleveland, O. — Architects Fulton & Taylor, Permanent building, are completing plans for a five-story brick and reinforced concrete store and light manufacturing building, 82x50 feet, to be built on Woodward avenue and East Thirty-eighth street, for M. D. Shanman, 216 Woodland avenue.

Bids close on the 15th inst for constructing a four-story brick, concrete and hollow tile store and apartment on East One Hundred and Fifth street, for Harvey Brothers, the Arcade. Plans for the building were made by Architect Theodore Connor, Park building.

New Kensington, Pa. — G. M. Evans will award separate contracts on the erection of a three-story brick and terra cotta store and apartment building, on Fifth avenue. Cost $30,000.

Alliance, O. — Three stores and six apartments will be included in a new building which will be erected on Main and Park streets, for the Williams Estate, care Architect Charles J. Inceho, Branson building, Columbus, who will prepare the plans.

Religious.

Charleston, W. Va. — Architects Weber, Werner and Adkins, Walnut street, Cincinnati, O., are preparing sketches for a stone church, to be built for the St. Paul's Evangelical Lutheran Congregation at a cost of $45,000.

Fairport, O. — Architect Franz Werner, Hippodrome building, Cleveland, is preparing plans for a brick church and Sunday school room, to be erected for the Finnist Lutheran Congregation. Cost $20,000.

New Kensington, Pa. — Architect Thomas G. Easton has plans for a brick and stone church, to be built for the Baptist Congregation at a cost of $30,000.

Pittsburgh, Pa. — Plans are being prepared by the same architect for a brick and stone church building to be built for the Lutheran Congregation at a cost of $25,000.

Toledo, O. — A. Bentley & Sons Company, Toledo, were awarded the contract to build a two-story brick church and Sunday school room for the Lutheran Congregation. Cost $20,000.

McKeever, Pa. — Architect H. H. Lindeman, Keystone building, McKeesport, is taking bids on a two-story addition 23x42 feet, on the building of the St. Nicholas Greek Roman Catholic Congregation. It will be of brick and steel construction.

St. Marys, O. — William Boardbeck, 722 Spring street, St. Marys, received the contract to build a 1/2-story brick and stone building, 55x105 feet, for the St. Paul's Reformed Church, the work to cost $30,000.

Cincinnati, O. — Specifications are now being written covering the construction of an addition and remodeling the building on Florence avenue, for the Little Sisters of the Poor. Architect Louis G. Dittoe, Provident Bank building, prepared the plans.

New Kensington, Pa. — Architect Raymond Frampton, New Kensington, is working on plans for the one-story brick and stone church building, for the Church of Christ, which will be built at a cost of $10,000.

Greenville, O. — Architects W. S. Coffman & Sios, Richmond, Ind., have been selected to prepare plans for a one-story brick church building, for the St. Paul's Reformed Congregation. No de-
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Pittsburgh, Pa.
is now receiving bids on the general contract for building a two-story school building, on East Ninety-third street, to cost $150,000. The building will contain 22 class rooms, kindergarten, etc.

Bratenahl, O. — Bids will be taken until the 8th inst. for building a one-story brick addition to the school building on Brighton road, by the Board of Education, C. A. Neff, Clerk, 1029 Garfield building, Cleveland.

Louisville, Ky. — Plans have been completed by Architects Joseph & Joseph, for a brick school building, to contain eight rooms, for the Board of Education. The work will cost $65,000.

Ridgeway, O. — A. R. Filsom, Bellefontaine, received the contract to build a one-story brick fireproof school building, 68x89 feet, for the Board of Education.

Norwood, O. — James Griffith & Sons Company, Reading road, Cincinnati, were the low bidders for remodeling the Courtland Avenue school building, for the Board of Education.

Lorain, O. — The Board of Education is asking bids on separate and general contracts for building a two-story brick and steel fireproof grade school and auditorium, plans for which were made by Architect H. O. Warner, Lorain. Bids close July 20.

Oxford, O. — Sims & Benzinger, Hamilton, secured the contract to build a one-story frame building, 67x121 feet, for the Board of Trustees of Miami University. T. C. Lloyd, Oxford, and Cullen & Vaughn, Hamilton, were the two low bidders for building an addition to the normal school.

Toledo, O. — The Gettins-Kopake Company, Messenger building, Toledo, are asking for sub-bids on the erection of a two-story brick and stone high school building, to be constructed in West Toledo, for the Board of Education.

Paulding, O. — Willing Brothers, Bellevue, O., will award sub-contracts on various work in constructing a library building, 40x62 feet, for the Carnegie Library Association.

Boswell, Pa. — Lawrence & Critchfield, Somerset, Pa., received the contract to build a brick grade school addition and alterations to the high school building for the Board of Education. New bids will be asked soon.

Erie, Pa. — The E. C. Gerhard Building Company, Victoria building, St. Louis, Mo., received the contract for the erection of a brick fireproof school building for the Board of Education. Cost $159,000.

Middleport, Ky. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, O., are preparing plans for a brick and terra cotta trim grade school building, to be erected for the Board of Education, at a cost of $25,000.

Ripley, O. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, are preparing plans for a brick and stone fireproof grade school building, to be erected for the Board of Education. Cost $20,000.

New Castle, Pa. — Smith & Bauman, New Castle, were awarded the contract to remodel the Lincoln school building on Long avenue, for the Board of Education. The building, which will contain eight rooms, was designed by Architects C. C. & A. L. Thayer.

Portage, Pa. — Architect L. O. Brosie, Highland building, Pittsburgh, will be ready for sub-bids on the erection of a two-story brick and tile school building, for the St. Joseph's Parochial School. Previous bids were too high.

Cleveland, O. — Preliminary plans are being made by Architect Franz Warner, Hippotrome building, for a four-story brick and reinforced concrete school of capacity for 1,000, for the Western Reserve University. The estimated cost is $20,000.

James City, Pa. — No date has been set for closing bids on the construction of a one-story frame building for the School Board of Highland township, J. C. Mercelliott, secretary, Kane, Pa. Plans were made by Architect H. C. Park, Ridgeway.

Galipolis, O. — Edgar Latham, Columbus Savings & Trust building, Columbus, received the contract to build a three-story brick and reinforced concrete dormitory for the Ohio Board of Administration. The building will be 75x138 feet.

Portsmouth, O. — New ventilating systems are to be installed in various school buildings and bids will be taken by the Board of Education in a week or two.

Marion, O. — W. V. Handsby & Son, Zanesville, O., were the low bidders on the construction of a two-story brick and concrete school building for the Board of Education. The cost of the work will reach $50,000.

Venetia, Pa. — The Peters Township School Board, J. P. Bryant, secretary, Venetia, will soon select an architect to design a two-story brick school building, to cost about $15,000.

Wheeling, Va. — J. W. Beltz & Sons, Wheeling, will rebuild the Chapel street school building, which was recently destroyed by fire. The work will cost $55,000.

Hundred, W. Va. — D. T. Burton, Moundsville, received the contract to build a two-story and basement brick school building, for the Board of Education. Cost $12,000.

Lorain, O. — Architect H. E. Ford, Henecker building, has been selected by the Board of Education to prepare plans for a two-story brick and reinforced concrete school building, to cost $125,000.

Huntington, W. Va. — The King Luminary Company, Charleston, W. Va., secured the contract to build the grade school building for the Board of Education. The work will cost $49,000.

Bradford, Pa. — The Tut Manufacturing Company, Bradford, will be awarded the contract to build a grade school building, for the Board of Education.

Bowersville, O. — J. W. Moorman, Zenta, O., was the low bidder for building a brick and metal lumber school building, for the Board of Education. The building will measure 106x136 feet.

Society and Club Buildings.

New Philadelphia, O. — The Masonic Lodge, William A. Wagner, chairman, is asking bids on a 2-story brick building, to contain lodge rooms, store, etc., plans for which were made by Architects Langdon & Hohly, Nicholas building, Toledo. The work will cost $30,000.

Parkersburg, W. Va. — Architect F. L. Packard, Hayden building, Columbus, has about completed plans for a seven-story brick, terra cotta and marble building, which will be constructed for the Masonic Association. Bids will be taken about July 10.

Bradford, Pa. — The Bradford Council Knights of Columbus, is having plans made by Architect George F. Richenland, 628 State streets, Erie, for a two-story club house 40x51 feet. Plans will be ready for estimates about July 25.

Zanesville, O. — Adams Brothers were the low bidders on building a two-story brick fireproof addition for the F. O. E. No. 102. The work will cost $10,000.

Maysville, Ky. — McDowell & Case, Maysville, secured the contract to build a three-story brick and terra cotta building, 50x58 feet, for the I. O. O. F.

Cincinnati, O. — Architects Elmer & Anderson, Ingalls building, have been selected to make the plans for the Y. M. C. A. building for colored people. Plans will be started at once.

Zanesville, O. — The Knights of Columbus contemplate the erection of a three-story lodge building. The selec-
Mr. Architect, Mr. Builder,
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tation of an architect will be made about July 15.

Massillon, O. — L. W. Gise & Son were the low bidders on the carpentry work and E. Converse, Massillon, on masonry work for the new addition to be built for the Masonic Temple Association.

Galion, O. — John King received the contract to build a three-story brick and composite stone building, 130x363 feet, for the Galion Masonic Temple Association. The work will cost $38,000.

State, County and Municipal.

Maumee, O. — Plans will be started at once by George Champions, Nashb building, Toledo, for a water works system, to be built for the Village of Maumee. No definite details have been formulated.

Oli City, Pa. — Plans for the proposed armory for the State Armory Board will be revised by the E. E. Bailey Company, Chambers building, and new bids asked about July 15.

Coshocton, O. — George J. Bock & Son, Coshocton, were the low bidders for grading and paving work to be done by the Board of County Commissioners. About 1½ miles of brick paving with concrete foundation and stone curb will be required.

Cleveland, O. — Baldwin Brothers Company, Rose building, Cleveland, secured the contract for brick paving on Green road, the work to cost $80,000.

Elyria, O. — The Massillon Bridge Company, Massillon, secured the steel work and Colburn Brothers, Olmstead Falls, O., the concrete work on the new bridge crossing the Black river, the work being placed by the Board of County Commissioners.

Clearfield, Pa. — Borough Engineer E. W. Hess has plans for repaving and curbing work to be done for the Borough of Clearfield. The work will be of brick with concrete base and curb and will cost $10,000.

Mahoning County, O. — Kennedy Brothers, Youngstown, O., received the contract to do the road improvement work on the Springfield-Poland road, for the Board of Trustees of Springfield township. Cost $36,266.

Norwalk, O. — Preliminary plans are being prepared by City Engineer L. H. Herrick, for the construction of a brick, steel and reinforced concrete fireproof municipal light plant, for the City of Norwalk. Cost $120,000.

Rockford, O. — Bids will be taken by the Village of Rockford for considerable brick paving, curbing, etc. Estimates will be taken about the 25th inst.

Gallipolis, O. — Charles P. Kircher, Athens, O., received the contract to build a dormitory for the Ohio State Board of Administration. The building will measure 76x138 feet and will cost about $67,000.

Lancaster, O. — The City of Lancaster is asking bids on the erection of an armory and memorial building, 60x150 feet, brick and stone construction, plans for which have been made by Architect Karl L. Best, Hayden building, Columbus.

Bedford, Pa. — The United States Government will take bids about July 23 for constructing a one-story stone fireproof post office building, 54x80 feet. Plans were made by the supervising architect, Oscar Wunderloth, Washington.

Beaver, Pa. — Anderson & Cook, Beaver, received the contract to build an addition and remodel the jail building for the Beaver County Commissioners. Architects Carlisle & Sharrar, Jenkins Arcade, Pittsburgh, prepared the plans.

Columbus, O. — The Dawson Construction Company, May building, Pittsburgh, was the low bidder on building a dormitory for the Ohio Board of Administration. The building will be 60x138 feet and will cost about $63,000.

New Castle, Pa. — W. Bender, New Castle, secured the contract to build a comfort station for the City of New Castle. It will be a one-story brick structure, 20x30 feet and cost $7,000.

North East, Pa. — Architects Alden & Harlow, Farmers Bank building, Pittsburgh, are working on plans for a one-story brick library building, to be constructed for the town of North East. The work will cost about $30,000.

Theatres.

Mt. Healthy, O. — Architect Anthony Kunz, 795 East Court street, Cincinnati, has plans in preparation for a two-story brick motion picture theatre building, to be constructed for Peter Bunn, 41 East Second street. The building will contain two store rooms, two flats and theatre.

Cleveland, O. — Architect A. F. Janowitz, Permanent building, is working on plans for a four-story terra cotta and reinforced concrete theatre building, to be constructed on East Seventy-ninth street and Floung avenue, for A. M. Gordon, 1325 Williamson building. The building will measure 80x160 feet and will cost $103,000.

Logan, O. — L. C. Craig received the contract for the erection of a brick fireproof motion picture theatre and office building, for E. Parvis. Cost $15,000.

Murray City, O. — Architect E. S. Matheny, Crooksille, O., has plans about completed for a brick fireproof motion picture theatre and lodge building, for the F. O. E. No. 164, Cost $15,000.

Manufacturing.

Cleveland, O. — William Dunbar Company, 8201 Cedar avenue, Cleveland, secured the contract to build the enameling plant for the Enamel Products Company. The building will be of brick and reinforced concrete construction.

Erie, Pa. — The Hunting-Davis Company, Century building, Pittsburgh, have plans and specifications about completed for a brick and steel fireproof annexalment plant, to be constructed for the Erie Malleable Iron Company. Cost $80,000.

New Kensington, Pa. — Architect W. J. Laughlin is working on plans for a two-story brick soap factory to be constructed for the New Kensington Soap Company. The building will be 40x120 feet and will cost $12,000.

Sharon, Pa. — The Sharon Steel Hoop Company, Sharon, will take bids on structural steel work for an addition to its plant.

Butler, Pa. — Bids will be taken next week on the building of a four-story steel and reinforced concrete shop building, 60x145 feet, for Spang & Company, plans for which are being made by Architect C. C. Johnson, 241 Main street. No equipment will be required.

Hospitals.

Cincinnati, O. — Plans are being prepared by Architects Eisinger & Anderson, Ingalls building, for a brick fireproof addition to be built for the Longview Hospital, for the Insane. Cost $503,000.

Martinsburg, W. Va. — Architect C. E. Kent, 712 North Queen street, has plans under way for a brick addition and alterations to be built for the Kings Daughters' Hospital. Cost $10,000.

Indian View, O. — C. C. Haffs, 6733 Buckingham Place, Cincinnati, received the contract to build an addition to the hospital of the Rockhill Sanitarium, the work to cost about $9,000.

Zanesville, O. — Architect Harry E. Meyers, Peoples Bank building, has plans for a four-story brick fireproof hospital, to be constructed for the Beth-
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All Requirements.

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seda Hospital Association. Plans will not be ready for bids until September 15.

**Miscellaneous.**

Canton, O. — W. F. Trimble & Sons, 1719 Pennsylvania avenue, Northside, Pittsburgh, received the contract to build a brick terra cotta trim, steel, hollow tile, and reinforced concrete passenger station on South Market street, for the Pennsylvania Lines West, Pittsburgh. The building will contain the baggage room, ticket office, waiting room, toilet rooms, etc., and will cost $70,000.

Sharon, Pa. — A. Wishart & Sons Company received the contract to build a frame pavilion for F. H. Buhl. Cost $20,000.

Hill Station, Pa. — The Pittsburgh Coal Company, Oliver building, Pittsburgh, has plans about completed for a sub-station and engine house 45x85 feet, brick and steel construction. All materials will be purchased by the company.

Emporium, Pa. — A one-story brick power plant is to be built by the Borough of Emporium. The building will be 30x30 feet and will cost $16,000.

Cleveland, O. — George A. Rutherford Company, Cleveland, was awarded the contract to build a gymnasium 35x76 feet, for the Goodrich House, the work to cost $17,000.

**Liens Filed for Labor and Material Furnished.**

**ALLEGHENY COUNTY, PA.**


**NO-LIEN CONTRACTS.**

A. Richmond & Son vs. William Watson Smith. Agreement made June 23 and filed June 24, to build residence in Wilkins avenue, for $15,750.

Anderson-Darragh Company vs. William Watson Smith. Agreement made June 23, filed June 24, to install hot water heating system in residence in Wilkins avenue, for $970.

Ira Mann vs. William Watson Smith. Agreement made June 23 and filed June 24, to do plumbing and gas fitting in residence in Wilkins avenue, for $2,096.

Kress House Moving Company vs. Pennsylvania Railroad Company. Agreement made June 17 and filed June 23 to raise passenger station and baggage room at Braddock Station.


Axtelh Electric Company vs. Richard Rowland. Agreement made June 16 and filed June 25, to do electric wiring for theatre in Penn avenue, near Highland avenue, for $1,750.

James W. Murphy vs William Sinning. Agreement made June 6 and filed June 27, 1914, to erect a duplex brick dwelling for $5,700.

Herman Hileman vs. Central District Telephone Company. Agreement made June 26 and filed June 29, 1914, to furnish all tools and derricks, etc. for telephone company in kilback township, Borough of Glenfield and Haysville.

American Cement Tile Manufacturing Company of Wampum, Pa., vs. Pressed Steel Car Company. Agreement made June 16, and filed June 21, 1914, to perform all work for the roof on machine shop extension at McKees Rocks, for $5,151.

F. Hoffman & Company vs. Charles Dreifus & Annette Dreifus. Agreement made and filed June 21, 1914, to complete a residence and garage on Northumberland street, Pittsburgh, for $34,375.


Booth & Flinn vs. Central District Telephone Company. Agreement made June 26 and filed June 29, 1914, to furnish all tools, derricks, etc., for work of the telephone company in Boro of New Kensington.

J. Toner Barr vs. Central District Telephone Company. Agreement made June 24 and filed June 29, 1914, to construct main line under ground conduits, etc., for the telephone company in the corporate limits of the city of Pittsburgh.

Sauders Paving & Construction Company vs. Central District Telephone Company. Agreement made June 27 and filed June 29, 1914, to furnish all tools, derricks, etc., in Boro of Aspinwell and O'Hara township.

**Sub-Contract Notes.**

Cut Stone Work.

Robert Hinton, Huntington, W. Va., received contract for church, Huntington. Owner, Apostolic Holiness Church, Huntington.

Electric Work.


Modern Electric Company, Wilkinsburg, Pa., received contract for duplex residence, Pittsburgh. Owner, Mrs. Mary C. Thaw, Pittsburgh.

Heating.


F. E. Geisler, Pittsburgh, received contract for institutional buildings, Morgantown, Pa. Owner, Pennsylvania Training Schools, Morgantown.

Bockway Plumbing & Heating Company, Huntington, W. Va., received contract for office building, Huntington. Owner, Board of City Commissioners, Huntington.

Granite.


Marble Work.


Lumber and Mill Work.


Pittsburgh Hardware Door Company, Pittsburgh, received contract for residence, Pittsburgh. Owner, Dr. W. E. Mendel, Pittsburgh.

Higgins Lumber Company, Pittsburgh, received contract for six residences,
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TOLEDO, PIT. HURON, ALPENA, ST. IGNACE.
Sheet Metal Work


George P. Helt, Northside, Pittsburgh, received contract for residence block, Pittsburgh. Owners, Abel & Smith, Pittsburgh.

Ornamental Iron


NICE TILE ORDER

W. H. Chapman & Sons, the well-known Wheeling building supply house, report having secured the following contract during the last week: The Olympic theatre, Steubenville, Ohio, tile work for large lobby; Harry L. May, residence, tile work for large porch, bath room and two tile mantels; C. E. Wells, residence, Glover Gap, W. Va., tile work and 10 cabinet mantels.

CONTRACT AWARDED

For Elks' Home

The general contract for building a three-story brick and stone Elks' home, for the B. P. O. E. No. 94, Tiffin, O., has been awarded to E. Converse, Masillon, O. This building will measure 62x100 feet and will have slate roofing, face brick exterior, concrete footings and foundations, fireplaces, brick mantels, metal frames and sash, waterproofing, tile work, etc.

WRITING HOTEL

Specifications

Architects Weber, Werner & Atkins, 414 Walnut street, Cincinnati, are preparing specifications for the $100,000 hotel building which is to be built at Mt. Sterling, Ky., for H. C. McKeever of that place. The building will be seven stories high, measuring 75x120 feet, and will contain 85 rooms, one store room, banking quarters, etc. Bids on the general contract will be taken next week.

POWER PLANT FOR CITY OF CLEVELAND

The City of Cleveland is having plans made by Architect Fred Betz, City Hall building, Cleveland, for a brick, steel and reinforced concrete power plant, tunnel, coal bunkers, etc., which are to be constructed on Scranton Road, Cleveland. The work will call for a one-story power house 70x85 feet; boiler room 30x 85 feet, two stories; pump and refrigerating room 25x85 feet, one story reinforced concrete 1,400 feet long, eight feet wide and 7½ feet high, etc. The buildings will have steel sash, composition flooring, stone trimmings, ventilators, etc.

IMPROVING BANK BUILDING

The Union Trust & Deposit Company, Parkersburg, W. Va., will make extensive improvements to the interior and exterior of the building. The plans have been drafted and approved by the company, and cover practically the entire space occupied by it. The work will be done under the supervision of the Dennison & Hirons Company, of New York, and will be completed by September 1. The cost will aggregate about $25,000. Heavy metal grills will be placed on the windows Tennessee marble will replace the old floor and a new vault will be placed in the bank. The room for the directors will be overhauled and new fittings provided, high wainscoting will be erected and a new chandelier installed. A new lighting system will be established, the screens now in use in the banking room will be replaced with German silver and the wood work will be made grey to harmonize with the screen.

BUILDING CONDITIONS

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracts Awarded</th>
<th>Corresponding Period</th>
<th>January 1, 1914, to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1909</td>
<td>1,951,000</td>
<td>12,100,000</td>
<td>70,818,000</td>
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<tr>
<td>1910</td>
<td>2,863,000</td>
<td>52,100,000</td>
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</tr>
<tr>
<td>1911</td>
<td>2,681,000</td>
<td>69,656,000</td>
<td></td>
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<tr>
<td>1912</td>
<td>3,084,000</td>
<td>93,724,000</td>
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<tr>
<td>1913</td>
<td>51,955,000</td>
<td>2,786,000</td>
<td></td>
</tr>
<tr>
<td>1914</td>
<td>83,131,000</td>
<td>3,084,000</td>
<td></td>
</tr>
</tbody>
</table>

GENERAL NEWS

Architect H. A. Crowe, Cleveland, O., has recently opened new offices at 1253 Leader-News building, and desires catalogues and samples of material.

William Faire & Sons, Wheeling, W. Va., were awarded the plumbing work for the Chaplin street school, building, for the Board of Education, Wheeling. The heating contract will be placed shortly.

Architect Frederick Schleifel, Pittsburgh, will remove his office from 6024 Penn avenue, to the East End Trust building, in the near future.
Architects and engineers Izant & Frank, Cleveland, O., have established new quarters at 913 Illuminating building, Cleveland.

The Venango Tile & Mantel Company, Franklin, Pa., has been awarded the marble and slate work for all the new buildings to be built at Zanesville, Ohio.

The plant and property of Oakland Pressed Brick Company, Zanesville, O., has been purchased by Harry Greiner, Underwood street, Zanesville. It is reported plant will be operated for manufacture of paying brick.

The Glenwood Brick Company, of Erie, Pa., which has been operated for a number of years by Thomas J. Paradise & Son, has been reorganized. The capacity of the plant will be increased very materially by the addition of new machinery and equipment.

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Scott A. White, Pittsburgh.
Warneck & Finley, Oliver Building, Pittsburgh, Pa.

ART AND STAINED GLASS.
H. C. pony, W. North Ave., N. S., 220 South Highland
Brown Brothers, Broadway and Lincoln Aves., Pittsburgh.

BUILDING CONTRACTORS.

BUILDERS’ SUPPLIES.
George Grundy, 2005 Gerrett St., Pittsburgh.

BLUE PRINT PAPER.

BLUE PRINTING.

BRICK CONTRACTORS.
Steel, George N., Woodville Ave., Nineteenth Ward, Pittsburgh.
Wilson, Louis, 2104 Corey Ave., Braddock.

BRICK JAIL RAKER.
George Grundy, 2005 Gerrett St., Pittsburgh.

BUILDERS’ SUPPLIES.
Crow Wall Paster Co., Braddock.
Hall, Haskell & Brother, Homestead, Pa.
Wheeling Wall Paster Co., Wheeling, W. Va.

BRICK MANUFACTURERS AND DEALERS.
Hocking Valley Pipe Clay Co., Nelsonville, O.
W. N. Tabor, Builders Exchange, Pittsburgh, Pa.
Ward & Sons, J. H. Park Ave. and Ninth St., Pittsburgh.

BUILDING CONTRACTORS.
Breden, Jacob, 245 Lella St., Mt. Washington.
Brown Brothers, Broadway and Lincoln Ave., Mt. Lebanon.
Kissell, D. C., 710 Rice St., Pittsburgh.
Moorhead & Co., H. S., 220 South Highland Avenue, Pittsburgh, Pa.
Rogers, Philip, 157 Mount St., Pittsburgh.
Wilson, Andrew, 1512 Sunbury Ave., Nineteenth Ward, Pittsburgh.

CARRIER SYSTEMS.
Mathew Gravity Carrier Co., Elwood City, Pa.

CEMENT.
Wheeling Wall Paster Co., Wheeling, W. Va.

COLD STORAGE DOORS.

CONEY COATING.
Wheeling Wall Paster Co., Wheeling, W. Va.

CONCRETE FOUNDATIONS.

CONCRETE SIDEWALKS.
Fryer, Thos. R., 11th and Broadway, West Park McKee Eocks, Pa.

COMPOSITION FLOORS.

CONTRACTORS’ PUMPS.

COREN WORK.
Linnach, Frank, 1724 Lowrie St., Northside, Pittsburgh.
W. H. Ruelle, 310 Weiser St., Northside, Pittsburgh.

DIRECTORIES BOARDS.
J. Willis Dannel, Pittsburgh, Pa.

ELECTRICAL CONTRACTORS.
Cartier Electric Co., Oliver Bldg., Pittsburgh.

ELEVATORS AND DUMB WAITERS.
Marshall Brothers, South Twenty-first and Mary Sts., Pittsburgh.

ELEVATOR DOORS.
J. Willis Dannel, Pittsburgh, Pa.
Lau & Hogan, Youngtown, O.


EXPANDED METAL.
Bostwick Steel Lathe Co., Niles, Ohio.
Wheeling Wall Paster Co., Wheeling, W. Va.

FIREPROOF DOORS AND PARTITIONS.
J. Willis Dannel, Pittsburgh, Pa.

FIRE ESCAPES.
Lau & Hogan, Youngtown, O.

FLOOR SURFACING.
Vickel, Martin Co., Ltd., 32222 30 Penn Ave.

GAUSS BLOCKS.
J. Willis Dannel, Pittsburgh, Pa.

GRAVITY CARRIERS.
Mathew Gravity Carrier Co., Elwood City, Pa.

HARDWOOD DOORS.
Carnahan Mfg. Co., Logansport, Ind.
Pittsburgh Hardwood Door Co., Pittsburgh.

HARDWOOD FLOORS.
Bald, John N., Jenkins Arcade, Pittsburgh.
Empire Flooring Co., Jenkins Arcade, Pittsburgh.

HOUSE PUMPS.

HEATING APPLIANCES.
J. R. Steel, Fulton Bldg., Pittsburgh, Pa.

HEATING (HOT WATER-STEAM).

INTERIOR TRIM.
H. C. Benis, Bradford, Pa.
Onter Woodworking Co., Dubuque.

INTERIOR MARBLE WORK.

INTERIOR MILL WORK.
Onter Woodworking Co., Dubuque.
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MILLION DOLLAR HOTEL
FOR COLUMBUS.

William G. Deshler, Wyandotte building, Columbus, O., a well-known capitalist of that city, has decided to build a $1,000,000 hotel structure on High and Broad streets, and is having plans made by Architects Holabird & Roche, 53 W. Jackson boulevard, Chicago. The structure will be 12 stories high, covering an area of 108x187 feet. It will be of brick, steel and terra cotta construction. The heating, plumbing and lighting systems will be laid out by the architects.

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PRELIMINARY PLANS
FOR INSTITUTE

Plans will likely be completed by Architect Walter S. Cohan, Oliver building, Pittsburgh, for the proposed building to be constructed for the Hebrew Institute of Pittsburgh, So! Rosenbloom, president, 207 Market street, Pittsburgh. The structure will be 57x114 feet with an auditorium 36x60 feet, brick and stone construction. It is likely that the building will have composition roofing, rolling partitions, fire doors, combination tile and reinforced concrete floor construction, tile partitions, metal bath, electric lighting, plumbing, heating, etc.

IRONTON SCHOOL
OPEN FOR BIDS.

Bids are to be closed on the 21st inst. for constructing a brick and steel grade school building, for the Board of Education, Ironton, O. The building will contain eight rooms and will have rest room and library. Architects Howard & Merriam, 8 E. Broad street, Columbus, O., prepared the plans and specifications, the latter calling for structural steel, ornamental iron, cement floor, light buff brick, hollow metal doors and sash, etc.

WILL ENLARGE SEMINARY.

The Bonebrake Theological Seminary, Dayton, O., has just commissioned Architects F. J. Hughes & Company, United Brethren Annex, Dayton, to prepare plans for a three-story brick and concrete administration building 90x120 feet, to contain chapel and class rooms. Preliminary plans have been started and the project will be ready for bidders about the first of January next. The building will have tile roofing, heating system, electric lighting plant, etc. The work will cost $75,000.

TAKING BIDS ON
OIL CITY OFFICE BUILDING.

The contract for building a three-story brick and steel fireproof office building for the United Natural Gas Company, Oil City, Pa., will likely be awarded in a short time. The E. E. Bailey Company, Oil City, prepared the plans for the structure, which will measure 54x56 feet and specified slag or gravel roofing, cut stone, sheet metal work, terra cotta, face brick, interior marble and tile, iron grille work, electric lighting, hard plastering, plumbing, heating, etc.

NEW TOLEDO STRUCTURE.

The Toledo Humane Society, Walter Brown, secretary, Toledo, O., is to build a five-story brick and steel building, with terra cotta trim, plans for which are in the hands of Architects Huber & Gamble, Spitzer building. The first floor will contain general offices, second and third floors dormitory for juveniles and fourth and fifth floors kitchen and dormitory. The construction work will call for tile floors, ornamental iron, fire escapes, skylights and ventilators, composition roofing, cement floors, fireproof doors, steam heating system, electric elevator, etc.

REBUILDING KANE FACTORY.

Holgate Brothers Company, Kane, Pa., will rebuild its plant immediately and have placed the contract with W. L. Dykes, for the work on a percentage basis. The building will be 64x140 feet, four stories, with composition roofing, steel beams, brick exterior, electric lighting, steam heating, etc.

AWARDING CONTRACTS
FOR FORD BUILDING

The F. W. Marks Construction Company, Leader-News building, Cleveland, O., which has the contract to build the new assembling shops for the Ford Motor Company at Center, Morewood and Center avenues, Pittsburgh is asking bids on composition roofing, plastering and painting. The Marks company will do the brick and concrete work. The steel work has been awarded to the McClintic-Marshall Construction Company, Pittsburgh. The steam heating, lighting and plumbing work is reserved by the owners.

COSTLY CHURCH REMODELING.

The St Joseph's Cathedral, Columbus, O., is to be remodeled at a cost of $100,000, from plans which have been made by Architects Richards, McCarty & Bulford, Hartman building, Columbus, O. The entire interior will undergo repairs consisting of oak floors and trim, metal lathing, furring, ornamental Caen stone work, steel beams and columns, stone work. Bids on the work will be asked about the 20th inst. The structural steel work has been placed with the Columbus Structural Steel Company.

ASKING BIDS ON
CLEVELAND STRUCTURE.

The Parish & Bingham Company, Hamilton avenue, Cleveland, O., will build a brick, steel and hollow tile office building 40x75 feet, at Madison avenue and W. One Hundred Sixth street, for which plans have been made by Ernest McGeorge, Leader-News building, Cleveland. The company will also build a one-story brick and steel garage 24x80 feet. Bids on both buildings will be asked for next week. The office building will have composition roofing, maple flooring, electric lighting, hollow tile floor construction, metal sash, etc., while the garage will have cement tile roofing, metal sash, cement floors, etc.
Metal Window Frames and Sash

The specifying of metal window frames and sash is becoming more general each week. Much work, which heretofore called for wood sash protected with iron shutters has been changed to metal sash. Not only does the metal sash, glazed with wire glass, afford fire protection, but they present a neat appearance and admit sufficient light for all purposes.

The Willis Manufacturing Company, Galesburg, Ill., manufacture a simple and easy operating window, equipped with all the safety devices recommended by fire underwriters. Various styles of windows are made, including special types in combination with the company’s different styles to meet requirements of the trade.

- **Style B, Mullion Double Hung.**
- **Style J, Hinged Sash.**
- **Style A, Double Hung.**

The construction of the double hung window, style A, is almost identical to wooden windows, having metal parting strips and angle iron stops which are removable by loosening some bolts. The method of attaching the weights and chain to the sash is the same as with double hung wooden windows. With each opening is included wire weight loops, also heavy wire attachment for securing the chain to the sash. A removable pocket cover is provided in each jamb for the insertion of the weights. The muntin caps are removable which allows of easy glazing. This makes for a very economical installation which is not approached by any other manufacturer. At the meeting rails and between the sash and jambs the construction is such as makes the windows storm-proof and wind-proof. The entire construction and finish is such as makes them acceptable for all first class buildings in daily use as offices and similar occupancy.

The construction of the mullion double hung style is the same as style A, except as to the mullion. Each mullion requires four inches more in width of opening than two openings. This construction requires the insertion of a five-inch I-beam and the concreting of same. The size limit of brick opening on this style is 10x9 feet. It is possible to extend the width by continuing the mullions as required. This style can also be made in a size of opening not greater than nine feet wide by five feet high by using a mullion, but not requiring the insertion and concreting of a five-inch I-beam.

The double pivoted window as shown by style E, is of the hollow air chamber construction. All are made of No. 24 gauge galvanized steel. In this style both sashes are automatic closing, by the fusing of a link at 155 degrees. This window gives a greater amount...
of ventilation than any other style. The rails of the sash interlock with the jambs to make a thoroughly weather-proof window.

Style K is used in openings which communicate with fire escapes or such other special purposes. The sash in the lower half of this type are constructed to open in or out.

Another type is that shown by style J, which offers good ventilating facilities and is especially useful where materials are to be passed in or out of a building through such an opening.

The glass used in the various styles of windows made consists of four kinds, polished wire, maze wire, rough wire and ribbed wires, all one-quarter inch thick, having wire netting embedded in its center during the process of manufacture. Set in approved hollow metal window sash it is the most efficient fire retardant known, permitting the blaze to declare itself. Its parts are visible, accessible, cleanable and the fire fighter is not handicapped by hidden or rusty fastenings nor blistering paint. Wire glass will crack from a shock or by the action of intense heat but remains practically intact retaining its place in the sash and the perils incident to falling glass and the ingress of draft and flame are avoided.

LABOR DIFFICULTIES IN PITTSBURGH

Owing to the withdrawal of one of the local bodies from the Building Trades Council, Pittsburgh, and efforts by its members to influence other trades to stop building work in the city there has been considerable agitation among the various building contractors during the past week. The trouble has not been caused by any wage disagreement, but by the local union's disagreement with the officials of the Trades Council.

Efforts were later made to have the local union reinstated but this action was not permitted. This caused more or less friction between the factions with the members of the Builders Exchange standing between the two bodies and seeking to have the difficulty settled. The various labor leaders and the officials of the State Department of Labor were asked by the Exchange to use their endeavors for peace.

The latest report is to the effect that the Builders' Exchange officials have made an agreement with officials other than that made last May, believing that it will be better for its members. It is more than likely that there may be some difficulty in building circles before the end of the present week.

STEUBENVILLE TO HAVE MARKET HOUSE

A one-story brick and stone market house and auditorium is to be constructed for the City of Steubenville, O., plans for which are being made by Archies Peterson & Clark, 530 Main street, Steubenville. The auditorium will have a seating capacity of 1,700. The building will have slate and tile roofing, structural steel frame, tile or terrazzo flooring, electric lighting fixtures, etc.

MAKE METAL SASH IN CANTON.

The Zahner Metal Sash & Door Company, Canton, O., has been organized and will build a plant for the manufacture of metal material for doors and window frames. The Zahner company will be controlled by the Monarch Metal Manufacturing Company's interests at Kansas City, Mo.

Style E, Double Pivoted.

Style K, Pivoted Upper, Casement Lower.
Mechanics' Lien for Materials

In a structure subject to the enforcement of a mechanics' lien for materials furnished for its erection but not incorporated into it? The law on this topic is quite commonly stated to be in a condition of chaos. Judges and commentators alike are wont to say that there is a division of authority on the question, and to substantiate this by the citation of a great number of authorities to each of two diametrically opposed propositions—either that the use of materials furnished in good faith for a building is necessary in order to sustain the lien, and the other that there may be a lien in such circumstances whether use is actually made of the materials or not.

As a matter of fact, the cases thus cited cover a considerable range of the mechanics' lien law, and actually involve various and distinctive questions, and are to a large extent distinguishable for that reason. The major questions, according to J. A. Wilder, in Case and Comment, which are contained in those decisions, and which serve as the principal basis for distinguishing them are two in number. The first is whether there may be a lien for materials furnished but never used at all, and the second is whether materials furnished and employed or consumed in the process of the work, but not entering into and becoming a part of the final structure, are materials contemplated by the mechanics' lien law. It will be at once observed that the materials involved in the first situation, having been furnished for the structure, are salable, and the only question is whether the non-use of such salable articles precludes the lien, whereas, in the other case, the materials were furnished for, and were used in, temporary work, and the question is whether materials are salable at all when not intended to be, and not in fact, incorporated into the structure.

When the decisions have been lined up on these two questions, and have been analyzed in view of the particular statutes involved, it is found that much of the so-called conflict has been dissipated.

For instance, assuming for the purposes of this discussion that the materials were furnished for the particular work, and that their nonuse was not due to defect in the contract or the failure to complete the structure, whether through the default of the contractor or builder or otherwise, an analysis of the decisions on the first question, that is, the point whether materials furnished for a structure, but not actually used therein, constitute the basis of a mechanics' lien, results in the deduction of several distinctive rules which may be briefly summarized by the statement that there is a conflict among the decisions involving statutes which provide for a lien for materials furnished "for a structure," that where the lien is given for materials furnished "for the construction" of an improvement, the decided weight of authority inclines to the view that the actual use of the materials furnished is not necessary; that, likewise, the actual use of the materials is held unnecessary where the legislature has subjected buildings to debts contracted for materials furnished for or in the erection thereof; but that where the lien is given for furnishing materials "used" or "to be used" in an improvement, the rule is that the use of the materials furnished is a prerequisite to the enforcement of the lien.

Materials Not Used.

In deducing the rules just mentioned, it is necessary to ignore a number of decisions which do no more than utter generalities—and of that character are seldom valuable in fixing legal principles. For instance, in a considerable number of decisions the courts have considered this question abstractly, and decided it either in the affirmative or the negative without assigning any satisfactory reason for the decision. In some cases the courts state broadly that to sustain a mechanics' lien for materials furnished for a structure, it must appear that the materials were actually used in its construction. On the other hand, it has been just as broadly asserted in a few jurisdictions that where the materials furnished are necessary to support a lien for a particular structure specified in the contract, the furnisher's lien does not depend for its existence or enforcement upon the use of the materials for that purpose. But, as said before, the cases which do more than utter generalities may be said, for the most part, to turn upon the language of the particular statutes involved. Occasionally, the question whether the materials were furnished to the contractor or sub-contractor on the one hand, or to the owner on the other, has been an important factor in reaching a conclusion in a particular case. And this difference, if difference there be, is in itself sometimes traceable to the variation of the phraseology of the statutes. The potency of the various statutes to influence a decision may perhaps be illustrated by reference to one or two miscellaneous decisions which involve unusual statutes.

Under a statute giving a lien for the contract price of the materials, it seems that the actual use of the materials is not essential to the enforcement of the lien, while materials furnished are not delivered because not accepted are not lienable under a statute giving a lien for materials "furnished," and actual use is held necessary under statutes giving a lien for materials furnished toward the completion or performance of any contract.


The courts are not entirely agreed upon the question whether the use of materials is necessary to support a lien for materials furnished for a statute giving a lien to every person who shall furnish materials "for any building. Some cases hold that there can be no lien unless the materials are actually used, under such a statute, or under a statute giving a lien to persons furnishing materials for or on account of any vessel. Before the Illinois legislature passed an act expressly dealing with the necessity that materials be used, the Illinois court held that under a statute giving a lien to a person who should by contract with the owner furnish material for any building, and extending the lien to all materials furnished, the materials so furnished must be actually used in order to sustain the lien, though not, of course going so far as to hold that the right to a lien would be affected by a diversion of a small part of the materials to other uses.

Leaving out of consideration two decisions which turn upon the particular facts involved, there seem to be but two jurisdictions in which a contrary result has been reached under a statute of this kind. It has been held in Iowa and Missouri that under a statute giving a lien to any person furnishing any materials for a building, a lien may be enforced although it is not made to appear that the materials were actually used; and though the Iowa court has denied a lien where the non-use of the materials was due to the fault of material men, it upholds the lien where the non-use is due to causes not within the contractor.
"For Construction" or "Erection" of Structure.

With a single exception the cases involving statutes giving liens for materials furnished for the construction or erection of a structure upheld the lien, declaring that it is not affected by the non-use of the materials or a part of them, except where the unused portion is returned—and this whether the non-use is due to the fault of the owner or of the contractor. And a like rule obtains in reference to liens against railroads or mills where there are special statutes couched in similar language.

For "Debts Contracted" for Materials.

The Pennsylvania courts have applied the broad rule that the actual use of the materials is unnecessary, where they were furnished to the contractor, but for or on the credit of the building, and it has been said that this rule does not bear hard upon the owner, for he in his power to determine the price of the building while there are outstanding charges against him, or to stipulate for security against those that might afterward turn up; and that if he settles with the contractor without exercising common prudence of this kind, he cannot charge the material man with the consequences of his own carelessness. While the Pennsylvania courts have seldom made reference to any State, a few of the early cases which invoke the rule, and which may or may not, but probably do, mark its inception, were based upon the phraseology of the statute of 1806, which provided that a building shall be subject to all debts contracted for or by reason of any materials found and provided by any lumber merchant, etc., for or in the erecting and constructing of such building.

The rule of the above Pennsylvania cases was recognized in a case decided in 1890, which, however, referred to the act of 1835 couched in similar language. And the rule was recognized, though held not to apply, where the non-use of the materials was due to failure to deliver them before the completion of the building. While the lien was denied where the materials were furnished upon the credit of the contractor, and not of the building, or where furnished to a sub-contractor as distinguished from a contractor, a lien was allowed where the materials were sold at a sheriff's sale as the property of the contractor, and where the contractor failed to complete his contract or use the materials in houses. Other Pennsylvania decisions turned more or less on the question of the necessity that the materials be furnished on the credit of the building. The case of Boyd v. Mole seems to stand by itself among the other Pennsylvania decisions. While it recognizes the general Pennsylvania rule, it states in effect that the material man cannot recklessly furnish materials for a building without reference to what are necessary, but that he must have an eye to the character of the building upon the credit of which he sells his materials, and see to it that only those necessary for and fit to be used in the building are charged to its account; the ultimate decision being that while, in enforcing his lien, he will be confined to materials furnished by him which could reasonably have been used in the building, he is entitled to his lien therefore although such reasonable amount was not actually used.

MINERAL FLOORING.

Two qualities are of prime importance in securing satisfactory flooring; first, that the material chosen be durable; second, that it be sanitary. Otherwise, the floor is certain to prove a constant source of expense and annoyance and a menace to health as well.

Next comes the important question of cost: readiness of application to irregular corners; time consumed in applying and hardening; safe walking surface; permanent color; sound, moisture and fire-proof qualities; residence; weight and conductivity of heat and cold.

Complete satisfaction can only be obtained from flooring that will pass muster on each of these points.

In wearing qualities, this product is unapproached by any other material, either plastic, quarried, igneous or manufactured. Floors laid by this process a dozen years ago, and subjected to constant and hard wear since, show no sign whatever of deterioration and to-day present the same smooth, fine-grained appearance as when first laid. Unlike many plastic and quarried materials, no dust, or tiny particles of grit can be worn away, whatever the character of service encountered.

Mineral flooring will not disintegrate with time or from climatic change and can not tear loose from the base. The life of this flooring is certain to exceed the life of the building, eliminating entirely the items of upkeep cost and renewal.

No porous floor material can be considered truly sanitary, nor can any arrangement that leaves crevices, corners or cracks at junction points to harbor dust and dirt, and the disease germs that are the inevitable accompaniment. Being a perfect monolith, mineral flooring offers no lodging whatever for dirt of any kind. It can be readily and quickly cleaned and thus returned to an absolutely sanitary condition.

The best possible tribute to the sanitary qualities of this flooring is found in the fact that it is rapidly becoming the most popular material in hospitals, schools and public institutions, being used for flooring entire buildings as well as in kitchens, bath rooms, pantry, corridors, etc., making the housework light for the servants and assuring absolute cleanliness, where it is vital both to health and comfort.

Composition flooring is unquestionably the most economical that can be obtained where service is taken into consideration. Very little greater in cost than a good grade of linoleum and very much cheaper than tile or marble.

Another desirable feature of composition flooring is found in its plastic character. Since it is laid in a semi-liquid state, all irregularities of surface, slope or corner are readily accommodated. This permits the treatment of worn floors, of wood or other material, without removal, or leveling, the mineral flooring being superimposed without difficulty.

Another very important fact in procuring the satisfactory floor is a safe walking surface. Mineral flooring affords an ideal foothold, hard and smooth, yet possessed of sufficient "cling" to present a trustworthy footing.

Mineral composition flooring can be had in most any color desired or exceedingly artistic effects can be obtained by combining a combination of colors or a variegated effect. This flooring can be scored to represent tile or marble. In case of damage to the flooring, the square can be removed and replaced and the same cannot thereafter be detected. Little disturbance need be occasioned by resurfacing an old floor with mineral composition, as the work can be completed and the rooms occupied within 24 hours after the flooring is finished. This is particularly important where the flooring is to be laid in buildings where every day spent in repairs means the loss of a day's receipts.

Soundproof, moistureproof and fireproof are qualities found in mineral composition flooring to a marked degree. They are as near soundproof as a floor can be, impervious to moisture, and as non-burnable as stone. It is light in weight, resilient to the tread, and vermin-proof.

The Philadelphia Mineral Flooring Company recently established an office at 459 House building, Pittsburgh, in charge of J. Willis Dalzell, who reports the demand for this flooring to be very brisk.

The increase in the consumption of the various materials used in the construction of mineral flooring has been 500 per cent within a short space of two years, thus showing the immense popularity that composition flooring has gained throughout the country.
Charles Huepel, 17 Climax street, is asking new bids on the construction of a two-story brick and stucco residence in Dormont, from plans made by Architect Charles Bickel, May building.

Plans are being revised by H. R. Kennedy & Company, Home Trust building, for the one-story and balcony theatre building, to be constructed on Oliver avenue and Cherry alley, for the Harry Davis Enterprise Company.

The Second United Presbyterian Congregation, Wilkinsburg, is having plans made by Architects Ingham & Boyd, Vandergrift building, for a one-story stone church building to be erected at Biddle and Hays street at a cost of $75,000. Plans will not be ready for bids until September 1.

The Bennett school building, Hale and Bennett streets, is to be enlarged and remodeled for the Board of Education, plans for which are being made by Architect A. D. Alexander, Fulton building. The work will cost $8,000.

Separate bids will be taken by C. C. McKalip & Company, First National Bank building, for the erection of an eight-story brick and stone fireproof apartment building, to be erected on Fifth, Bellefonte and Kennedy avenues.

The contract for building a two-story stone garage on Grant boulevard, for Thomas Kenyon, 1143 North avenue, Northside, has been awarded to F. Hoffman & Company, 903 Hay street, Wilkinsburg.

Schutz, Schreiniger & Clyde, May building, were awarded the contract to remodel the public bath house at Thirty-fifth and Butler streets, for the Public House and Bath Association.

Architect S. L. Rousseau, 1317 Allegheny avenue, Northside, has completed plans and will take bids on the erection of a two-story brick warehouse on Stengel street, for the Hardwood Manufacturing Company, 922 South avenue. The building will measure 34x50 feet and will cost $6,000.

Plans are being revised by Architect C. W. Hodgen, 810 Penn building, for a one-story brick and tile church building, to be erected at Ingomar, for the Franklin M. E. Congregation. Former bids ran too high.

The contract for paving Carson street from Seventh to Eighteenth streets, has been awarded to M. O'Herron & Company, First and McKean streets.

The Bane school building, Fernleaf and Eikes streets, will be enlarged and remodeled from plans which are now being made by Architect A. D. Alexander, Fulton building.

Preliminary sketches have been completed by Architect S. L. R. Rousseau, 1317 Allegheny avenue, Northside, for a two-story brick store and apartment block building, to be built for Dan Walter, 12 California avenue, Avalon. Architect will not take bids before August 5.

Architect C. W. Hodgen, 810 Penn avenue, has plans for interior alterations to be made to the Seventh Presbyterian Church, Poolum avenue, Mt. Lebanon. The work calls for a new gallery.

Plans are under way by Architects Carlisle & Sharrer, Jenkins Arcade, for a 2-story brick residence, to be built in Swissvale, for Mr. Holter. The work will cost $7,000.

A new swimming pool is to be built in the basement of the Y. M. C. A. building, Stockton avenue, Northside. Plans for the work have been made by Architect R. M. Trimble, Ferguson building. Bids on the work will be taken at once.

Bids are now being asked by Architect D. A. Crone, Oliver building, for the erection of three brick residences on Eldridge and Nicholson avenues, for E. M. Marks, Smithfield and Diamond streets. Work will cost $6,000.

Plans will be completed this week by Architect James T. Steen, Fulton building, for a 2-story hollow tile and cement plaster residence, to be built on Andover Terrace for Dr. George A. Holiday, Jenkins Arcade.

Preliminary plans are about completed by Architect W. S. Cohary, Oliver building, for a two-story brick and stone institute building, for the Hebrew Institute of Pittsburgh. The building, which will be erected on Wylie avenue, near Green street, will be 50x142 feet, and constructed of brick and stone, at a cost of $800,000. Plans will be ready for bids August 30.

The Board of Education, Fulton building, awarded to Sturm & Walter, 315 Second avenue, the contract for the electrical wiring of the Columbus, J. M. Logan and Morse schools.

Architect W. Ward Williams, Magee building, awarded to C. W. Houguy, Twentieth and Pike streets, the contract for remodeling a two-story brick building on Miller street, for D. Kellerman, Eighteenth and Pike streets. Cost $5,000.

Architects Janssen & Abbott, Century building, have superstructure plans nearing completion for the 12-story brick and granite fireproof hotel building, to be constructed on Sixth avenue, Cherry Alley and Oliver avenue, for the William Penn Hotel Company. Cost $6,000,000. Contract for excavating and structural steel has been awarded to James L. Stuart, Oliver building.

Bids have closed on erecting a store and residence addition and stable on Millvale avenue and Cypress street, for Ferdinand Unger, 4707 Cypress street, from plans drawn by Architect W. A. Thomas, Park building. Cost $5,500. Work consists of addition to residence, two-story brick 30x26 and new two-story brick stable, 20x30.

The Board of Education has awarded to William T. Powell, 508 Fourth avenue, the contract for altering the Snodgrass school building, on Sweetbriar street.

Beaver Falls, Pa. — Frank Garvin, Seventh avenue, was awarded the contract to build a 2½-story brick residence on Twentieth street, for Thomas McKee. Cost $5,500.

Crafoot, Pa. — John & Morris, Carnegie, secured the contract to build two 2½-story brick veneer, frame and stucco residences on Steubenville pike, for George Hardy, 211 Noble avenue.

Cincinnati, O. — Plans are being drawn by Architects Edward G. Reed,
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Lexington, Mass., for a 2½-story frame residence, to be built on Wold avenue, for Templeton Briggs, 1224 West Eighth street. Cost $20,000.

Cleveland, O. — No definite time has been set for taking bids on the construction of a two-story stucco on hollow tile double residence to be built on Kinsman road, for Dr. W. C. Fuller, 930 Kinsman road. Plans are being made by Architect O. N. Chamberlain, Schofield building.

Toledo, O. — Architects Thai & Aitken, Ohio building, are taking bids on building a 2½-story pressed brick and stone residence, for George A. Sproos, 331 Winthrop street. The work will cost $20,000.

Uniontown, Pa. — Bids will close on the 14th inst. for constructing a three-story brick and stone apartment and store building, 206x5 feet, for S. A. Frock. Plans are made by Architect A. P. Cooper.

West Newton, O. — Joseph Tachen­rusky has private plans for a two-story brick vender residence to be built at a cost of $4,600.

Cleveland, O. — Architect J. L. Cameron, 140 Eshel building, has been selected to prepare plans for an apartment building, to be constructed for D. Perlick, 2580 East Sixty-third street.

Bradford, O. — One-story brick bungalow is to be built for Samuel Bavaque, from plans which have been completed by Architect E. F. Brickel, who is now taking bids on the work.

Butler, Pa. — Bids will close July 15 for constructing a two-story brick residence at Oakland place, for Benjamin Williams, Main street. Architects H. E. McManus, 135 North Main street prepared the plans and will take bids.

Cleveland, O. — A two-story brick apartment building is to be built on Howard avenue, for Max Morris, 4912 Sevolle avenue, plans for which have been completed by Architect E. F. Brickel, who is now taking bids on the work.

John Larken, 3322 Archwood avenue, received the contract to build a two-story frame tenement building, at 1001 Lorain avenue, for V. K. Rattey, 1800 West Fifty-fourth street. The building will contain four apartments.

William Beamer, 3600 Carnegie avenue, has private plans for four residences, each to be 28x34 feet, and costing $16,000.

Bids will be taken about July 15 by Cohen & Abrahams, 2418 East Sixty-first street, for constructing a two-story apartment building, to cost about $6,000. Plans for the work were made by Architect M. Altschuld, 2448 East Sixty-first street.

Cincinnati, O. — A 2½-story brick, double residence, is to be built on Warsaw avenue, for William Filers, 267 Warsaw avenue, from plans which are now being made by Architect E. B. Shoemaker, 610 Lincoln Inn Court.

A duplex apartment to cost $12,000 is being planned by Architect Alfred Klein, Union Trust building, to be built for Dickman & Thompson, Provident Bank building.

J. M. Wolf, 820 Hutchins street, contemplates the erection of a 2½-story brick residence on Blair avenue, the work to cost $7,000. No architect has been selected.

Private sketches are being made by the Lautt Building Company, 1812 Vine street, for a 2½-story flat building, to be built on Graham street at a cost of $8,000.

Architect E. B. Shoemaker, 610 Lincoln Inn Court, is preparing plans for a 2½-story brick bungalow, to be built on Rapid Run road, for Frank H. Lockman, Loretta avenue.

Columbus, O. — Bids close this week on the erection of a three-story brick and stucco on tile residence and garage, to be built on Iuka street, for Thomas M. Hills, Ohio State University. Plans for the work were made by Architect O. St. John Chubb, Brown Hall.

Two double brick residences are to be built on Mohler street, by private parties, who are having plans made by Architect F. A. Stwert, Columbia building.

Dayton, O. — Plans are being made by Architects Thies & Thies, Bollinger company, for a two-story duplex residence, to be constructed on Jefferson street, for John B. Forster, 296 West Lexington avenue.

A two-story brick terrace for students is to be built by the Bonnechere Theological Seminary, which has selected Architects F. J. Hughes & Company, U. B. Amske, to prepare the plans.

Duquesne, Pa. — Donald Reechick will take bids this week on the erection of a 2½-story brick residence, to be built from plans prepared by Architect A. L. Miller, 924 Chislet street, Pitts­burgh.

Portage, Pa. — Plans are being made by Architect John Molitar, 139 South Fifteenth street, Philadelphia, for brick apartment and store building, to be constructed for Dr. Calvin C. Rush. Bids will be taken at once.

Turtle Creek, Pa. — Graham Brothers, Pitts­burn, received the contract to build a brick veneer bungalow for L. A. Colesfizer, 114 Seventh street.

Bradford, Pa. — Architect Brickell & Brickell, 64 Main street, will complete plans about August 1 for a 2½-story brick residence, to be built on East Main street, for M. Matt, Red Rock, Pa.

Cleveland, O. — Architect C. M. Un­ger, 1232 Superior avenue, has completed plans for a two-story frame dwelling 40x43 feet, to be built on 819 East Ninety-third street, for C. P. Bliss, 1069 Englewood avenue.

C.C. Bause, 2485 East One Hundred and Twenty-eighth street, has been awarded the contract for a two-story frame dwelling, to be built on 2558 East Boulevard, for Louis F. Sebastian, 749 East Ninetieth street.

Architect S. H. Weis, 1032 Schofield avenue, has the plans for two brick tenement buildings, to be built on Linwood avenue, for M. Margolian, 278 East Sixty-eighth street.

Fairmont, W. Va. — The contract for building a two-story frame residence on Park avenue, for H. Cassidy, has been awarded to C. E. Minor, Fairmont.

The contract for building a two-story brick residence on Pittsburgh avenue, for C. W. Hall, has been awarded to Toothman & Holland.

Bids will close soon on the erection of a two-story brick residence, containing six rooms, for Louis Helenick. Cost $3,000.

Shaker Lakes, O. — Architect R. M. Kingsdale, 712 Osborne building, Cleveland, has extended the closing of bids until July 15, for a two-story shingle residence, to cost $9,000, to be built for Charles William, 27 Western Reserve building, Cleveland, O.

Weirton, W. Va. — Bids will be taken about July 22, for the erection of a two-story frame residence, to cost $5,000, for Chess Campbell.

Akron, O. — Architects Izant & Fink, Illuminating building, Cleveland, have plans nearly completed for a two-story frame residence to be erected on Jean­nette street, at a cost of $5,000, for Dr. Cole, Jeannette street. Estimates will be received about July 14.

C. H. Vojnic, 127 East South street, will build a brick apartment building, on 244 East Crosier street, to cost $6,000.

Cincinnati, O. — H. L. Prechord, First National Bank building, contemplates erecting 40 residences, bungalows and St. Louis apartments, to cost from $3,500 to $7,500 each. Same will be of brick and frame construction. Architect has not been selected.

Plans are in progress for a 2½-story brick St. Louis apartment building, to be erected on Stanton avenue, for S. D,
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Architect J. W. Green of Ravenna, has awarded to H. L. Searl, 7103 Detroit avenue, the contract for erecting a two-story brick apartment building on 5619 Heugh avenue, for Miss Mary Plath, of Ravenna. Cost $7,000.

Architect R. A. Conkey, 9610 Piedmont avenue, has plans in progress for a two-story frame residence, 35x36, to be erected on Lee Road, near Mayfield avenue, for T. E. Leighton, 7818 Le- mont avenue, N. E. Cost, $5,500.

Architect Charles Kimpel, New England building, will be ready for bids about July 13 on erecting three two-story frame double residences on East Seventy-second street near St. Clair avenue, for A. E. Dudley, 309 Schofield building.

Architect W. S. Lougee, 500 Marshall building, has plans in progress for a two-story brick residence, to be erected on 11322 Lake avenue, for M. F. Brandley, 430 Lakeside avenue, N. E. The time for taking bids is indefinite.

Columbus, O. — Excavations have been started for a two-story brick residence, to be erected on 890 South Ohio avenue, for J. H. Choglowsky, by Contractor J. A. Pfahl, 499 East Third street.


The same contractors will also start the erection of a 21/2-story frame residence on East South street, for John Castello, Main street. Cost $2,500.


Grafton, W. Va. — S. G. Loar is taking bids on materials for remodeling a two-story frame residence, to cost $2,000.

Lakewood, O. — Architect Charles Kimpel, New England building, Cleveland, is about ready for bids on erecting a two-story frame residence on Ridgewood avenue, for D. Snidley, Ridgewood avenue. Cost $2,000.

Listonburg, Pa. — Architect H. C. Camp, of Accident, Md., has plans in progress for a two-story frame store and apartment building, 45x70, to be erected for Frank Straw.

Mannington, W. Va. — Leslie Hall will build a two-story frame country residence, from private plans, to cost $2,500. Mr. Hall is now taking bids on materials.

James McInerney is also taking bids on materials for a two-story frame residence, to be erected to cost $2,500.

Nelsonville, O. — Architect B. E. Mathews, Lima, has preliminary plans in progress for a two-story brick residence, to be erected for a party whose name is withheld. Cost $8000.


Wooster, O. — Architects Kaufmann-Bostwick Company, 619 Rose building, Cleveland, are preparing sketches for a two-story stucco and hollow tile residence, 30x60, to be erected for Thomas H. Prosser, Schmulbach building, Wheeling.


Cranksburg, W. Va. — Architect S. W. Ford has plans in progress for a three-story brick and stone apartment building, to be constructed on Main street, for Mrs. N. Baker. Building will contain nine apartments and cost $12,000.

Columbus, O. — Architect H. C. Jones, 12 Deshler building, will be ready for bids about July 15, on erecting a two-story brick terrace, 65x87, on Oakwood and McCullers avenues, for Edward Evans, 1153 East Main street. Cost $7,000.

Architects Dawson & Hollbrook, 613 Outlook building, will be ready for estimates about July 14, on constructing a two-story brick apartment building on Fulton and Zettler streets, for Allen & Richard Koch, 199 South High street.

E. E. Beckett, 674 South Ohio avenue, and J. M. Payne, 1351 Atcherson street, are low bidders on erecting a two-story brick apartment building on Nineteenth street, near Spring street, for Dr. J. H. Hamilton, 1180 1/2 Mt. Vernon avenue. Cost $8,500.

Dayton, O. — Architects Scheene & Williams, 591 Arcade building, awarded to Joseph Losey, Schwink building, the contract for erecting a two-story frame residence on Indiana avenue, for the Mutual Realty Company.

The same architects are taking bids on erecting a two-story brick residence on Cincinnati Pike, Oakwood, for John V. Lyle, 254 Arcade building. Cost $6,000.

Granton, W. Va. — Samuel Jones was awarded the contract for building a two-story frame residence for J. R. Cole. Cost $4,600.

Maryville, O. — T. J. Hinton received the contract for building a two-story frame residence on Sixth and Ash streets, for W. M. Hanss, to cost $3,500.

Oil City, Pa. — Bids have been rejeeted for the erection of a two-story brick veneered residence on Pearl avenue and Haines alley, for Louis Schwartzkop, Harriet avenue. Owner will ask for new bids.


Warren, O. — Architect J. L. Decker, Youngstown, will be ready for bids about July 13, on erecting a 21/2-story residence, for F. H. Wilkinson, Jr., to cost $10,000.

Youngstown, O. — Architect A. F. Judd, 139 East Federal street, will receive bids until July 20, on erecting a two-story brick residence on Randall avenue, for Charles C. K. Kurz, 410 East Federal street.

Business Buildings.

Akron, O. — Plans will be completed this week by Architect F. W. Hagloch, for a three-story brick store and apartment building on Market street, for C. J. Snyder, 303 S. Main street. The work will cost $15,000.

Amherst, O. — Charles Ebbs and A. Baker, Elyria, will build a two-story and basement brick building to contain offices and post office quarters. Plans which are being made by Architect H. O. Wumser, Lorain, will be ready for bids about the 17th inst.

Columbus, O. — Patrick McAllister, 100 East Lane avenue, secured the contract to build a three-story brick office building and factory for Beck & Orr, 21 East State street. The building will measure 60x100 feet.

Jacob Rusinger, 735 Fifth street, was the low bidder for constructing a three-story brick warehouse on Second street, for J. G. Emrich, 371 South High street.

Cleveland, O. — Engineer Ernest McGee, Leader-News building, will be ready for bids about July 15 for erecting a two-story brick, steel and hollow tile office building on Madison avenue,
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for the Parish & Bingham Company. The building will measure 40x75 feet.

Cuyahoga Falls, O. — George Bitterman, North Front street, contemplates the building of a two-story brick store building, from private plans.

Homestead, Pa. — J. O. Snyder, McCaw and Eleventh streets, was awarded the contract to build an addition to the store building for Board of Education. The work will cost about $35,000.

DuBois, Pa. — Walker & Curley, Bessemer building, Pittsburg, were awarded the contract to construct a two-story brick and reinforced concrete packing house for Armco & Company, Chicago. Sub-bids are now being taken.

Lancaster, O. — Architects Richards, McCarty & Bulford, Hartman building, Columbus, are taking bids on building a one-story brick store building, 40x74 feet, for Marmons Brothers.

Middletown, O. — George I. Hecks, South Charleston, received the contract to build a four-story brick and steel fireproof store and office building, 82x200 feet, for the William Seabold Realty Company. Cost $60,000.

Cleveland, O. — Architects Christian, Schwarzenberg & Gaede, 1900 Euclid building, are taking bids this week on the erection of a three-story brick and steel office building, to be constructed on Broadway avenue, for the Grabler Manufacturing Company. The building will measure 40x100 feet, and will cost about $15,000.

Plans are nearing completion by Architects Lehman & Schmitt, Garfield building, for a one- and two-story brick, steel and reinforced concrete addition for the Burns-Bowe Baking Company, 3707 Clinton avenue. Bids are to be taken this week.

W. J. & R. F. Lister, 1718 East Fifty-fifth street, have private plans for a two-story brick store and apartment building, for which bids are now being taken.

Catozzi Brothers, 1914 E. One Hundred Twenty-third street, have had plans completed by Architect Nicola Petti, 1185 Euclid avenue, for a two-story store and apartment building, to be built on St. Clair avenue. Sub-contracts will be awarded by the owners.

Meadville, Pa. — No date has been set for closing bids on the erection of the one-story brick and stone fireproof office building, for the United Natural Gas Company. Plans for which were made by the E. E. Bailey Company, Chambers building, Oil City.

Urbichsville, O. — Lichcy & Riflee were awarded the contract to build a three-story brick store, office and apartment for D. D. Nicola, Williamson building, Cleveland. The building will cost $30,000 and will contain four stores and eight suites.

Charleston, W. Va. — Ragland, Baxter & Morford Company, Nashville, Tenn., has been awarded the contract for erecting an office building for United Fuel Gas Company. The building will measure 103x40 feet, and will be brick, granite and architectural terra cotta construction.

Cleveland, O. — Roland A. Curry Company, Cleveland, O., has been awarded the contract for erecting a store, theatre and office building, for the Dean Square Realty Company, 325 Rockefeller building. The building will be 125x157 feet, two stories, brick, steel and reinforced concrete construction.

Plans have been completed by Architect Ernest Huberty, 18017 Whitehorn avenue, for a two-story frame residence, to contain four apartments, for A. Scholl, 9602 Woodlawn avenue, who will take bids about July 15.

East Liverpool, O. — Plans are now in progress by Architect C. P. Mutsch, First National Bank building, for a brick and semi-fireproof, store and apartment building, to be built on Dresden avenue, for the Widinger Heirs. Bids will be taken at once.

Marion, O. — Plans will soon be ready for bids by Architects Mariott, Allen & Hall, Hayden-Clinton building, Columbus, for erecting a three-story brick and concrete store and office building, on West Center street, for Hayes Thompson, McNeal-Wolford building.

Elyria, O. — Glick, Wietzel & Elyria, have been awarded the contract for erecting a three-story store and club house, for the F. O. E. No. 431. Work will be started in a short time.

Newark, O. — E. Elford, Hayden-Clinton building, Columbus, is taking separate bids on the erection of an office building and bottling plant for the Consumers Brewing Company. Work to cost $17,000.

Providence, Ky. — Bids will be taken by the Providence Bank Company, for the erection of a one-story stone building, 22x60 feet, plans for which were made by Architect F. J. Schlotter, Evansville, Ind.

Steubenville, O. — Competitive sketches are being received by D. J. St. Clair and others, for a three-story brick store and lodge building, to be built on Washington street, for the Knights of Pythias.

Architects Peterson & Clark have been selected to prepare plans for a bank, store and apartment, of granite and terra cotta fireproof construction, two stories, 18x42 feet, for the Jefferson Building & Loan Company. The work will cost $10,000.

Wheeling, W. Va. — A. C. Fisher & Son have been awarded the contract for erecting a brick and tile building, two stories, for Jebbia-Saylor Company.

Bradford, Pa. — The Oil Well Supply Company contemplates erecting a one-story brick warehouse on Mechanic street, from private plans. Cost $4,000. Plans have been sent to the Pittsburgh office for approval.

Columbus, O. — Architects Maetzol, Tresselt & Fassett, Central National Bank building, awarded to Jacob Rui­ singer, 735 South Fifth street, the contract for erecting a three-story brick warehouse on Second street, for J. G. Emrich, 371 South High street. Cost $10,000. Contract for brick masonry was let to William Watson, 3927 W. Ninth avenue.

Ewers Brothers, 185 West Broad street, received the contract for constructing a three-story brick and concrete business block on West Broad and Ludlow streets, for Samuel A. Es­ wein, 24 West Broad street. Cost $12,000.

Canton, O. — Architect C. V. Pettit, Cassilly block, awarded to Steiner Brothers the contract for erecting a one-story brick and stone market house on Second street and Cherry avenue, N. E., for the Every Day Market Company.

Cleveland, O. — Architects Fulton & Taylor, Permanent building, will receive estimates until July 11, on constructing a five-story brick and reinforced concrete store and light manufacturing building on Woodland avenue and East Thirty-seventh street, for M. D. Shann­ nan, 210 Woodland avenue. Building will contain five stories on first floor and remainder will be used for light manufacturing space. Cost $50,000.

Columbus, O. — Architect Charles L. Inscho, 120 Brunson building, awarded to Patrick McAllister, 100 East Lane avenue, the contract for erecting a two-story brick and stone store and apartment building on North High street, for A. K. Cremer, Washington Court House. Cost $12,000.

Dayton, O.—Architects F. J. Hughes & Company awarded to The Structural Concrete Company, Reibold building, the contract for constructing a six-story reinforced and brick fireproof store building on 133 East Third street, for Johnson & Watson Company.

Lima, O. — Architect B. F. Mathews, Opera House block, has preliminary plans in progress for a five-story brick store and office building, to be constructed on South Elizabeth street, near Market street, for Elmer Barthe. Cost $50,000.
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Religious.

Altoona, Pa. — Bids will close on the 15th inst for constructing a two-story stone and steel frame church building, 90x130 feet, for the First Baptist Congregation. The work was designed by Architect W. H. Nicklas, 700 Euclid avenue, Cleveland, will cost $80,000.

Columbus, O. — Patrick Shannahan, 807 Pennsylvania avenue, was the low bidder for erecting a three-story brick and reinforced concrete asylum for St. Ann’s Infant Asylum. The building will measure 45x140 feet and cost $48,000.

East Liverpool, O. — Finley Brothers, Chester, W. Va., were the low bidders for building an addition and remodeling the building of the First Presbyterian Church.

Homestead, Pa. — J. O. Snyder, McClure street, received the contract to build a one-story stone structure for the St. Matthew P. E. Church. J. L. Smith, Braddock, has the brick work.

Newport, Ky. — Architect W. L. Jacke, United Brethren building, Dayton, O., is working on sketches for a one-story brick church building, for the St. Peter and Paul Roman Catholic Congregation. The building will measure 40x100 feet and cost $18,000.

Sharpsville, Pa. — Christian & Troutman, Sharon, received the contract to build an addition to the First Baptist Congregation’s building.

Clearfield, Pa. — The First Baptist Church will take bids until the 16th inst, for constructing a one-story church building from private plans.

Duquesne, Pa. — Plans for a one-story brick and stone church building for the St. Joseph’s Slavic Congregation will be completed about August 1, by Architect H. J. Lang, House building, Pittsburgh.

Mentor, O. — The Latimer Construction Company, Citizens building, Cleveland, was awarded the contract to build a two-story brick and stone church and school building, for the Mentor Christian Church. The work to cost $12,000.

Springfield, O. — Architects DeCamp & DeCamp, Neeve building, Cincinnati, are preparing sketches for a $15,000 church building, to be constructed for the Methodist Episcopal Church.

Columbus, O. — Grace United Presbyterian Church will take bids about August 1, for the erection of a brick and stone, two stories, 118x98 feet. Plans were made by Architect J. E. Martin, East Liverpool, O.

Greenville, O. — Plans will be ready for bids about July 10, by Architect W. S. Kaufman & Son, Richmond, Ind., for erecting a one-story brick church, for the St. Paul’s Reformed Church.

Wellsville, O. — Plans have been completed by Architect S. R. Badgley, Wise building, Cleveland, for a brick and stone frame school and Sunday school, for First Methodist Episcopal Church, Main street. Work to cost $50,000.

Corbin, Ky. — Northwestt Brothers, Corington, Ky., have been awarded the contract for erecting a three-story brick building, for the R. C. Academy. Architect David Davis, Fosdick building, Cincinnati. Estimated cost: $40,000.

Algers, O. — Architect B. F. Mathews, Opera House Block, Lima, has plans nearly completed for a one-story brick and stone church, to be erected for the First Methodist Episcopal Congregation, to cost $12,000. Same will contain auditorium, school rooms and social rooms.

Bluffton, O. — Architects Leech & Leech, of Lima, have plans in progress for a 1/2-story brick and stone church, to be erected for the First Methodist Episcopal Congregation. Cost $25,000.

Greenville, O. — Architect J. B. Martin, of East Liverpool, has completed plans for a one-story brick and tile church, to be erected for the Methodist Episcopal Congregation. Cost $12,000.

Lorain, O. — Architect W. P. Gnther, of Akron, has plans completed for a one-story brick church, 18x68, to be constructed on Lexington and Fifteenth streets, for the Church of the Nativity, Roman Catholic Congregation. Cost $54,000. Owners will take bids about July 14, to close July 24.

Rawson, O. — Architect B. F. Mathews, of Lima, has plans in progress for a one-story brick church, to be erected for the First Methodist Episcopal Congregation, at a cost of $15,000.

Spencer, W. Va. — Architect J. B. Martin, of East Liverpool, O., has plans in progress for a one-story brick and stone church, to be erected for the Methodist Episcopal Congregation, to cost $20,000.

Toledo, O. — Contractors A. Bentley & Sons Company, are taking sub-bids on constructing a one-story stone auditorium on Collingwood avenue and Virginia street, for the First Congregational Church, to cost $40,000. Plans by Architects Mills, Rhines, Bellman & Nordhoff, Ohio building.

Willsburg, O. — Architect B. F. Mathews, of Lima, has plans in progress for a one-story brick and stone church, to be erected for the First Methodist Congregation. Cost $11,000.

Educational.

Dayton, O. — Architect F. J. Hughes & Company, United Brethren building, have been selected to prepare plans for three-story administration building, 90x120 feet, for the Bonebrake Theological Seminary, also for a three-story brick and reinforced concrete dormitory. Preliminary plans will be started soon.

Ironont, O. — The Board of Education will take bids until the 21st, for constructing a two-story brick and steel frame school building, 70x80 feet, plans for the building being prepared by Architects Howard & Merriam, Columbus.

Lyndora, Pa. — Plans have been completed by Architect George W. Kline, Butler, for a school and parish house, to be constructed for the St. Michaels Roman Catholic Congregation. Bids will be taken by the owners at once.

Fitchairn, O. — Metcalfe Brothers, Pittsford, have secured the contract to build a two-story brick school building, for the Patton Township School Board.

St. Clairsville, O. — Bids will close on the 24th inst for building a two-story building 90x180 feet, brick fireproof construction, for the Board of Education. Architect E. F. Farris, Schumback building, Wheeling, made the plans.

Hamilton, O. — The Roche-Brunner Building Company, Johnson building, Cincinnati, secured the contract to build a three-story brick fireproof high school building for the Board of Education. The building will cover an area of 125x244 feet and will be built E-shaped. Plans for the work are made by Architect J. L. Packard, Columbus.

Ripley, O. — Bids are to be taken by the Board of Education and Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, for the erection of a two-story and basement school building to contain 12 rooms and auditorium. Estimated cost: $55,000.

Alpha, O. — McCurren Brothers, Xenia, O., have been awarded the contract for erecting a two-story brick high school building, for the Board of Education.

Bowling Green, O. — The contract has been awarded to Steimle Construction Company, Fremont, O., for the erection of a three-story brick and stone science building, for Board of Trustees of Northwestern Ohio Normal school. The work to cost $70,107.

Canton, O. — Dawson Construction Company, of May building, Pittsburgh, Pa., was the low bidder for the erection of a grade school building of brick and stone, three stories, 128x65 feet, for Board of Education.
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WARREN, O.
Ridgeway, O. — The Board of Education is asking for new bids on the erection of a one-story brick fireproof school building, to cost about $15,000. Former contract has been withdrawn. Architect E. H. Rickeck, 274 Twelfth avenue, Columbus, prepared the plans.

Tunnelton, W. Va. — The building of a high and grade school for the Kingwood District Board of Education, may not mature until fall. Plans for the work are nearing completion by Architect A. C. Lyons, Fairmont.

Worthington, W. Va. — New bids are being asked by Architect C. H. Snyder, Peoples Bank building, Fairmont, for building a one-story brick school building for the Board of Education.

Canton, O. — Melbourne Brothers received the contract for constructing a two-story brick and reinforced concrete fireproof grade school building for the Board of Education to cost $35,000. George Hammond, 4220 Prospect avenue, Cleveland, prepared the plans.

Columbus, O. — D. W. McGrath, New Fret National Bank building, is low bidder on the erection of a one-story brick and concrete building on the O. S. U. Campus, for the Board of Trustees of the Ohio State University, to cost $16,000.

Morgantown, W. Va. — Sketches are being submitted for a high school building, to be constructed for the Board of Education.

York, O. — Architect Paul T. Cahill of Cleveland, awarded to J. W. Yarrington, Broadway, O., the contract for constructing a two-story brick and high school building, for the Board of Education, to cost $815,000.

Vernon, O. — Architects Kling & Zampf of Youngstown, awarded to A. Wishart & Sons, Sharon, the contract for erecting a two-story brick and stone fireproof school building, for the Board of Education.

Warren, Pa. — Architect E. A. Phillips will be ready for estimates about July 15, on constructing a two-story brick and tile high school building addition on Market street, for the Board of Education, to cost $90,000.

Canton, O. — Melbourne Brothers received the contract for constructing a two-story brick and reinforced concrete fireproof grade school building, 50x100, for the Board of Education, to cost $55,000. Plans were drawn by Architect George Hammond of Cleveland. Building will contain assembly room, play room, manual training, domestic science and restaurant.

Dublin, O. — The Board of Education of Washington township contemplates erecting a two-story brick fireproof
township grade and high school building, to cost $32,000. Architects Howard & Merritt of Columbus, will prepare the plans.

Matson, O. — Architects Marriott, Allen & Hall of Columbus, will prepare plans for a two-story brick and concrete high school building, to be constructed for the Board of Education. Site has not been selected. Cost $150,000.

Masontown, W. Va. — Architect Stephen W. Ford of Charlsburg, has plans in progress for a two-story brick and stone school building, to be erected for the Board of Education. Cost $25,000.

Prices Corners, O. — The Board of Education of Canaan township contemplates constructing a two-story brick concrete grade and high school building to cost $25,000. Architect Wilbur T. Mills of Columbus, will prepare the plans. Building will contain class rooms, superintendent’s office and auditorium.

Raymonds, O. — Architect Frank L. Packard of Columbus, has been selected to prepare plans for a two-story brick and high grade school building, to be erected for the Board of Education of Liberty township. Cost $30,000.

Rockland Township, O. — The Board of Education will receive bids until July 25 on erecting a high school building from private plans. Same will contain eight rooms.

South Browssville, Pa. — Architect A. F. Cooper of Uniontown, has plans in progress for a two-story brick, hollow tile and terra cotta high school building, to be constructed for the Board of Education, to cost $70,000.

State, County and Municipal.

Butler, Pa. — The City of Butler has had plans completed by City Engineer C. A. Carson, for a viaduct to be built across Wayne street. This will have concrete abutments and crosstree wood block flooring.

Marietta, O. — The Ohio National Guard, Hayden Clinton building, Columbus, will build an armory building, 72x137 feet, two and three stories, brick construction, from plans now being made by Architect Karl L. Best, Columbus.

Springfield Lake, O. — A sewage treatment plant is to be built by the District Tuberculosis hospital, Springfield Lake. The work will call for two concrete sedimentation tanks, sand filters, etc.

New Castle, Pa. — Architects C. C. & A. L. Thayer have plans for remodeling a jail for the Lawrence County Commissioners, the work to consist of new cells and alterations to the plumbing and heating system.

Bradford, Pa. — Bids will be taken July 15, for grading and paving Morrow avenue and Pike street, for the city of Bradford. The work will call for 1,000 feet of brick paving, concrete foundation and curb.

Fairmont, W. Va. — An addition to the city hall building for the city of Fairmont will be constructed from plans prepared by Architect A. C. Lyon, who will take bids about July 15.

Midland, Pa. — The borough of Midland will take bids until the 15th inst., for paving and curbing Beaver street.

Dayton, O. — Frank J. Trogan, 16 North Edgar street, was the low bidder for resurfacing the Eaton Pike, Lemon Pike, and Germantown Pike, for the Board of County Commissioners.

Oberlin, O. — Bids are being asked by the Oberlin College for 4,200 feet of brick sidewalk construction.

Portsmouth, O. — Kelley Brothers, Portsmouth, were awarded the contract to pave Fifteenth street. The work calling for a brick paving, curving and roadway drains.

Sandusky, O. — A street lighting system is to be installed by the City of Sandusky, plans for which are being made by Robert L. J. Wager, city engineer.

Steubenville, O. — New plans for a one-story brick and stone auditorium and market house, are being made by Architects Peterson & Clark, 520 Market street, who will take bids on the erection about July 15. The building will measure 68x171, and will cost $30,000.

Toronto, O. — About 2,500 feet of brick paving, concrete curbing and sidewalks will be built by the borough of Toronto, which is now asking bids on the work.

Fairmont, W. Va. — H. L. Wilton received the contract for the concrete and substructure for a highway bridge over the Tygarts Valley river. Superstructure work has been awarded to Meredith & Nicholson, Marietta, O.

Kittanning, Pa. — Arthur M. Morgan, Harris Trust building, Chicago, has been selected to design a water works system and electric plant for the borough of Kittanning.

Lima, O. — The City of Lima will take bids about July 15 for one-quarter mile of brick paving, concrete foundation, cement or sand stone curbing.

Mt. Vernon, O. — The Board of County Commissioners is asking bids on the erection of a one-and three-story...
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brick and concrete building, to be used as a children's home. The main building will be three stories 50x125 feet, with two wings. Architects Marriott, Allen & Hall, Hayden-Clinton bldg, Columbus, prepared the plans.

Smyrna, Del. — The Smyrna Borough Commissioners will select an architect next week to prepare plans for a two-story brick and stone addition, 30x60 feet, to the Court House building. The estimated cost of work is $50,000.

Sykesville, Pa. — The Sykesville Improvement Association will advertise for bids on constructing a water works system from plans which are to be prepared by Bouman & Hess, Deposits Bank building, Da Bois, Pa. A 30,000 gallon concrete reservoir will be built.

Canal Dover, O. — The city is advertising for bids on constructing a sewage system and disposal plant, to cost $65,000.

Columbiana County, O. — The Board of County Commissioners awarded to Morgan Brothers, Ravenna, the contract for the grading and paving of Alliance Salem road, in Goshen and Butler townships. Cost $261,000.

Preble County, O. — The Board of County Commissioners awarded to the Foster Construction Company, of Richmond, Ind., the contract for the improvement of Eaton & Richmond roads, in Washington and Jackson townships.

Manufacturing.

Tiffin, O. — The Great Northwestern Pottery Company contemplates the building of additional kilns and a one-story brick building, 45x50 feet.

Cleveland, O. — George H. Rutherford, 2160 East Eighteenth street, was awarded the contract to build a two-story brick and reinforced concrete factory and office building, for P. A. Geier & Company, St. Clair and East Fifty-first streets.

Akron, O. — Architects Weary & Goldstein, Akron Savings & Loan building, are taking separate bids on erecting a two-story brick and steel dry cleaning plant, on Market street, for the Read-Beinzel Company, 251 East Market street. Cost $16,000.

Erie, Pa. — The Ball Engine Company is taking bids on constructing a one-story steam shovel shop, 130x203 feet. H. Edsil Barr is the engineer.

Huntington, W. Va. — The Baggs Manufacturing Company contemplates constructing a manufacturing plant. No details have been decided.

Cleveland, O. — Bids are being taken this week on the erection of a brick and steel factory addition to be built for the Aetna Realty Company. Plans for the work were prepared by Architects Christian Schwarzenberg & Gaeledt, 190 Euclid building.

Arcadia, Pa. — The Arcadia Realty Company, Jenkins Arcade building, Pittsburgh, has private plans for a one-story brick, steel and concrete factory building, to be built at Arcadia, near Valencia, bids to be taken about August 1.

Lima, O. — The erection of three factory buildings, brick, steel and concrete fireproof construction, one story, for the Buckeye Machine Company, are being handled.

Covington, Ky. — Architect B. T. Wisenall, First National Bank building, Cincinnati, O., has plans in progress for a four-story reinforced concrete fireproof lithographing plant addition, to be constructed on Old Bank Lick Road, for the Donaldson Lithographing Company. Cost $50,000.

Springfield, O. — Architects Scheck & Williams, of Dayton, have preliminary plans in progress for a five-story reinforced concrete fireproof light manufacturing plant, to be constructed for E. L. Shuey, Central and Superior avenues, Dayton.

Toledo, O. — Architects Mills, Rhines, Bellman & Nordhoff, Ohio building, awarded to the Schmidt-Hardwood Company, the contract for constructing a one-story brick and steel fireproof printing plant addition, on Monroe street, for the Express Publishing & Printing Company.

Hotels.

East Liverpool, O. — Bids will be taken about July 14 for the erection of a brick addition to the Travelers hotel. Plans for work are now being made by Architect C. H. Metsh, First National Bank building. The estimated cost of improvements $20,000.

Ironton, O. — Joseph J. Cloran is having plans made by Architect L. C. Lowe, 1730 Fifth Avenue, Huntington, W. Va., for remodeling a store and office building into a hotel. Plans will be completed about July 30 and bids taken shortly afterward.

Lima, O. — Architects Leech & Leech, have plans in progress for a four-story brick, stone and steel fireproof hotel building, to be constructed on West Wayne street, for Alsichul Brothers, North Main street. Cost $104,000. Building will contain 100 rooms.

Dayton, O. — H. L. Stevens & Company, of Chicago, Ill., received the contract for constructing a 11-story brick and reinforced concrete fireproof hotel building, 200x100, on Ludlow and Second streets, for the Miami Hotel Company. Cost $1,000,000. The above contractors also prepared the plans.

Roncon, W. Va. — Architects Holmboe & Lafferty, of Clarksburg, awarded to W. T. Gates & Company, the contract for erecting a three-story brick hotel addition, for W. J. Roderick, to cost $10,000.

Society and Club Buildings.

Brackenridge, Pa. — The Brackenridge Heights Country Club will have a one-story frame and shingle club house built from plans being completed by Architect F. C. Sauer, 804 Penn avenue, Pittsburgh. Bids will be taken this week.

Charlese, Pa. — Charlese Lumber Company has awarded the contract for erecting a brick and stone club house, three stories, for the Masonic Temple Association. Cost $30,000.

Steubenville, O. — Architects Peterson & Clark, have plans in progress for a two-story brick fireproof club house, 60x100, to be constructed on North and Fourth streets, for the B. P. O. E. Cost $40,000.

Urbana, O. — Architect Wilbur T. Mills, of Columbus, has been selected to prepare plans for a four-story brick and stone temple, to be constructed on North Main street, for the Masonic Temple Association. Cost $30,000.

Theatres.

Canal Dover, O. — The Union Lumber Company has awarded the contract to build a two-story motion picture building for Isaiah Weber. The building will measure 12x145 and will cost $18,000.

Columbus, O. — Architects Maetzold, Tressett & Bassett, Central National Bank building, have plans in progress for remodeling a picture theatre on 7th North High street, for J. W. Swain, 17 South High street. Cost $5,000.

Hospitals.

Lakewood, O. — Architect Paul T. Cahill, 310-1900 Euclid building, Cleveland, has revised plans in progress for a four-story brick and reinforced concrete fireproof hospital building, to be constructed on 14519 Detroit avenue, for the Lakewood Hospital Trustees. Cost $104,000. Former bids have been re-
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Warren, Pa. — Architect F. H. Gruninger will be ready for bids about July 15 on erecting a three-story brick nurses home, 4x63, on St. Clair avenue, for the Trustees of the Warren Emergency Hospital. Cost $14,000.

Braddock, Pa. — Plans for the erection of an addition to the building of the Braddock Hospital Association have been completed by Architects Burkett & Brickell, 64 Main street.

Miscellaneous.

Marion, O. — W. O. Handsby & Son, Zanesville, was the low bidder for building a grand stand for the Marion County Agricultural Society.

Mansfield, O. — Simon Small & Company, Bird building, will ask for sub-bids on the erection of a chapel for Charles Schlaeger & Son. The building will be of brick construction, 22x66 feet.

Princeton, W. Va. — Eallon & Company, Falls Mills, Va., have been awarded the contract of erecting an electric line from Princeton, W. Va., to Binefield, W. Va., for Princeton Power Company. Work to cost $60,000.

Nottingham, O. — Architect E. J. Schneider, Cuyahoga building, Cleveland, is taking new bids on constructing a two-story brick and reinforced concrete fireproof power plant, laundry and gymnasium, for the Ursuline Convent.

Liens Filed for Labor and Material Furnished.

ALLEGHENY COUNTY, PA.

Entress Brick Company, a corporation, vs. Thomas Burke, Jr., owner, and Martin Burke, contractor. Building in Third ward, Pittsburgh. Cost $1,025.


NO-LIEN CONTRACTS.

G. L. Croig & Company vs. Schenley Farms Company, a corporation. Agreement made June 29 and filed June 30, 1914, to erect a garage at 5931 Howe street, Pittsburgh, for $1,275.

Stinson-Kennedy Company vs. James Ward, Jr. Agreement made June 29 and filed July 1, 1914, to erect and complete the plumbing work for a 2½-story brick house in Brown Place, Fifteenth ward, Pittsburgh, for $4,175.

Schutz, Schreiner & Clyde Company, a corporation vs. Public Bath House and Bath Association. Agreement made July 24 and filed July 3, 1914, to construct the alteration in building at Thirty-fifth and Butler streets, Pittsburgh, for $4,380.

Peter Celotis vs. A. Leo Weil. Agreement made and filed July 14, to complete all excavations, etc., for garage at 5931 Howe street, Pittsburgh, for $843.

Joseph Attwell vs. A. Leo Weil. Agreement made and filed July 14, to do the wrecking of all brick work, etc., for garage at 5931 Howe street, Pittsburgh, for $1,600.

John M. Tate Company vs. Trustees of the Presbyterian Congregation of Sewickley. Agreement made June 26 and filed July 6, 1914, to construct the plumbing system in the new church house on Beaver Road and Grant street, Sewickley, for $1,739.

Sub-Contract Notes.

Cut Stone Work.

M. S. Atkinson, Tarentum, Pa., received contract $15,000 church, Tarentum. Owner, English Lutheran Congregation.

Braddock Stone Company, received contract $50,000 church, Homestead. Owner, St. Mathews Protestant Episcopal Congregation.


Electric Work.

Dunshie Electric Company, Pittsburgh, received contract $30,000 mercantile building, McKeesport. Owner, M. S. Neiman, McKeesport.

A. W. Prater, Northside, Pittsburgh, received contract seven duplex residences, Pittsburgh. Owner, John Bar, Pittsburgh.


Heating.

Iron City Heating Company, Pittsburgh, received contract $25,000 factory building, Pittsburgh. Owner, Standard Cigar Company, Pittsburgh.

Regan & Hormel, Charleroi, Pa., received contract $30,000 church house, Charleroi. Owner, Loyal Order of Moose No. 165.

McGinnis-Smith Company, Pittsburgh, received contract $80,000 club house, Charleroi. Owner, W. K. Voelz, Pittsburgh.

Marble and Tile Work.

Phillips Tile & Mantel Company, Columbus, received contract remodeling offices, Columbus. Owner, Dr. James M. Rector, Columbus.


Twin City Mantle & Tile Company, Northside, Pittsburgh, received contract $30,000 church, Ben Avon. Owner, Emmanuel Methodist Episcopal Congregation.

Mill Work.

Andrews Lumber Company New Bethlehem, Pa., received contract $17,000 residence, New Bethlehem. Owner, Charles Lower, New Bethlehem.

Beaver Falls Planing Mill Company received contract $25,000 church, Butler, Pa. Owner, Grace Lutheran Congregation.


Constance Lumber Company, Mansfield, O., received contract $25,000 grade school addition, Mansfield Owner, Board of Education.

Mill Work.


Rocke Lumber Company, Bucyrus, O., received contract $50,000 bank and office building, Toledo. Owner, Dieeman Savings Bank.

Plastering.

McNulty Brothers, Pittsburgh, received contract $25,000 factory building, Pittsburgh. Owner, Standard Cigar Company, Pittsburgh.

Roy Glenn, Butler, Pa., received contract $25,000 church, Butler. Owner, Grace Lutheran Congregation.

J. E. Forrett, Pittsburgh, received contract $40,000 bungalow, Aspinwall. Owner, F. Schilero, Pittsburgh.

Plumbing.

Wey Brothers, Northside, Pittsburgh, received contract $10,000 bungalow, Northside, Pittsburgh. Owner, W. K. Voelz, Pittsburgh.

Weldon & Kelly, Pittsburgh, received contract residence alteration, Sewickley. Owner, S. G. Cooper, Sewickley.

Frank Elber, Pittsburgh, received contract six residences, Pittsburgh, Owner,
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W. N. Satter, Northside, Pittsburgh, received contract $25,000 office building, New Kensington. Owner, Aluminum Company of America.

Ornamental Iron.

Sheet Metal Work.
Thomas W. Irwin, Northside, Pittsburgh, received contract remodeling store building, Pittsburgh. Owner, William Grabowsky, Pittsburgh.

Roofing.
Reinforced Tile Company, Youngstown, O., received contract warehouse, Toledo. Owner, Standard Oil Company, Toledo.
F. Cooper, Butler, Pa., received contract $25,000 church, Butler. Owner, Grace Lutheran Congregation.
Scarborough Roofing Company, received contract $7,000 residence, Bellefonte, Owner, Harry Pfordt, Ben Avon.
P. LeGouillon, Pittsburgh, received contract $30,000 church, Ben Avon. Owner, Emsworth Methodist Episcopal Congregation.

Steel.
McClintic-Marshall Company, Pittsburgh, received contract grade school addition, Mansfield. Owner, Board of Education.
Donovan Iron & Wire Works, Toledo. Owner, Standard Oil Company, Toledo.

GENERAL NEWS.
The Kasch Roofing Company, Akron, O., was awarded the contract to furnish the roofing on the new high school building, at Ashtabula, O.
P. W. Finn, Masonic Temple building, Altoona, Pa., will secure new bids on the plumbing and heating work for the church and parsonage of the Methodist Episcopal Church, Uniontown, Pa.
The Standard Stained Shingle Company, North Tonawanda, N. Y., has recently established a sales agency at 715 Union Bank building, Pittsburgh, in charge of J. D. Gies. The company manufactures the well-known "Creo-Dip" shingles in thirty different color shades, permitting a most artistic color combination for roof and side walls.
The J. E. Moss Iron Works, Wheeling, W. Va., secured the steel work on the new store and office building now under course of construction, for C. E. Prunty, Charleroi, W. Va. The heating was let to A. C. Welch Company, Charleroi. The composition roofing, plastering, ornamental iron and elevators have not been awarded. Separate contracts are being placed by the owner.

J. W. Wilkins, 409 House building, Pittsburgh, representing the Requart Company, Dayton, O., has just secured the contract for all the interior and exterior mill work, cabinet work, etc., for the new passenger station to be built at Canton, O., for the Pennsylvania Company.
The Architectural Iron & Wire Works, Wheeling, secured the contract for the ornamental iron for the Presbyterian Church building, at Connellsville, Pa. The ornamental plastering was awarded to F. C. Boulton, Fairmont.
D. E. Henke & Company, Zanesville, O., have been awarded the contract to build a school building near Columbus, O., for the Truro Township School Board. They are also busy on a high school building at Keene, O., having the brick work about completed.

FACTORY BUILDING FOR LIMA.
The Buckeye Machine Company, Lima, O., has in contemplation the erection of a one-story brick and steel factory building 60x150 feet, office building and a paint shop. No plans have been determined upon, but an early decision will be made so that work can be started as soon as possible.

COMBINATION STORE
AND CLUB HOUSE
A four-story brick and reinforced concrete store and club house is to be built by the Knights of Columbus, Springield, O., at a cost of $30,000. The building will be designed by Architects Thies & Thies, Dayton, O., and will contain two store rooms and a roof garden, in addition to the club rooms, dining rooms, auditorium, library, etc. The building will measure 40x156 feet and will have composition roofing, tile floors for lobby and bath rooms, maple and brick flooring, metal bath partitions, face brick exterior, etc.

AWARDING BATH HOUSE WORK.
The new bath house which is to be built on South Tenth and Muriel streets, Pittsburgh, for the Henry W. Oliver Estate, will be one of the finest of its kind in the country. James L. Stuart, Oliver building, who has the general contract has sub-let the following work: tile roofing, P. LeGouillon, Pittsburgh; mill work, D. L. Gillespie, Pittsburgh; sheet metal work, W. H. Knodell, Northside; ornamental terra cotta, Northwestern Terra Cotta Company, New York city; structural steel, John Eichleay, Jr., Company, Pittsburgh; ornamental iron, Winslow Brothers, Chicago.

UNIQUE TERRACE FOR CINCINNATI.
Architects Joseph C. Steinmamp & Brother, 414 Walnut street, Cincinnati, O., are asking separate bids on the erection of a Georgian terrace, to be built at a cost of $75,000, for C. E. Scheffer, 334 Main street, Cincinnati. The building will contain 12 four-room apartments and six of six rooms. Bids on the work are being taken this week and it is likely that the contract will be awarded shortly. Specifications include gravel roofing, sheet metal work, ornamental plaster, metal lath, tile work, face brick, cut stone, electric lighting fixtures, etc., etc.

CONTRACTS FOR BUILDING.

BUILDING CONDITIONS.
The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

| Year       | Total Contracts Awarded | Corresponding Period
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1912</td>
<td>1,158,000</td>
<td>1910 ... 72,475,000</td>
</tr>
<tr>
<td>1911</td>
<td>1,552,000</td>
<td>1911 ... 80,180,000</td>
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<tr>
<td>1910</td>
<td>1,238,000</td>
<td>1910 ... 61,393,000</td>
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<tr>
<td>1909</td>
<td>851,118,000</td>
<td>1909 ... 2,662,000</td>
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<td>1908</td>
<td>1,152,000</td>
<td>1908 ... 1,825,000</td>
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<td>1907</td>
<td>1,576,000</td>
<td>1907 ... 1,582,000</td>
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<td>1906</td>
<td>978,000</td>
<td>1906 ... 1,356,000</td>
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<td>1905</td>
<td>908,000</td>
<td>1905 ... 1,175,000</td>
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<tr>
<td>January 1, 1914</td>
<td>$75,806,000</td>
<td>January 1, 1914</td>
</tr>
</tbody>
</table>
NOTICE TO CONTRACTORS.

Sealed bids will be received by the Commissioners of Beaver County, Pa., up until 12 o'clock noon of Wednesday, July 22, 1914, and will be opened at a meeting of the Commissioners to be held at a later hour, for steel jail equipment in the Beaver County Jail. Each bid must be accompanied by a certified check, as noted in specifications, as a guarantee of good faith in bidding; said check to be forfeited, to Beaver County if successful bidder fail to furnish satisfactory bond and enter into contract for the price bid, within ten days after award of contract. Checks of unsuccessful bidders will lie returned to them immediately on the awarding of the contract. Plans and specifications must be returned to commissioner's office with bid.

Satisfactory bond, approved by the County Commissioners, for the full amount of the contract price will be required of the successful bidder.

Plans and specifications and full information can lie secured at the office of Carlisle & Sharrer, Architects. 7119 Jenkins Arcade, Pittsburgh, Pa., and at Commissioner's Office, Court House, Beaver, Pa.

The Commissioners reserve the right to reject any and all bids.

By order of the County Commissioners.

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CONCRETE FOUNDATIONS.
Gaber-Edco Co., Wabash Bldg., Pittsburgh.

CONCRETE SIDEWALKS.
Fryer, Thos. R., 10th av and Broadway,
West Park Mokes Rocks, Pa.

COMPOSITION FLOORS.

CONTRACTORS PUMPS.
Harris Pump & Supply Co., 320 Second Ave., Pittsburgh.

DIRECTORY BOARDS.
J. Willis Daizell, Pittsburgh, Pa.

ELECTRICAL CONTRACTORS.
Risinger Mfg. Co., East Liverpool, O.

ELEVATORS AND DUMB WAITERS.
Marshall Brothers, South Twenty-first and Mary Sts., Pittsburgh.

ELEVATOR DOORS.
J. Willis Daizell, Pittsburgh, Pa.

FIRE PROOF DOORS AND PARTITIONS.
J. Willis Daizell, Pittsburgh, Pa.

FIRE ESCAPES.

FLOOR SURFACING.
Bald, John M., Jenkins Arcade, Pittsburgh.
Empire Flooring Co., Jenkins Arcade, Pittsburgh.
Warrell, Chappell & Co., Chicago, Ill.

FURNACE, STOVES AND RANGES.
Cheslign Engin’er Co., Commonwealth Building, Pittsburgh.

GYPSEM BLOCKS.
J. Willis Daizell, Pittsburgh, Pa.

GRAVITY CARRIERS.
Mathew Gravity Carrier Co., Eliwood City, Pa.

HARDWOOD DOORS.
Carnahan Mfg. Co., Logansport, Ind.

HARDWOOD FLOORS.
Bald, John M., Jenkins Arcade, Pittsburgh.

HOUSE PUMPS.

HEATING APPLIANCES.
J. R. Steel, Fulton Bldg., Pittsburgh, Pa.

HEATING (HOT WATER-STEAM.)

INTERIOR TRIM.

INTERIOR MILL WORK.

IRON FENCING.

IRON ROOFING AND SIDING.

JOINT HANGERS.
Lau & Hegs, Youngstown, O.

LIGHT IRON FURRING.
J. C. Ruxendell, Mt. Oliver, Pittsburgh, Pa.

LIGHTING FIXTURES.

LINE.

MILL WORK.
Carnahan Mfg. Co., Logansport, Ind.

MANTELS AND TILES.

METAL DOORS.
Lau & Hegs, Youngstown, O.

METAL LATH.
Bostwick Steel Lath Co., Niles, Ohio.

METAL LATH CONSTRUCTION.
Bostwick Steel Lath Co., Niles, Ohio.

METAL LATH CONSTRUCTION.
Bostwick Steel Lath Co., Niles, Ohio.

PAINT.
Bald, John M., Jenkins Arcade, Pittsburgh.

PAINTING CONTRACTORS.

PAINTERS AND DECORATORS.

PARK ETCHING.

PAPER PLANT.

PENDANT FANS.

PIERS AND PILLARS.

PIER SUPPORTS.

PISTOL SHAPED DOORS.

PNEUMATIC PIPES.

POWER PLANTS.

PRECAST LIGHT FRAME CONSTRUCTION.

PRECAST WALLS.

PRECAST WALLS.

PRECAST WALLS.

PUMPS.

REAL ESTATE.
MORTAR COLORS.

NON-STAINING CEMENT.

ORNAMENTAL IRON WORK.
Lau & Hogan, Youngstown, O.
J. Willis Balzal, Pittsburgh, Pa.

PARQUET FLOORS.
Bald, John M., Jenkins Bldg., Pittsburgh, Pa.
Empire Flooring Co., Jenkins Arcade, Pittsburgh, Pa.

PAVING TILES.

PLASTER BOARD.
Wolf, M. & Son, 3136 East St., N. S., Pittsburgh, Pa.

PRIVATE WATER SYSTEMS.
Dowrie Water Well Co., Jenkins Arcade, Pittsburgh, Pa.

RAGGIE BLOCK.
Pittsburgh Hardwood Door Co., Pittsburgh, Pa.

REINFORCING MATERIAL.

ROOFERS (TIN AND SLATE).
Blunt, Herman, 5152 Coral St., E. E., Pittsburgh, Pa.
Clark, George F., 1030 Sedgwick St., N. S., Pittsburgh, Pa.
South Hills Hardware Co., West Liberty, Pittsburgh, Pa.
W. H. Keed, 510 Welser St., Northside, Pittsburgh, Pa.

ROOFERS (GRAVEL, SLATE AND TILE).
Hahn Brothers, Pittsburgh, Pa.
Hill Top Roofing Co., 105 Middle Alley, Mt. Lebanon, Pa.
Limbach, Frank, 1721 Lawrence St., Northside, Pittsburgh, Pa.
Scott, A. W., Pittsburgh, Pa.
South Hills Hardware Co., West Liberty, Pittsburgh, Pa.

ROOFING MATERIALS.
Hahn Brothers, Pittsburgh, Pa.
McNair-Hillhouse Mfg. Co., South Bend, Ind.
Pittsburgh Hardwood Door Co., Pittsburgh, Pa.
Scott A. White, Pittsburgh, Pa.
South Hills Hardware Co., West Liberty, Pittsburgh, Pa.

SALT GLAZED BRICK.

SAFETY TREADS.
Lau & Hogan, Youngstown, O.

SAND AND GRAVEL.

SASH AND DOORS.

SEWER PIPE.

SHEET METAL WORK.
Limbach, Frank, 1721 Lawrence St., Northside, Pittsburgh, Pa.
W. H. Keed, 510 Welser St., Northside, Pittsburgh, Pa.

SIDEWALK LIGHTS.

STONE DEALERS AND CONTRACTORS.
McCabe, H. C., Elizabeth St., Pittsburgh, Pa.
Storech & Sons, V., Cricht, Pittsburgh, Pa.

STONE MASONS.
Navarro, P., 3210 Greystreet St., Pittsburgh, Pa.

STATE WORK.
Hyde-Murphy Co., Ridgway, Pa.

STAIR BUILDERS.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL WORK.
Lau & Hogan, Youngstown, O.

STRUCTURAL STEEL PAINTING.

SUSPENDED CEILINGS.
J. C. Boxendell, Mt. Oliver, Pittsburgh, Pa.
Carnahan, Chas., May Ave., Pittsburgh, Pa.

TILE (DECORATIVE).

TRUSSIT METAL.

VAULT LIGHTS.
Lau & Hogan, Youngstown, O.
Mullen Brothers Company, Fulton Building, Pittsburgh, Pa.

VENTILATORS.

WALL BOARD.

WALL LINING.
Empire Flooring Co., Jenkins Arcade, Pittsburgh, Pa.

WALL PLASTER.

WALL PLUGS.
Boswick Steel Lath Co., Niles, O.

WALL TIES.
Boswick Steel Lath Co., Niles, O.

WAREHOUSE DOORS.

WATERPROOFING.
Cerise Waterproofing Co., Chicago, Ill.

WATER WELL PUMPS.

WATER WELL PUMPS.

WEATHER STRIPS.
Chamberlin Metal Weather Strip Co., Pittsburgh, Pa.

WIRE FABRICS.

WIRE GUARDS.
Haas, Chas. G., 506 North Ave., N. S.
Lau & Hogan, Youngstown, O.
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NORTH SIDE PITTSBURGH

SCOTT A. WHITE
626 OLIVER BUILDING
Tile, Slate and Gravel Roofing
ARCHITECTURAL TERRA COTTA

ARCHITECTURAL TERRA COTTA
JUMBO BUILDING BLOCKS
WARNOCK & FINNESSY
1947-1948 Oliver Building PITTSBURGH
Phone 1424 Grant

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Fireproofing Products

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More than 2,000 Square feet of Petrosilo has been sold since we began manufacturing it for the trade a month ago.

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Petrosilo is a composition flooring laid in cement form over a cork cushion.

Gives the foot ease of linoleum and the appearance and wearing quality of tile.

All colors—for kitchens, bathrooms, halls, terraces, porch floors and for office and factory buildings.

Write for particulars or estimates.

CHAPMANS
1218 Main Street
Sash & Door Dept., 48 Eighteenth St.
Wheeling, W. Va.
NEW HOTEL FOR DAYTON.

The Miami Hotel Company, John H. Patterson, president, Dayton, O., is having plans made by H. L. Stevens & Co., 910 S. Michigan, Chicago, for an eleven story brick and reinforced concrete hotel building 100x200 feet to be built on Ludlow and Second streets. The structure will be built at a cost of $1,000,000 and will have tile corridors, marble lobby, two marquise, roof garden, composition roofing, private electric lighting system, telephone system, six electric elevators, steam heating system, vacuum cleaning system, etc.

ENLARGE WARREN SCHOOL BUILDING.

Plans for remodeling and enlarging the Market street high school building, for the Board of Education, Warren, Pa., are being made by Architect E. A. Phillips, Warren Trust building, Warren, Pa. The new addition will be 34x150 feet, two stories and will be of brick and hollow tile construction. This will afford 11 additional school rooms. Plans are ready for bidders. Building requirements will consist of steel beams, metal studs and lath, tin roofing, face brick, electric work, plumbing, indirect steam heating system, etc. The cost is estimated at $30,000.

SELECT ARCHITECT FOR WAREHOUSE.

The T. H. Close Realty Company, Madison avenue, Toledo, O., has selected Architects Mills, Rhine, Belknap & Nordhoff, Ohio building, Toledo, to prepare plans for a three story brick and reinforced concrete warehouse building 62x100 feet to be built on St. Clair street. The construction work will include structural steel, steel frame sash, skylight, fireproo! doors, electric freight elevator, composition roofing, etc.

LARGE RESIDENCE FOR NEW CASTLE.

Bids are now being taken for the construction of a two story brick and stone residence to be built on Leisure street, New Castle, Pa., for A. C. Hoyt, 208 E. Lincoln Avenue, New Castle. Architect C. E. Ousley, Mahoning Bank Building, Youngstown, O., who prepared the plans has specified cut stone, fireproof floors, hollow tile partitions, metal lath, brick terrace and porch floors, enamel brick, tile roofing, etc. The work will cost $50,000.

COLUMBUS ELKS TO BUILD.

The Board of Trustees of B. P. O. E., Columbus, O., and Architect Frank L. Packard, Hayden-Clinton building, Columbus, are asking bids on the enclosure contract for a three story brick, stone and reinforced concrete building 116x151 feet. The work will call for face brick, cut stone, composition roofing, structural steel, ornamental iron, suspended ceilings, skylights, sidewalk lights, slate roofing, cypress or white pine exterior finish, etc.

PLANNING LIMA STRUCTURE.

Preliminary plans are under way by Architect B. F. Mathews, Opera House Block, Lima, O., for a five-story brick and semi-fireproof store and office building, for Elmer Barth, Lima, O. The work, which will cost $50,000, will call for concrete flooring, composition roofing, tile floors, fireproof doors, sidewalk lights, metal ceilings, store fronts, steam heating system, electric work, freight and passenger elevator, etc.
Who Pays the Quantity Surveyor?

By Ernest McCullough.

For 25 years George Alexander Wright, an architect of San Francisco, Cal., a former quantity surveyor in Great Britain, has been agitating the quantity surveying method for estimating buildings in the United States. A year or so ago he started a monthly publication called the Quantity Surveyor and organized the American Institute of Quantity Surveyors. These steps, followed by a trip around the country, on which trip he addressed a number of architects and contractors' associations, made the subject a live one in the United States and there is now a possibility that quantity surveying will be a standard method of estimating.

The question continually asked the writer since he associated with him Mr. Thomas Robinson, late a quantity surveyor in London, England, is, "Who pays for the quantities?" There is present in the mind of the average contractor the idea that he will have to pay for quantities whether he gets a contract or not, and the cost of a bill of quantities may be higher than he would pay an estimator.

The owner pays for the lists of quantities. The first step is for the architect to decline to accept bids from contractors who have not lists of quantities prepared by some certified quantity surveyor. Thus the architect is saved considerable expense for blue printing and by having one competent person go carefully over the plans and details for the quantities before bids are called for.

The lists furnished by the selected quantity surveyor are given to all the bidders whom the architect has selected, a copy being filed in the vault of the architect and there kept until the contract is completed. The contractors pay nothing for these lists, but each one adds 2\% per cent to his bid to cover the cost of the list in case he gets the contract. By this way of bidding the successful bidder pays for the work of the quantity surveyor and as he added the item in his lump sum bid, it, of course, finally comes on the owner as indeed all estimating expense must.

When the quantity surveyor system is firmly established in the United States it will cut the estimating cost for contractors out altogether. It will reduce the cost of blue printing and specification writing in architects' offices and go farther towards wiping out the "extras" bills than any one thing yet proposed. Under the present method every contractor employs a force of estimators. This means considerable expense for each week and as a number of men must look over plans sent out by architects few estimators get all the time they really require for the making of a correct estimate. There is thus a tremendous economic loss. On one piece of concrete work the writer estimated for a certain firm, two other firms sent him the same plans a day or two later. These firms were so crowded that their own estimators had no time to do the work. The writer charged the full rate to each man, so he really was paid three times for the job. Under the present method of working it was not wise for him to let any one of the firms know that he had given the quantities and if there was any difference in the bids it would be due to the unit prices assumed by the bidders. The cost for estimating for each firm was $50, making a total cost of $150 on one item only in the building. It is to be assumed that several trades did the same thing, so the aggregate cost for the estimating on the building was not far from $1,000; all paid by the bidders.

Under the quantity surveying method for doing business the architect would have sent the plans to a quantity surveyor to take off the quantities for all the trades and also prepare the specifications. The total cost would have been less than $300 and any contractor wishing to bid could have secured a list of quantities for his own work, free of charge. General contractors would have received a complete list of quantities free of charge. The successful contractor would pay it for the owner, who would finally pay in the weekly or monthly estimates given to the contractor. When this special feature of the quantity surveying method of estimating becomes generally known there should be a good chance for it to become firmly established in the United States.

WHO IS TO BLAME?

When competitive bids for the construction of buildings are opened many new men are found in line with bids to present. The experienced men in construction business are falling off in number, many have given up in despair or have been forced to surrender unconditionally on account of the present system, under which profits to a contractor are practically impossible. The men who get the bulk of the work now are in most every instance beginners, men who have never served an apprenticeship in any trade and in most cases are in a position to care little about loss because from this evil they are immune, having nothing to lose.

This subject has appeared in the builders' journals at different times and was at one time discussed by the architects in meeting of their association, but up to this time no effective remedy has been suggested, and if suggested, it has not been put into practice. Shall the contractors wait until the architects, through mercy, work out the problem for them by reason of the trouble, or will the contractors work out their own salvation by following the examples set by other industries and professions?

The position of the contractors is at this writing such as requires united action. When a bid is made up, based upon some of the contingencies which may arise during the construction of a building and such a bid is in competition with one not based upon any contingencies, the former bid is of course from 10 per cent to 15 per cent the highest and is sure not to be accepted by the owner. The specifications are always so drawn that the contractor is entirely at the mercy of the owner except in cases where the architect is of such a character that he will insist upon justice, in preference to the owner's good will.

One would imagine that an architect, when called upon to decide a question at issue between the contractor and owner, would see his own advantage first and lean to favor the owner be-
cause of his future work (there are plenty of contractors anyway). Some years ago this leaning on the part of the architect was perceptible, but the reputable architect of today has taken a different attitude. This must be attributed to the association and is therefore a splendid example for the contractor. A contractor of experience and substantiability can foresee many pitfalls in the business, knowing that a misstep or mistake, no matter who makes it morally or legally responsible, will interrupt the work and keep him into complications and money loss, remembering of course that the contractor while engaged upon the work, also under the general conditions of the specifications is to be held responsible no matter what happens to anything or anybody. It does not matter who makes a mistake, the contractor is supposed to rectify it, if it is necessary to do so in order to be able to deliver a completed building and keep in good standing.

A contractor of no experience and no responsibility does not foresee danger, neither can he lose what he does not possess. He is the more liable to bid low and as the work goes to the lowest bidder in most cases, the most work is done by this class, which adds trouble for the architect, encourages litigation, creates bankruptcies and loss to the owner. Loss to the owner because repairs are often necessary soon after completion of the work.

You say that the contractor should give a surety bond. Can you recall many cases where the surety company is liable? If they were, they would not write bonds so freely. You say that the contractor should carry liability insurance. Do all contractors know that an insurance company is not liable where the contractor has not complied with the statute? How many contractors have time to read the statute? Here again the class of contractors who are such a detriment to sound business, have no reason to care what the statute is. Under the laws of Illinois, Ohio and several other States, it is necessary for the contractors to build a scaffold for work which was formerly done in the air. And it is necessary that a scaffold has a slatted or solid railing and still if an accident occurs, the contractor is liable. And even a contractor in competition with one who by reason of his lacking financial ability is not liable in any event.

Cost of bidding is an expense, which in an office per year amounts to one-tenth of one per cent of the cost of the buildings figured, not including railroad fare. At this rate with an average of 10 bidders to a job, the waste on all of the work for which contracts are let is one per cent and is greater when adding the cost where contracts are not let. It is possible for an owner to get a long list of bids and sub-bids, whether the work is let or not.

A remedy for the present evils can be effected by an association and that will be done sooner or later even if the architects must bring it about. These men have through their association bettered their conditions very materially. If the contractors wish in their own field to save their business, they will find it necessary to have some protection which is more effective than anything they have had. They will find it necessary to work together with the architects and support the high standard advocated by them.

One suggestion for a remedy may be made which if worked out by the contractors, may again build up a standard. When the owner invites bids he should agree to pay for them. This would lead to care on his part as to the class invited and would cost him no more in the end. Under the present system the estimating is not and cannot be done free of charge, the cost is added to the bid, but there is no inducement for the best men in the business to respond to an invitation. If a fee of one-tenth of one per cent were paid to the person making the lowest bid and a smaller fraction to each of the others, this would have a tendency to limit the bidders, who make all the trouble and cause so much waste. It would create a better and happier condition for the owner, architect and builders.

It might enhance the health of men operating the legal machinery, who could be sent on a vacation, would result in better structures and be the means of a considerable saving in cost.

If the contractors do not themselves benefit by the lesson set by other organizations and do not make an effort to work out their own salvation, then they can only charge the blame for the present adverse conditions to themselves.

THE DECIMAL POINT.

A decimal point is not an imposing looking object. It might be mistaken easily for a period or a fly speck. And yet it can cause a lot of trouble. In eight jumps it can make $1,000,000 look like one cent. It can befuddle an engineer's calculations or transform a contractor's bid into a fearful and wonderful thing. If the decimal point is moved one place too far to the west in a unit bidding price the contractor and everybody else will be surprised when the bids are read. Move it too far to the east and the "lucky" bidder will reach for a life preserver. Mistakes like these are of frequent occurrence.

A few weeks ago at a highway letting when the proposals were opened it was found that one man had offered to do the work for $1,826; while his nearest competitor had estimated the undertaking at $20,112. The low man sweated drops of blood in convincing a board of road superintendents that his bid was only one-tenth of what he intended. And that was all the satisfaction he got for his proposal was rejected. An instance where the decimal point apparently jumped too far in another direction occurred in a recent letting when the contractor submitted a bid having a somewhat imposing total of over $2,000,000. The other estimates ranged from $247,000 to $160,000, the right latitude and longitude of the decimal point is rather an important matter.

CONCERNING SPECIAL BUILDING PRIVILEGES.

Building ordinances should, above all things, stand for safe construction and impartiality. As so many interests are concerned in such ordinances it is evidently an exceedingly difficult task to frame a building code which will be fair to all concerned. It therefore follows that wide publicity should be given to such ordinances before a final vote is taken to adopt them. After they become law no violation of their provisions should be permitted without equal consideration and publicity. It is doubtful if the interests of the public are best protected by giving a small committee the power to permit infractions of the provisions of a building code.

There is, of course, difference of opinion as to the limiting height of buildings and as to the fairness of the "zone" system. In considering such matters as these the rights of the entire population of the city must be given careful consideration, even though individual interests may be seriously affected. Great pressure is often brought to bear upon building committees to permit modifications and slight violations of building provisions, and any tendency to rush such infractions without permitting wide publicity may well be looked upon with suspicion.

E. M. Crouch, Oil City, Pa., who has the contract to build a store and lodge building for the Oil City Lodge, $98, 1, O. O. F., has awarded the steel work to W. N. Kratzer & Co., Pittsburgh. The mill work has been placed with the Oil City Wood Working Company, Reno, Pa. Other sub-contracts are now being placed.
A COMPACT AND EFFICIENT BLUE PRINTING MACHINE

Wickes Brothers, Saginaw, Mich., have just placed on the market a blue-printing machine that makes prints of from two inches to 48 inches wide and of any length, and occupies a floor space of only 2½x5 feet.

This machine has a number of interesting and convenient features. Either separate or continuous prints can be made as desired. The work can be carried out in a lighted room as both the unprinted and the finished prints are kept in lightproof compartments. The operator performs all operations from the front of the machine and controls the light and the speed of the machine from the same point. Tracings, when printed, can be either delivered to him or in the compartment in the rear.

The tracings and paper are fed into the machine on an endless, automatically-lightened belt, which is operated by a Westinghouse Electric small motor. They then pass around the printing cylinder which consists of spirally-disposed bronze wires, so arranged that the paper and tracings are kept perfectly smooth while passing around. Inside the cylinder is a Cooper-Hewitt mercury vapor lamp which is a very desirable source of light for blue printing, as it is rich in chemical rays with artistic powers particularly adapted for this work. The manufacturers claim that this wire cylinder offers less obstruction to the light than a cylinder of glass, produces prints of a uniform tone, and is in addition self-cleaning and practically indestructible. From the cylinder, the tracings and paper pass into the storage compartment.

Since a current of only 5 amperes at 110 volts is needed for the small motor and the mercury vapor lamp, the expense of operation is very small, the manufacturers claiming that the cost does not exceed 1½ cent per square foot of blue print paper.

TO TAG LATH BUNDLES.

New York State has recently issued orders to the effect that all bundles of lath distributed shall be tagged, indicating whether the bundle contains 50 or 100 pieces. The order emanates from the State Scales of Weights and Measures, who requires that all lath when delivered to the consumer shall have the tag attached. This is in line with a demand previously made for a full-count bundle of shingles. The duty of tagging the bundles of lath rests upon the retail dealer. Arrangements may be made with most shippers for attaching the tag to each bundle to cover this point; but of course, this will mean an added cost of 5 to 10 cents per thousand pieces. Lath are seldom counted at the mill when they are being put up in bundles, but the lath crew is supposed to make up each bundle to the regulation size, and they are supposed to run over as often as under the figure. This particular regulation just issued stipulates that there may be a reasonable variation from the stated number in one bundle, provided there is an excess of equal amount in another bundle.

GREATEST OFFICE BUILDING YET.

The new Equitable building, under construction in New York—the largest and heaviest office building yet designed—is to be wired throughout with Simcore, made by the Simplex Wire & Cable Company, Boston. The specifications to date call for a total of more than 400 conductor miles for distributing electric energy and lighting service throughout the mammoth building.

It is estimated that the entire structure when completed will weigh 203,000 tons, of which 35,000 tons is the steel structure. It is about 106x312 feet, rises 500 feet above the street, and the lowest basement is 60 feet below the street. On a little more than an acre of ground there are more than 27 acres of rentable floor space, served by 50 electric elevators.

Bids are being taken by the Hardin Commission, Kentucky, on interior decorating, composition flooring and electric fixtures for the court house building. Bids close August 11.
Brick, as a building material, is one of the oldest in the world, and its comparatively recent adoption in connection with interior decoration is due to the wonderful colors and textures of the modern artistic face brick. The various shapes and shades of the modern rough-textured brick have resulted in the introduction of ornamentation into brickwork of the same texture and finish as the field itself, thus obviating the introduction of glazed tile and marble as an adjunct to the brickwork.

The cost of brick decoration compares favorably with either marble or decorative plaster. For example, brick decorative panels, according to some recent estimates, average about $1.30 per square foot, including designs, and $1.50 per square foot for installation, while the cost for less pretentious decoration seems to be in the neighborhood of 75 cents per square foot for material and the same amount per square foot for installation.

It is an undeniable fact that there are still a number of architects who do not appreciate the possibilities of brick work, possibly for the reason that they have not availed themselves of the opportunity of observing some of the latest examples of brick decoration; but judging by the increasing use of artistically shaded and textured brick laid in mortar joints of characteristic size, color, and composition, it seems safe to predict that the old style brickwork with monotone pressed brick and thin mortar joints will soon be a relic of the past.

Brick has been raised to an even higher plane as a decorative medium through its use for interior decoration, and taking into consideration the fact that brick once more holds its own with stone, marble and even marble, it seems reasonable to suppose that possibilities of their product are yet far from exhausted.

NEW DEFORMED CONCRETE REINFORCING BAR.

A reinforcing bar of substantially uniform cross-sectional throughout is being made by the Cambria Steel Company, Johnstown, Pa. It is a rolled bar, manufactured under patents granted to E. E. Slick, vice president and general manager of the company. The bars, it is pointed out, are as satisfactory as the plain square type and have a special form of splicing device which decreases the amount of lap ordinarily required and consequently reduces the amount of material used to no advantage.

The projections on these bars are arranged in the form of waves and are located so that the concrete can be firmly bedded on all portions of the bar without air pockets forming that would destroy the contact. The bars are arranged so that their surfaces will interlock by merely placing them in contact with each other.

Tests were made in the manufacturer's laboratory to determine the strength of the bars and the wedges. The bars tested, which were of structural steel composition, had a lap of five corrugations or approximately 5/8 inches at the joint. It is stated that in every case the specimens broke in the body of the bars, the clamp and the wedge being intact after the bar ruptured. A one-half-inch bar showed an ultimate tensile strength of 63,500 pounds per square inch and two five-eighth-inch bars gave results of 59,640 and 59,690 pounds, respectively. The stresses that were applied, it is pointed out, are approximately four times as great as those to which the bars will be subjected in actual use. The bars also were bare when tested, while in use they will be surrounded by solid concrete, which will, of course, add more strength to the splice. These bars are made in all of the standard sizes, from 9/4 to 11/4 inches on a side.

SIMPLEX STEEL TAPED CABLE.

Under this title a 16-page booklet has just come from the press which describes briefly the manufacture and uses of the cable which is protected by two steel tapes wound on spirally in reverse directions. Steel taped cable has a field peculiarly its own. It must be used where considerations of safety and civic pride will not permit the use of overhead wires, and a conduit system is too expensive.

The book illustrates and describes briefly, methods of installing steel taped cable in ornamental lighting systems, parks, the grounds of public buildings, and in railroad and manufacturing yards. It discusses the unusually severe voltage tests to which the Simplex products are subjected and shows by figures from actual jobs how this product has cut underground wiring costs in half. A copy of the booklet will be sent by the Simplex Wire & Cable Company, Boston, to anyone interested.

DEPARTMENT STORE FOR COLUMBUS.

Architect W. T. Mills, McCune building, Columbus, O., will be ready for bids next week on erecting an eight story brick and steel fireproof department store building on N. High street for the Z. L. White Company, 112 N. High street. The building will measure 62 x 187 feet and will be constructed by C. C. Hansberger, 51 S. State street, Columbus. The material on which bids will be taken include cement, terra cotta plastering, electric work, plumbing, heating, etc. Stirling & Lum, Denigerson building, Columbus, will act as associate and superintending architects.
Preliminary plans are being made by Architect T. H. Scott, Beredum-Trees building, for a top addition to the Bennedum-Trees building, which is under contemplation by the owners, the work to cost $100,000.

The Model Coat & Apron Company, 4809 Penn avenue, will award separate contracts for building a one and two-story brick stable on Broad street.

William G. Johnston & Company, Ninth street and Penn avenue, contemplate the building of a one-story brick printing plant on the Northside. The work will likely be awarded to James L. Stuart, Oliver building, on a percentage basis.

D. T. Riffle, Keenan building, was awarded the contract to build a substation and hoisting engine house at Gwendolyn station, for the Pittsburgh Coal Company. The building will be 48x85 feet, two stories high, brick and steel construction. The contract for a similar building at George station was also awarded to D. T. Riffle.

W. L. McKisson, Evans City, secured the contract to build a 1 1/2-story brick veneer bungalow on Ahabana avenue, Dormont, for Mrs. J. F. Douglass, 607 Beatty street.

James W. Murphy, Spahr street, was awarded the contract to make the interior alterations to the Redman Street Baptist Church, Redman street.

A brick and steel store house, 46x180 feet, will be built to the plant of the Pressed Steel Car Company, McKees Rocks, the work to be done by W. E. Trimble & Son, Pennsylvania avenue, Northside.

Plans and specifications will be completed next week by Architects Janssen & Abbott, Century building, for the new structure for the Allegheny General Hospital, Sandusky street and Park Way. This will be a four-story brick and stone building, 60x120 feet.

Bids close July 17 on the construction of a 2 1/2-story brick double duplex residence, for James Dunn, plans being prepared by Architects Simpson & Ises, Wabash building. The work will be completed at a cost of $16,000.

Martson Brothers, House building, have been awarded the contract for a 2 1/2-story brick and cement plaster apartment building, for William T. Campbell, Alger street, plans for which were prepared by Architect R. M. Trimble. The work will cost $15,000.

Architect O. M. Topp, Jenkins Arcade, has preliminary plans in progress for a one-story stone veneer church, for the Calvary Lutheran Congregation, Wilkinsburg, to be built at a cost of $40,000.

Knoxville Land Improvement Company has private plans in progress for 60 two-story brick venner residences, to be built on Bausam street, at a cost of $3,000 each.

E. E. Framey has awarded F. L. Fisher, 2204 Watson Way, the contract for a 2 1/2-story brick and stucco residence and garage, plans for which were made by Architect O. M. Topp. The work will cost $15,000.

Bids close July 22, for a three-story brick store building, to be built on Penn avenue and Twelfth street, for Herbert May, plans for which were prepared by Architect Charles Bickel, May building.

Bids are being taken on the general contract for building the William Penn Hotel, which is to be constructed on Sixth avenue, Cherry alley and Oliver avenue, from plans of Architects Janssen & Abbott, Century building. These bids, which close August 3, include the masonry, hollow tile work, reinforced concrete work, carpentry and interior trim, cut stone, glazing, etc. Specifications for the power and mechanical equipment will soon be ready.

Bids are in and the contract will soon be awarded for erecting a 2 1/2-story brick veneer residence in Mt. Lebanon, for J. A. Lovett, Bayard street, Mt. Lebanon. Plans were made by Architect Thomas Hannah, Keenan building.

Architect Charles Bickel, May building, will have plans ready next week for bids on the erection of a brick and terra cotta store and loft building to be erected on Sandusky street, near Penn avenue, for the Pittsburgh Cut Flower Company.

Walker & Curley, Bessemer building, are asking sub-bids on the erection of a one and two-story brick and reinforced concrete building, 58x138 feet, for JohnFoertsch & Company, Northside.

Bids will be taken until the 25th inst. by Architect John Phillips, McKees Rocks, for building a two-story brick residence on Russellwood ave., McKees Rocks, for private parties.

The Fetzer-Winger Company, Bessemer building, received the contract for building a three-story and reinforced concrete stable, 128x160 feet, for John R. Hermes, Forbes and Eddy streets. The work will cost $89,000.

The contract for building a two-story brick residence at 515 California avenue, Northside, for John J. Jones, California avenue has been awarded to C. A. Baldwin, 214 Marsonia avenue.

Plans and specifications will be completed next week by Architect E. E. Lee, Peoples Bank building, for a hollow tile and cement stucco club house, to be built at Edgewood, for the Edgewood Community Club, Maple avenue, Edgewood.

Plans for the building of an edifice for the First German United Evangelical Congregation, Mt. Washington, are to be refigured. The building, as designed by Architect J. A. Long, Machessney building, will be one and two stories high, brick construction.

John Davidson, 432 Southern avenue, received the contract to remodel the school building for the Mt. Oliver Board of Education.

Bids are to be taken until the 22nd inst. by Architect James T. Steen, Dalton building, for building a 2 1/2-story hollow tile and cement stucco residence on Andover Terrace, for Dr. George A. Holliday, Jenkins Arcade.

Samuel Felbyberger, 254 Lytton street, is taking sub-bids on the erection of a 2 1/2-story brick and stone residence and one-story garage, to be built on Schenley Farms, for Dr. M. S. Davis, Diamond Bank building.

Andrew M. Moreland, 4754 Wallingford street, has awarded William Kerr & Sons, Farmers Bank building, the contract to build a two-story brick, arme...
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mental terra cotta and cement residence on Fifth avenue, plans for which were made by Architect Paul W. Irwin, Renshaw building. The work will cost $80,000.

No date has been set for closing on the erection of a two-story brick veneer residence on Mississippi avenue, Doramount, for Mrs. F. G. McMasters, 700 Bedford avenue.

Joseph Pagallo, 33 S. Pervis street, McKees Rocks, has private plans for a brick residence, to be built on Fleming avenue.

• Apartments and Dwellings. •


Batavia, O.—Architects Robertson & Fahnestock, Gerke building, Cincinnati, have plans for a two-story brick residence for Dr. James Ashburn.

Baden, Pa.—Architect Charles Mathews, Beaver, is working on plans for a two-story brick and hollow tile residence, to be constructed for private parties. Cost $5,000.

Cincinnati, O.—Two 2½-story brick apartment buildings are to be built on Walnut Hills, for Reiman & Reitan, Gayety building, also two similar buildings in Avondale.

The Baxter Company, 425 McGregor avenue, secured the contract to build a 2½-story brick and stone building for Bernard Grover, 2224 Iona avenue. A $15,000 frame residence is to be built on Wold avenue, for Templeton Briggs, 3996 Beechwood avenue, from private plans which are being made by Architect E. G. Reed, Percy road, Lexington, Mass.

Cleveland, O.—Bids are being taken by Architect H. F. Stuhler, Lenox building, for the erection of a two-story frame residence on E. Overlook road, for C. L. Gebauer, 959 Broadway avenue.

No date has been set for closing bids on the erection of a two-story stone residence and garage for Rush J. Wall, 1081 W. Eleventh street. Plans were made by Architect R. H. Hinsdale, Osborne building.

Ludwig Peters, 978 Ansel road, secured the contract to build a two-story frame apartment building on Kerman avenue, for Frank Twalski, 8310 Sowin ski avenue.

Columbus, O.—Plans will be ready for bids about the 24th inst. for building a two-story brick and stone trim residence, for E. M. Nicholas, Hayden-Clinton building. Architect's Howell & Thomas, 151 E. Broad street, prepared the plans.

Corry, Pa.—A. H. Fehlman was awarded the contract to build a two-story brick and shingle bungalow on E. Congress street, for A. Gumbniski. No sub-contracts have been awarded.

Corporal, Pa.—Sketches are being made by Architect T. E. Cornelius, House building, Pittsburgh, for a brick and stone trim residence for Thomas Snedden, Jr. Cost $8,000.

Freedom, Pa.—Plans have been completed by Architect J. W. Earl, Shields street, Rochester, for a two-story brick and stone trim residence for Dr. J. Miller.

Youngstown, Ohio.—Plans will be completed about July 28th, by J. L. Decker, Stanborough building for a 2½ story brick residence for J. E. Horner, Arlington street, Youngstown, to cost $7,500.

Titusville, Pa.—The E. E. Bailey Company, Chambers building, Oil City, has plans for a two-story brick and tile residence on Spruce street for D. T. Reutt, 124 W. Central avenue, to cost $15,000. S. P. Connors, Titusville, superintends the erection.

Toledo, O.—C. C. Whitmore, 1514 Nicholas building has purchased a site on the Genevieve Addition, on which to build a 2½-story brick and stone residence to cost $12,000. Will not mature for several months.

Columbus, O.—Plans are well on by Architect F. S. Rus’k, Brunson building for a two-story brick and stone terrace to be built at Seventeenth and Fulton streets, for Myron A. Smith, 631 Oak street who will take bids on separate contracts about July 18th.

Toledo, O.—Wm. Bassart, 117 Delaware street, has been awarded the contract to build two store brick veneer apartment building for Harry Silverman. Building will cost $12,000.

Springfield, O.—Bids are now being asked for the erection of a two-story brick building for the St. Joseph Roman Catholic Congregation. Plans for the work are made by Architect R. F. Gable Bushnell building.

Lima, O.—Architect Frank L. Packard, Hyden building, Columbus. Will take bids until August 5th on the construction of a three-story brick residence to be built for the board of Commissioners of Lima State Hospital. Work will cost $12,000.

Craffton, W. Va.—E. R. Clark has private plans for a two-story brick residence to cost $4,000. No date has been set for closing bids.

Lancaster, O.—Dr. Walter Scott is ready for bids next week for building a 2½-story brick residence on Fifth avenue. Plans were made by Architects Howell & Thomas, Columbus.

The same architects have plans for an $8,000 bungalow to be built for F. M. Davis who will take bids about July 23rd.

C. Fred Kim will take bids about the 20th inst for constructing a two-story brick and stone trim residence, plans for which were made by Architects Howell & Thomas, Columbus.

Lima, O.—No date set for closing on the erection of a two-story brick residence for M. M. Kindtner, Architects McLane&Hulsien, Central building prepared the bids.

Pennsboro, W. Va.—Plans under way by Architects Holabue & Lafferty Empire building, Clarksburg, for a 2½-story brick and tile residence to cost $10,000 for H. L. Lambert Pennsboro W. Va., who will be ready for bids about July 18th.

Toledo, Pa.—Astron Boon has private plans for the erection of a two-story brick residence to cost $4,500. No date set for closing.

Tiffin, O.—Architect George Netheri, will build and buy material for a 2½-story brick residence, for C. J. Schmidt 116 Holl street. The work will cost $2,500.

Arnold, Pa.—Architect W. J. Laughlin, New Kensington, has plans in progress for a 2½-story brick residence, for Thomas R. Moree, at a cost of $5,000.

Columbus, O.—Architect Forrest S. Rusk, Brunson building, will be ready for bids about July 20, on a two-story brick and stucco residence, for Mrs. Dooy. The work will cost $4,500.

Cleveland, O.—No date set for closing on a two-story brick residence for A. B. Jones, plans for which were prepared by Architects Steffens & Steffens. The building will measure 32x32, and will cost $6,500.

Marietta, O.—Mrs. H. Meredith has private plans for a two-story brick veneer residence, to be built at a cost of $4,000. No date has been set for closing the bids.

J. Sterckin is taking bids on a two-story brick veneer residence, to be built at a cost of $4,000.

Parkersburg, W. Va.—George H. Sandburg has private plans for a three-story brick apartment building, to be built at a cost of $15,000.

Toledo, O.—Architects Wachtler, Bellman & Schreiber, Nicholas building, has plans in progress for a 2½-story stucco residence for Paul W. Haroch, Lincoln Apartments, to be built at a cost of $8,000.

Architects Langdon & Hohl, Nicholas building, will be ready for bids about...
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July 22, on a 2½-story brick residence for Dr. Herbert H. Simard, Fairpark avenue. The work will cost $8,000.

Architects Wachtler, Beckman & Schrieber, Nichols building, have plans in progress for a three-story pressed brick and cut stone apartment building, for Charles Watchler, Cozy road, to be built at a cost of $30,000.

West Mentor, O. — No date set for closing on a two-story frame country residence, for C. C. Bolton, Hickox building, Cleveland, plans for which were prepared by Architects Meade & Hamilton, Garfield building, Cleveland, & Hamilton, Garfield building, Cleveland, have plans well under way for a 1½-story stone country residence, for Stanley Tucker, 118 Noble street, Cleveland.

Altoona, Pa. — Plans will be completed in a short time by Architect Millard for a two-story frame residence, to be constructed for J. J. Wiles.

Butler, Pa. — Garver & Craig, E. Pearl street, received the contract to build a two-story brick residence for J. E. Kraogel, 138 New Castle street.

Columbus, O. — Bids will close on the 24th inst. for building a terrace on Oakwood and McAllister avenues, for Edward Evans, 1153 S. Main street. Plans were made by Architect H. Charles Jones, Deshler building, Cost, $7,000.

New bids will be taken until the 22nd inst. for constructing a terrace on Nineteenth street, for Dr. J. H. Hamilton, 1060 Mt. Vernon avenue. Architect Miller Parson, 306 Deshler avenue, prepared the plans.

Architects Stirling & Lam, Denison Ferson building, are revising plans for a 1½-story brick bungalow to be built at Walahalla Park, for Dr. J. B. Scott, 33 N. High street. Bids will be taken shortly.

Charleston, W. Va. — Bids are to be taken until the 28th for erecting a two-story brick residence on Quarry street, for H. Carver; plans by Architect David Dick.

S. D. Maxwell received the contract to build a two-story brick apartment on quarry street, for E. B. Dyer, the work to cost $15,000.


Franklin, Pa. — The contract will soon be awarded for constructing a 2½-story brick residence on Fifteenth street for W. J. Bleakley, 1225 LiBerery street. Bids are in the hands of Architects Brady & Brady.

Rochester, Pa. — Bids are being taken by Architect E. N. Mathews, Leaf & Shingle residence on Virginia avenue, for J. W. Hunter.

Rome, O. — Architect J. A. Jones, Dispatch Annex building, Columbus, is revising plans for a 1½-story frame bungalow to be built for Vonnie Weston, E. Grant avenue, Columbus.

Akron, O. — A building permit has been issued for the erection of a brick and tile store and residence building on Water street for William Wert, 377 Wooster avenue.

Belleville, O. — Architect Frank L. Hetchings has plans for a two-story apartment building, to be built on Sandusky and Red River streets, for Harold Emmerson. The work will cost $7,000.

Columbus, O. — Architect J. A. Jones, Dispatch Annex building, will be ready to take bids next week on a two-story brick terrace on Tompkins avenue and 131 high street, for A. H. Andrews, Lovell and Lynn streets. The work will cost $12,000.

Knox & Phillips, 2158 W. Broad street, will be ready to take separate bids on a two-story brick residence building on Eight street, for John F. Stone, 65½ N. High street, plans for which are being prepared by Architect H. Charles Jones, Deshler building.

Cincinnati, O. — Architect Max Kau, 2241 Stratford avenue, has plans for a 2½-story apartment building on Prospect and Knoth avenues, for P. F. Braham Building Company, 206 Union Central building, at a cost of $7,500.

Architect Oscar Schwartz, Union Central building, has plans for a 2½-story brick apartment building on Mt. Hope road, Price Hill, for Charles Fedgeman, 954 W. Fifth street. Cost, $48,000.

Cleveland, O. — Bids are in on a three-story brick apartment building at Wade Park, for the Heckre Realty Company, 303 Leader building, plans for which were prepared by Architect William Harsh, 1332 Euclid building.

Parkerburg, W. Va. — J. McCall Martin has awarded G. M. Carter a contract to build a two-story frame residence building at a cost of $5,000.

Toledo, O. — Architect J. W. Matz, 314 Nashy building, will be ready for bids next week on a two-story brick store and apartment building, in Lucas county, for Mrs. A. Spyrsi, to cost $10,000.

— Plans will be ready for bids soon.

New Brighton, O. — The contract has been awarded to R. B. McDaniel Company, New Brighton, for a two story brick bakery building for the Home Baking Company, to cost $40,000. The work will be started at once.

Business Buildings.

Alliance, O. — The Williams Estate, Ruggerly building, Columbus and Architect Chas. L. Inchen, Brunson building, are taking bids on the erection of a three story brick store and apartment building, 52 by 70 feet. No date set for closing bids.

Clarksburg, W. Va. — Sketches by Architects Holmboe & Lafferty, for a four story brick and loft building, for Judge Nathan B. Goss, to cost $35,000. Plans have been approved.

Cleveland, O. — Plans have been completed by Architects Hubbell & Benes Avenue building for a two story brick and concrete, telephone building.

Architect Louis Lehle, 64 W. Randolph street, Chicago is preparing new plans for the erection of a two story brick reinforced concrete stock house, for Leidy Brewing Company, on Vega avenue, to cost $100,000. Owner will take bids about July 30th.

Architect Ralph Hecker, Leader-News building, Cleveland, has completed the plans for a one story, reinforced concrete, brick store and public garage, on Broad street, for Loomis & Ambler, to cost $5,000.

Elyria, O. — The contract has been awarded to Nieding & Ross, Elyria Block, for the erection of a two-story frame store building on Broad street, for Harry H. Smith, to cost $5,000.

Columbus, O. — Patrick McAllister secured the contract to build a two story brick and stone trim, store and apartment building on N. High street for A. R. Creamer, Washington Court House, O. Work will start soon.

Enterprise, W. Va. — Architect I. W. Hartley, has plans in progress for a two story brick lodge building, for K. of P. care Dr. T. L. Mutter Enterprise. Architect will be ready for bids soon.

Lima, O. — Architect McLaughlin & Hulsen, have plans for a one story brick and concrete fireproof, ware house, for The Ohio Steel Foundry Company. Will be ready to take bids about July 20th.

Louisville, Ky. — The National Concrete Construction Company, has secured the contract for the erection of a seven story brick storage building on Green street for The Fireproof Storage Company, to cost $40,000.

— The contract has been awarded to R. B. McDaniel Company, New Brighton, for a two story brick bakery building for the Home Baking Company, to cost $40,000. The work will be started at once.
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PITTSBURGH, PENNSYLVANIA
Springfield, O.—Architect Robert C. Gotwald, Gotwald building, has plans for a three-story brick store and apartment building, on W. Main street, for Kelly-Walcox Marble Company, E. Main street. Plans will be ready for bids about July 21st.

Lima, O.—Architects McLaughlin & Husken, have plans completed for one story brick and steel semi-fireproof bank addition, for the Gramm-Bershein Company. Owner is taking separate bids.

Titusville, Pa.—C. A. Wright was the low bidder for a two-story brick and tile store and apartment building, for Frank Cicelis, S. Franklin street. Plans made by Architect C. L. Coleman, Ithaca.

Glenville, W. Va.—Kanawha Union Bank will soon select an architect to prepare plans for a two-story bank building to cost $8,000.

East Palestine. O.—Plans will be completed about July 22nd, by Architects Clepper & Owens, Youngstown, for remodeling a business block owned by Mrs. Ida Faley, East Palestine.

Warren, O.—Architect C. F. Owスley, Mahoning Bank building, Youngstown, will have plans for an eight story brick and steel and reinforced concrete bank and office building. The building will measure 112x210 feet, for Western Reserve National Bank, to cost $130,000.

Parkersburg, W. Va.—Martin-Nelige Company has awarded R. L. Brown the foundation contract for a three-story brick grocery building, to be built at a cost of $60,000.

Toledo, O.—Architects Langdon & Holley, Nicholas building, have plans in progress for a two-story brick store and apartment building, for Mark Estate, 438 First street, to be built at a cost of $14,000.

Beckley, W. Va.—L. F. Crozier is taking bids on the erection of a store and office building, for E. M. Payne, the work to cost $15,000. Mr. Crozier is also taking bids for a bank and office building which he will construct for the Raleigh County Bank, the work to cost $35,000.

Marion, O.—John Baldauf was awarded the contract to build a store, apartment and garage, three stories and basement, for Louis Prazzo, N. Main street. The building will measure 47x165 feet.

Cleveland, O.—The Star Baking Company, Twentieth street, will build a one- and two-story building from plans which were made by Architect H. P. Kehr, Mutual Life building, Buffalo. The building will measure 112x210 feet and will cost $60,000.

Meadville, Pa.—L. Bouquin, Oil City, was the low bidder for constructing a one-story brick and stone office building for the United Natural Gas Company, Oil City, Pa.

Oil City, Pa.—The Western Building Company, Iroquois building, Buffalo, was the low bidder for erecting a three-story brick and stone office building on Seneca street, for the United Natural Gas Company.

Akron, O.—No date set for closing on a one-story brick and timber warehouse for R. B. Biscuit Company, 215 Bridge avenue, plans for which were prepared by Architect O. K. Stapf, 1917 Rose building, Cleveland.

Cleveland, O.—Architect F. Sullivan Fish, 307 Superior building, has plans in progress for a two-story frame store and apartment building, for Andrew Pawlak, Leader News building.

Marietta, O.—William Harrington has selected Architect C. N. Hoey to prepare plans for a three- or four-story brick store and office building on Court House Square, at a cost of $30,000.

Toledo, O.—The De Vore-McGormley Company, Nesbitt building, will take bids next week on a four story brick and steel semi-fireproof warehouse building for the Barbauer Company, Libby street.

Architects Mills, Rhines, Bellman & Nordoff, Ohio building, has been selected by E. H. Close Realty Company, 612 Madison avenue, to prepare plans for a three-story brick and steel fireproof warehouse building on St. Clair street.

Martins Ferry, O.—Schip & Foust were the low bidders on a two-story brick and steel store, theatre and lodge building on Fourth street, New York City, for the Odd Fellows & Red Men's Association. Architect F. E. Fois, Schmulbach building, Wheeling, W. Va., prepared plans for which were made by Architect C. F. Rowdy, 72 Young building.

Youngstown, O.—Architects Knox & Elliott, 1243 Rockefeller building, Cleveland, has plans in progress for an office and theatre building, for Youngstown Hippodrome Company.

Religious.

Clarksburg, W. Va.—Architect S. W. Ford has plans for a one story frame church, for Baptist Church to cost $5,000. Will be ready to take bids about July 15th.

Marion, O.—Emanuel Lutheran Congregation will soon select an architect to make plans for a two story brick church on Vine and Church streets to cost $25,000.

The Second Church of Evangelical Association, expects to select an architect to make plans for a one story frame or brick church on Greenwood and Mark streets to cost $6,000.

Cleveland, O.—St. Josaphats Congregation has selected Architect A. T. Wasielewski, Minneapolis, to make plans for a one story church building, to be built at a cost of $50,000.

Edgewood City, Pa.—Architects Fulton & Butler, Utica, have bids in progress for a two-story brick and stone church building, for the United Presbyterian Congregation. The work will cost $30,000.

Gibsonburg, O.—Architects Langdon & Holby, Nicholas building, Toledo, will be ready for bids about July 25, on a 1½-story cut stone and cement church building, for the Evangelical Congregation, to be built at a cost of $13,000.

Oil City, Pa.—Bids close July 29 on a two-story brick and stone church addition, for the First Presbyterian Congregation, plans for which were prepared by Architect Joseph Breon. The work will cost $12,000.

Roverlsburg, W. Va.—Architect S. W. Forić, Union Bank building, Clarksburg, will take additional bids on a one-story brick and stone church building, for the M. E. Congregation, at a cost of $12,000.

Columbus, O.—Bids will be taken next week by Architect Leon E. Stanger, 105 S. LaSalle street, Chicago, for a one-story and basement brick and stone church building for the First Church of Christ. The building will measure 90x120 feet, and cost $75,000.

Greensburg, Pa.—The plans of Architects Gram & Ferguson, 35 W. Forty-second street, New York City, for the proposed church building of the First Presbyterian Congregation, are being completed. The work will cost $250,000.

Glendennin, W. Va.—The Northern M. E. Congregation is asking sub-bids on the erection of a one-story brick building, 40x60 feet, to cost $15,000.

New Cornerstown, O.—Fred D. Jacobs, who has the general contract for building a one-story brick vaneer and stone trim church building for the First M. E. Congregation, will take sub-bids on the work.

Cleveland, O.—Schaefer Memorial Church, care Rev. H. R. Whiting, 1900...
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Marston avenue, has awarded Thomas Biggerstaff, 619 Bayley avenue, a contract to build a church building on 1200 Nixies avenue, plans for which were made by Architect W. & Mills, 1335 Schofield building. The work will cost $20,000.

Fairport, O. — Architect Franz War­ner, 718 Hippodrome building, Cleveland, has plans well under way for a two­story brick church building, for the Fin­nish Lutheran Congregation. The work will be completed at a cost of $20,000.

Newark, O. — W. B. Patton was the low bidder for a two­story brick addition to St. John's Evangelical Church, at a cost of $7,000. Plans for the work were made by Architect W. R. Patton, 25 E. Pearl street.

Norwood, O. — The Norwood Presby­terian Church contemplates the erection of a brick church at a cost of $35,000.

Education.

Athens, W. Va.—The State Board of Control will take new bids shortly for a two story brick and reinforced concrete normal school building addition, at a cost of $10,000. H. R. Warne, Charleston, prepared plans.

Hickory, Pa.—J. J. McClear, Hickory, has been awarded the foundation contract for school building, for Mt. Pleasant Consolidate Public School to cost $40,000. Architect C. L. Whitaker, Dra­vosburg, made the plans.

Mantua, O. — The contract for a two story brick and reinforced concrete freeproof school building has been awarded to Loomis & Seymour Construction Company, Ravenna. Work to cost $25,000.

Marion, O. — The contract for a two story brick and concrete school building for the Board of Education, has been awarded W. S. Handsky & Sons, Zanes­ville. Architects Allen & Hall, Haydn Clinton building Columbus, prepared plans.


Waldo, O. — The Board of Education of Waldo Township will probably vote on bond issue August 4th. Architect has not yet been selected to make the plans for a two story brick school building, to cost $36,000.

Warrensburg, O. — (L. D. Hetrick & Bros, Columbus, have been awarded the contract for a two story brick school building, for the board of Education of Warrensburg.

Mutual, O. — The Board of Education Union township ask for bids August 1st, on a one story brick, fireproof school building, to cost $20,000. Architect A. W. Stover & Company Springfield, prepared plans.

Gomer, O. — Architect McLaughlin & Hulsker, Central building, Lima, have plans in progress for a one­story brick school building, for the Board of Education, at a cost of $18,000.

Rochester, Pa. — Bids close July 23 on rebuilding and remodeling a two­story brick school building, for the Board of Education, plans for which were prepared by Architect P. E. Mathe­wes. The work will cost $30,000.

Swanton, O. — Architect J. W. Matis, Nashy building, Toledo, has prepared plans for a one­story brick school building, for the Board of Education, at a cost of $10,000.

Williamstown, W. Va. — The Board of Education has awarded Eugene Er­noigh, Parkersburg, the contract for a two­story brick school building, plans for which were made by Architect W. J. Alexander, Parkersburg. The work will cost $4,500.

Youngstown, O. — Architect C. F. Osvald, Mahoning Bank building, has plans for a 2/4­story brick school building, for the Board of Education.

Cresson, Pa. — The Pennsylvania Lumber Company, South Fork, Pa., re­ceived the contract to build a two­story brick and hollow tile school addition, for the Board of Education. Lawrence Branch, South Fork, has the cut stone, brick and concrete work.

Hudson, O. — Architect J. W. C. Cor­busier, Lenox building, Cleveland, will be ready for bids about August 15 for constructing a two­story brick and rein­forced concrete high and grade school building, 65x106 feet, for the Board of Education. Cost $60,000.

Warrensburg, O. — L. D. Hetrick & Brothers, 708 S. Ohio avenue, Columbus, received the contract to build a two­story brick school building, 65x74 feet, for the Board of Education.

Fremont, O. — The Board of Education has awarded Roddell, Pink & Ehrler contract to remodel a school building on State street, for the Board of Education.

Cincinnati, O. — Specifications are be­ing written by Architect A. Lincoln Heckenheimer, Lyric Theatre building, for a two­ and three­story brick and terra cotta fireproof building, for the University of Cincinnati. The work will be completed at a cost of $175,000.

Manufacturing.

Warren, O.—Jas. L. Sturt Company Cleveland, was awarded the contract to build a brick and reinforced concrete, fireproof factory building, for Chicago­Cleveland Car Roofing Company, Cleve­land, at a cost of $30,000.

Cleveland, O.—The Warren Refining Company, has selected the Osborn Engineering Company, Engineers building, Cleveland to make plans for a three­story reinforced concrete and brick fac­tory building, at a cost of $30,000.

Beaver Falls, Pa.—Architect A. L. Allen, Euclid building, Cleveland, has plans in progress for a steel coal and ash handling machine for the Ingram­Richardson Manufacturing Company. Bids will be taken about July 30th.

Cleveland, O.—Architect Albert Kahn, Detroit, will take bids on a factory addition to F. B. Stearns Company about July 29th.

Architects Christian Schwarzenberg & Gaede will take bids soon on a three­story brick and steel factory addition, to K. & E. Blance Makers. No date set for closing bids.

Younger & Farmer, 1670 Crawford road have been awarded the contract for a three­story brick and steel factory addition, to Hornburgh & Beat, at the cost of $18,000.

Columbus, O. — Architect has not been selected to prepare plans for a two­story lumber mill, for E. A. Frent­zke, Armstrong street.

East Palestine, O. — Architect Clep­ner & Owings, Youngstown, have plans nearly completed for a one­story brick factory addition, to the East Palestine Knitter Company, at a cost of $8,000.

Owens Station, O. — The Marion Na­tional Mill Company contemplates the erection of a two­story concrete or brick or corrugated iron lime plant, at a cost of about $10,000. Project to mat­ure about August 1.

Toledo, O. — The Schmidt Hardwood Company has been awarded a contract to build a one­story brick ma­chine shop and warehouse on Libbey street, for Owens Bottle Machine Com­pany, at a cost of $22,000.

Beaver Falls, Pa. — Bids will be taken about August 1, on an addition to a brick factory building, for the Ideal Tool & Manufacturing Company.

Toledo, O. — Toledo Bowling Green & Southern Traction Company, Findlay, O., has awarded M. Rabbitt & Sons Company, Nashy building, a contract for a one­story brick freight shed, 40x 100 feet.
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WARREN, O.
Youngstown, O. — Architect C. J. Ott, K. of C. building, has plans for a brick cold storage plant for Smith Brewing Company, 507 W. Federal street, to be built at a cost of $27,000.

Architect Ott will have plans completed next week for a one-story brick addition, for the Youngstown Carriage Company, E. Boardman street.

Vermilion, O. — The DeVore-McGormley Company, Nasby building, Toledo, have plans for a one-story concrete, brick and steel fireproof factory building, for the Wakefield Brass Company.

Cleveland, O. — Architect John Graham, 306 Woodburn avenue, Detroit, is receiving bidders on the erection of a mass assembly plant, 157x274 feet, four stories, for the Ford Motor Car Company, Highland Park, Mich.

Meadville, Pa. — Bids will close on the 20th inst. for constructing a one-story addition to the plant of the Meadville Malleable Iron Company. The building was designed by Architect E. J. Weaver, Crawford Trust building and will measure 90x140 feet.

Youngstown, O. — A one-story and basement building 10x1190 feet, is to be built for the Toledo Bread Company, from plans which have been prepared by Architects Stanley & Scheibel, Wick building. The contract will be awarded at an early date.

State, County and Municipal.

Youngstown, O. — Architect J. L. Decker has new plans on for a three-story brick, terra cotta and stucco sanatorium, to be erected at a cost of $90,000.

The City of Youngstown is to have a concrete bridge built across Fifth avenue, this to be a 300-foot reinforced concrete ribbed arch, 64 feet wide. City Engineer R. A. Booth, has the plans.

Cleveland, O. — Lehman & Henderson, have been awarded contract for the South interceptor sewer, for the City of Cleveland, at a cost of $125,000.

Marion, O. — City of Marion has awarded the Toledo Asphalt Block & Pavement Company a contract for 2,000 feet brick paving, concrete foundation, about 24 feet wide, at a cost of $1,158.

The Toledo Asphalt Block & Pavement Company has been awarded contract to grade and pave Cleveland avenue, the work calling for 1,200 feet of brick or asphalt block paving, stone or concrete curbing and concrete foundation.

Oil City, Pa. — Bids for the erection of a two-story brick armory building, for the State Armory Board, have been rejected, and the time for taking new bids is indefinite.

Keyser, W. Va. — Bids close August 1 on a two-story brick and steel dormitory building, for the State Board of Control. Plans were made by Architect H. Rus Warne, Capitol street, Charleston. The work will cost $35,000.

Bellevue, O. — Bids close August 4 for the grading and graveling of Anderson-Bell Pike, by the Board of County Commissioners, at a cost of $17,000. The work consists of five miles of macadam.

Xenia, O. — Engineer N. J. Sherman has been selected by the City of Xenia to make plans for a concrete sewerage disposal plant at a cost of $40,000.

Parkersburg, W. Va. — Engineer Meredith & Nicholson, Marietta, has plans in progress for a reinforced concrete or steel bridge near Williamstown, for the Board of County Commissioners of Parkersburg.

Kittanning, Pa. — Engineer S. D. Foster, Harrisburg, has plans completed for a state road, for the State Highway Department. The work consists of 2½ miles brick paving, 16 feet wide, with concrete foundation and curb.

Ebensburg, Pa. — Three additional wings are to be built to the court house at Ebensburg for the Board of County Commissioners of St. Johns County. Plans for the work are under way by Architect James R. Gordon, 507 Fifth Avenue, New York City.

Lowellville, O. — The Village of Lowellville contemplate the building of a sewage system, the work to consist of seven miles of vitiﬁed sewer pipe. Preliminary plans are being made by Wm. Wilson, Youngstown.

Tarentum, Pa. — John Welch, Midland, Pa., received the contract to build a power house for the Borough of Tarentum.

Hotels.

Clarksburg, W. Va. — Hannah J. Coleman and Architect Edward J. Wood, are taking bids on a two-story brick, ﬁreproof hotel on Main street, at a cost of $30,000.

Lima, O. — Lima Hotel Company contemplate the erection of a three- or four-story brick hotel addition. Details have not yet been decided; may mature later in summer.

Springfield, O. — Architects Drach & Miller, have started plans for remodeling the Arcade hotel, Fountain avenue. Uncertain when project will mature; held up for the present.

Johnstown, Pa. — The Johnstown Hotel Company has awarded the Cambria Steel Company the structural steel contract for a seven-story brick and terra cotta ﬁreproof hotel building, plans for which were made by Architects Janssen & Abbott, Century building, Pittsburgh.

Charleston, W. Va. — The Kanawha Hotel is to undergo interior decorating, plastering, tile work and hardwood trim. Bids are being taken by Architect David Dick.

Youngstown, O. — An eight-story brick and stone hotel building is contemplated by J. H. McGraw. No details have been decided.

Johnstown, Pa. — The Johnstown Hotel Company has awarded M. M. Sleeley & Sons the excavation and concrete contract for a seven-story brick and terra cotta, ﬁreproof hotel building on Main street and Potts Place.

Society and Club Buildings.

Struthers, O. — Architects Miller & Ford, Youngstown, have plans well on the way for a two-story brick lodge building, for the Knights of Pythias, at a cost of $8,000.

Youngville, Pa. — I. O. O. F. No. 500, is having plans made by Architect J. V. Kinnear, Ridgway, for a three-story brick lodge building and offices at a cost of $15,000. Owner will take bids at once.

Urbana, O. — The Masonic Temple Association has selected Architect William T. Mills, Columbus, to make plans for a two-story brick and steel temple, at a cost of $40,000.

Columbus, O. — Bids close July 27 on a three-story brick and stone, ﬁreproof building, for the Board of Trustees of B. P. O. E. plans for which were made by Architect Frank L. Packard, Hayden building. The work will cost $160,000.

New Brighton, Pa. — Architects Boyd & Stewart, Century building, Pittsburgh, have preliminary plans for a three-story brick and stone building, for the New Brighton Y. M. C. A. The work will cost $40,000.

Oil City, Pa. — Meals & Johnson were the low bidders on the completion of a four-story brick building, for the Y. M. C. A., plans being made by Architects Slattuck & Hussey, 19 LaSalle street, Chicago. The work will cost $25,000.

Buchannon, W. Va. — The Pythian Lodge of West Virginia, O. G. Rife, president, Wayne, W. Va., has selected a site on which to build a $125,000 structure. No action has been taken towards the selection of an architect.
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Theatres.

Byran, O. — A one-story brick reinforced concrete moving picture theatre building is to be built for George D. Jones, 309 Schofield building, Cleveland, O. The building will measure 44x132 feet. Plans for the work have been made by Architect George Kempbell, England building, who will take bids at once.

Columbus, O. — A two-story brick and concrete nickelodeon is to be built on N. High street, near Fifth avenue, for Dr. Clovis Taylor. Bids on the work will be taken August 1.

Franklin, Pa. — Bids have been rejected and new bids will be asked by Brown & Dill, Liberty street, on the erection of a two-story brick and steel theatre building, plans for which were made by E. E. Bailey Company, Oil City.

Aliquippa, Pa. — Architects Schollar & Hersh, Aliquippa Trust Building, have plans for a three-story brick theatre and office building 55x120 feet to be built for A. Notopulis, Eleventh Avenue. Bids will be taken about the 25th inst.

Toledo, O.—Bids will soon be asked by Architects Thy & Atell, Ohio building, on the construction of a one story and basement brick motion picture theatre building 40x120 feet for the Orient Feature Company.

Hospitals.

Covington, Pa. — Covler Hospital has private plans in progress for a two-story brick hospital building, to cost $30,000.

Indian View, O. — C. C. Hobbs, 6733 Buckingham Place, Madisonville, Cincinnati, is taking sub-bids on an addition to the tuberculosis hospital building in Hamilton county, for the Rockhitz Sanitarium. The work will cost $9,000.

Springfield, O.—No date set for closing on a two-story brick hospital, reinforced concrete fireproof hospital building, in Clark county, for the Citizens Hospital, plans for which were prepared by Architect A. W. Stover & Company, 505 Fairbanks building.

New Kensington, Pa. — Architect S. F. Heckert, Bessemer building, Pittsburgh, has preliminary plans in progress for a three-story brick and stone fireproof hospital building, Fourth and Eighth avenues, for the Citizens General Hospital, at a cost of $50,000.

Miscellaneous.

Cincinnati, O. — The Cincinnati Ice Company has private plans for a three-story brick ice plant, which will have a capacity of 120 tons daily.

Ebensburg, Pa. — A one-story brick garage will be built on High street for E. W. Mohler, Hassen building. Bids on the work will be taken until the 21st inst.

Springfield, O. — The Board of Education, High School building, will hold bids next week on installing a mechanical hot air furnace system of heating in the McKinley school building.

Toledo, O. — F. R. Stahl, Builders Exchange, has been awarded the contract to build a three-story brick and terra cotta garage on Adams street, for the Robert P. Tiedo Auto Company. The building will measure 100x100 feet.

Ebensburg, Pa. — Bids close next week on a one-story brick and concrete garage, 50x80, on High and Julian streets for W. C. Mohler, plans for which were prepared by Architect W. S. Powell, Johnstown, Pa. The work will cost $7,000.

St. Paris, O. — Architect C. F. Bowdler, 72 Young building, Piqua, O., has plans in progress for a one-story brick, glass and steel greenhouse, for John Kiser.

Sub-Contract Notes.


NO LIEN CONTRACTS.


A. R. Rice Company vs. John Davis Enterprise Company, a corporation. Agreement made July 6 and filed July 7, 1914, to do the wrecking and excavating and perform all work necessary for the brick masonry, etc., required for the theatre, loft and arcade building in Second Ward, for $41,372.


James L. Stuart vs. William Penn Hotel Company a corporation. Agreement made July 7, and filed July 8, 1914, to provide all materials and perform all work for the excavating, etc., for the building being erected at corner of Sixth avenue and Cherry Way, Pittsburgh.

John Thomas vs. Alice Craft Hardy. Agreement made July 6 and filed July 11, 1914, to do the plumbing and gas fitting work in two houses to be erected on Steubenville Pike, near Noble avenue, Crafton. Cost $1,800.

Johnston & Morris of Carnegie vs. Alice Craft Hardy. Agreement made July 6 and filed July 11, 1914, to build two houses on Steubenville pike, near Noble avenue, Crafton, for $8,261.

Cut Stone.

Downey & McDermott, Pittsburgh, received contract for residence, Pittsburgh; owner J. H. Barton, Pittsburgh.

Electric Work.

Lima Heating & Plumbing Company, Lima, O., received contract for residence, Lima; owner, Henry S. Eick, Lima.

Dormont Electric Company, Dormont, Pittsburgh, received contract for residence, Dormont; owner C. F. Rankin, Pittsburgh.

Marble Work.

Patrizio Art Mosaic Company, Pittsburgh, received contract for picture theatre building, Pittsburgh; owner, R. A. Rowland, Pittsburgh.

Buckeye Marble Company, Cincinnati, received contract for refuge home, Glendale, O., owner City of Cincinnati, O.

Mill Work.

Kuntz Brothers, Rochester, Pa., received contract for store and apartment building, Rochester; owner, M. Carese, Rochester.

Oil City Wood Working Company, Reno, Pa., received contract for store and lodge building, Oil City, Pa.; owner L. O. O. F., Oil City.

F. M. Hill, Pittsburgh, received contract for residence, Pittsburgh; owner, J. H. Barton, Pittsburgh.

Hyde-Murphy Company, Ridgway, Pa., received contract for residence and garage, Pittsburgh; owner, Charles Driftm, Pittsburgh.


August Lisbeck, Jamestown, N. Y., received contract for church, Warren, Pa.; owner, Pentecostal Church, Warren, Pa.

Bishop Planing Mill Company, Elkins, W. Va., received contract for store and...
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Bobzum Bros.
CANTON, OHIO.
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DAYTON, OHIO.
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COLUMBUS, OHIO.
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Franklin Building Supply & Coal Co.
CINCINNATI, OHIO.
W. J. Pugh.
COVINGTON, KY.
Reaumonde Supply Co.
VANWERT, OHIO.
Wilson & Gram.
office building, Bowers, W. Va.; owner, Davis Collieries Company, Elkins.

Molten Lumber Company, Lima, received contract for store and apartment building, Lima, O.; owner, D. C. Dunn, Lima.

**Ornamental Iron.**

M. J. Davidson, Beaver Falls, Pa., received contract for store and apartment building, Woodlawn, Pa.; owner, John Harrison, East Liverpool, O.

**Plastering.**


W. C. Bunyan & Company, Wyoming, O., received contract for refuge home, Glendale, O.; owner City of Cincinnati, O.

James Gatwood, Pittsburgh, received contract for residence, Pittsburgh; owner, Mrs. Luella Schmidt, Pittsburgh.

McNulty Brothers, Pittsburgh, received contract for picture theatre building, Pittsburgh; owner, R. A. Rowland, Pittsburgh.

Bogart Plastering Company, Bluffton, Ohio, received contract for store and apartment building, Lima, O.; owner, D. J. Dunn, Lima.

**Plumbing.**

Cox Plumbing Company, Weston, W. Va., received contract for church, Weston; owner, St. Patricks R. C. Congregation, Weston.

**Heating.**

Farquar Heating Company, Lima, O., received contract for apartment building, Lima; owners, Dun Building Company, Lima.

R. T. Withers & Son, New Castle, Pa., received contract for school building, New Castle, Pa.; owners Board of Education, New Castle.

**Structural Steel.**

Van Dorn Iron Works, Cleveland, received contract for enameling plant, Cleveland; owner, Enamel Products Company, Cleveland.

Pittsburgh Bridge & Iron Works, Pittsburgh, received contract for school building, Vanport, Pa.; owners, Board of Education, Vanport.

**Roofing.**

American Cement Tile Manufacturing Company, Pittsburgh, received contract for enameling plant, Cleveland; owners, Enamel Products Company, Cleveland.


Scott A. White, Pittsburgh, received contract for residence, Pittsburgh; owner, A. J. Kelly, Jr.

Ludowici-Celadon Company, Pittsburgh, received contract for church building, Weston, W. Va.; owner, St. Patricks R. C. Congregation, Weston.

Knitz Brothers, Rochester, Pa., received contract for store and apartment, Rochester; owner, M. Carcase, Rochester.

South Hills Hardware Company, Pittsburgh, received contract for residence, Dormont, Pittsburgh; owner, Mrs. A. E. Stewart, Pittsburgh.

P. LeGouillon, Pittsburgh, received contract for residence, Pittsburgh; owner Mrs. Luella Schmidt, Pittsburgh.

**COURT HOUSE TO BE ENLARGED**

The McKean County Commissioners, Smethport, Pa., expect to make selection of an architect soon to prepare plans for an addition to be built to the Court House. This will be of brick and stone construction and will measure 30x60 feet, the cost to be $56,000. It is probable that bids will be asked about August 1.

**HOSPITAL UP FOR BIDS.**

The Longview Asylum for Insane, Carthage, O., and Architects Elzie & Anderson, Ingalls Building, Cincinnati, will take bids until August 4 on the erection of a three or four story brick and stone trim hospital building. The building specifications will include face brick, brick mantels, interior mill work of white pine, quartered oak, etc., fireproof windows, turndoors, composition roofing, ornamental iron, fire escapes, cut stone, etc. The building will cost $130,000.

**SPRINGFIELD TO HAVE PLANT.**

A light manufacturing plant is to be built at Springfield, O., by E. L. Shuey, Central and Superior avenues, Dayton, O., plans for which are being made by Architects Schenck & Williams, Arcade building, Dayton. The building will be five stories high, measuring 190x200 feet and will have steel sash, ventilators, composition roofing, steam heating system, electric lighting, etc. The main construction work will be of reinforced concrete.

**CONTRACT FOR CHURCH TO BE AWARDED SOON.**

Bids close on the 18th inst for constructing a one story brick and stone church building for the Roman Catholic Congregation, Wilmerding, Pa., plans for which were made by Architect John T. Comes, 1405 Fifth Avenue, Pittsburgh. The building will measure 55x130 feet and will have cut stone, reinforced concrete foundations, structural steel, metal lath, interior mill work of clear cypress, white pine, etc., composition roofing, face brick, hollow brick, marble and tile work, etc. The heating, lighting and plumbing work will be reserved.

**CLEVELAND SCHOOL TO BE AWARDED.**

Bids will close August 3rd on the general contract to construct a two-story brick and reinforced school building on E. Ninety-third street, Cleveland, O., for the Board of Education. The building will be 190x430 feet and was designed by Architect R. C. McCormack. It will contain 22 rooms, an auditorium, kindergarten, domestic science department, etc., and will be erected at a cost of $130,000. Specifications will call for reinforced concrete foundations and floor construction, gypsum block partitions, composition flooring, face brick, cut stone, fireproof doors, granolithic flooring, composition roofing, etc. The structural steel will be a separate contract.

**CHAPMAN'S MAKING NEW FLOORING**

Chapman's store at Wheeling, W. Va., is displaying tie for mantels, bath rooms and floors through the medium of a series of rooms completely fitted as they would appear in the home, with mantel and tile work installed.

During the last month they have purchased the formula for Petrosilo, a new sanitary flooring which is laid in the form of a cement over a cork cushion on new or old wood floors, cement, iron, etc.

The Chapman firm are installing Petrosilo floors on order and are manufacturing it for the general trade. It comes in a variety of colors. The formula is protected by United States patents.

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GENERAL NEWS.

Architect Chas. Mathews has moved from Midland, Pa., to Beaver, Pa.

Bids on the lighting fixtures for the new church building of the Second Presbyterian Congregation, Oil City, Pa., will soon be taken by owners.

The Iron City Marble Company, Conneaut, Ohio, was awarded the contract for erecting the new addition to the Carnegie Library, Northside, Pittsburgh.

The Riverside Bridge Company, Martins Ferry, Ohio, secured the structural steel work for the central power station, to be built at Clarksburg, W. Va., for the Clarksburg Gas & Electric Company.

Bids are in and the contract for building a two-story brick and stone church building for the Grace Methodist Congregation, Lima, Ohio, will be awarded in a short time. This will be 80x120 feet in size and will cost about $60,000.

The tile work for the Rogers school now under course of construction by the Board of Education, Pittsburgh, has been awarded to the Morris Graf Company, Wilkinsburg. The steel will be furnished by the John Eichleay, Jr., Company, Pittsburgh.

The steel work for the bank and office building for the Union Savings Bank & Trust Company, Steubenville, Ohio, will be furnished by the Pittsburgh Bridge & Iron Works, Pittsburgh. The owners will take bids on banking fixtures at once.

F. F. Schellenberg Company, Pittsburgh, which has the contract to erect a post office building at Bellaire, Ohio, has sublet the bill work to the Queen City Sash & Door Company, Milwaukee. The steam heating and plumbing will be done by Sumwalt & Son, Baltimore.

Sub-contracts for erecting the City Hospital at Steubenville, Ohio, are being awarded by the Guy Johnson Contracting Company, Toronto, Ohio. The steel work has been placed with the Weirton Steel Company, Weirton, W. Va.; electric lighting, Anderson & Son, Steubenville; plumbing, J. Frazer Heating & Ventilating Company, Steubenville; roofing, W. A. Helms, Steubenville.

The Erie Mantel & Tile Company, Erie, Pa., reports having secured the marble, tile and mantel work for the new residence of E. S. Schlanderer, W. Twenty-first street, Erie; mantel and tile work for residence of T. B. Brown, Bradford, Pa., and all the tile work necessary in the remodeling of the City Hall building, Erie.

The mill work framing and trim for the new $200,000 Y. M. C. A. building at Youngstown, Ohio, has been awarded to the Roach-Missy Sash & Door Company, Muscatine, Iowa. The fireproofing has been let to the Gypman Fireproofing Company, 1710 Broadway, New York City and the electric work to Rohwell-Gutham Electric Company, Cleveland.

Frank Limbach, Lowrie Street, North Side, secured the sheet metal work on the rectory for St. Anthony's Congregation, Millvale, Pittsburgh.

The New Kensington Fiber Plaster Company, New Kensington, Pa., will furnish the plaster for the new addition to the Arnold, Pa., school building; parochial school at New Kensington, Pa., apartment building at Arnold, Pa., for H. Foringer and residence at New Kensington, Pa., for James H. Bole.

NO SETTLEMENT MADE.

The labor trouble existing in the building trades throughout Pittsburgh may be settled before the end of the week. While this is not a certainty it can be accomplished if the new men employed as hoisting engineers secure their old positions on the river and the old body of hoisting engineers reinstated in the Building Trades Council. The committee of five representing the various labor organizations will make a report late this week. Should it be unable to decide the question as to which body has jurisdiction, the whole matter will be arbitrated under the management of the State Department of Labor.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>$87,611,000</td>
</tr>
<tr>
<td>1913</td>
<td>$78,791,000</td>
</tr>
<tr>
<td>1912</td>
<td>$60,400,000</td>
</tr>
<tr>
<td>1911</td>
<td>$66,433,000</td>
</tr>
<tr>
<td>1910</td>
<td>$53,719,000</td>
</tr>
</tbody>
</table>

PAINT PEELING FROM BRICKWORK.

Several reasons are given by painting authorities for paint peeling from brick work. When paint is applied too soon after repointing, the lime in the mortar destroys the oil in the paint by saponification. The process of peeling may be accounted for as follows:

Peeling invariably begins at the joints. Here the mortar, if fresh, or improperly mixed, had a chance to blister or saponify the oil in the paint. First there is a slight abrasion, then an open wound in the paint film. The first rain permits moisture to seep into the brick pores behind the protecting coat and in winter freezing forces off other parts of the paint over the brick itself. In summer the action of the sun on the wet surface draws the alkalies in the lime or cement mortar joint and soon loosens the paint from the brick surface. If bricks are greasy when laid up, paint will not adhere well to them. If the paint is applied over a coat of soot, so thick as to form an absorbent blister for the paint oils before they reach the brick texture, peeling also is likely to result. It is not wise to use paint weak in oils on brick properties for the absorptive powers of the brick require more oil than wood or metal does.

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NOTICE TO CONTRACTORS.

Sealed bids will be received by the Commissioners of Beaver County, Pa., up until 12 o'clock noon of Thursday, July 23, 1914, and will be opened at a meeting of the Commissioners to be held at a later hour, for steel jail equipment in the Beaver County Jail. Each bid must be accompanied by a certified check, as noted in specifications, as a guarantee of good faith in bidding; said check to be forfeited to Beaver County if successful bidder fail to furnish satisfactory bond and enter into contract for the price bid, within ten days after award of contract. Checks of unsuccessful bidders will be returned to them immediately on the awarding of the contract. The check of the successful bidder will be returned to him immediately upon the execution of the contract. Plans and specifications must be returned to commissioner's office with bid.

Satisfactory bond, approved by the County Commissioners, for the full amount of the contract price will be required of the successful bidder.

Plans and specifications and full information can be secured at the office of Carlisle & Sharrer, Architects, 7119 Jenkins Arcade, Pittsburgh, Pa., and at Commissioner's Office, Court House, Beaver, Pa.

The Commissioners reserve the right to reject any and all bids.

By order of the County Commissioners.

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ESTABLISHED 1888

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Subscription price $5 per year in advance.

Entered February 1, 1901, at Pittsburgh, Pa., as second-class mail matter, under Act of Congress March 3, 1879.

Advertising Rates on Application.

Papers are not stopped at the end of subscription unless the subscribers order them so and pay up the arrearages.

Ingram School Up for Bids.

Architect P. C. Dowler, Arrott building, Pittsburgh, has completed plans and is taking bids on the construction of the $100,000 school building, which will be erected for the Board of Education, Ingram, Pa. This is to be a two-story and basement structure, brick and stone construction and will contain 14 rooms and auditorium. Bids will be taken until August 3. The Board will take separate bids on the heating, lighting, plumbing and ventilation.

New Plant for Warren.

The United States Insulator Company, Wick building, Youngstown, has private plans under way for a one-story building 60x100 feet and a two-story building, 20x300 feet which will be of brick or reinforced concrete construction, steel frame. Building requirements will consist of steel sash, skylights, steel rolling doors, cement flooring, etc. In addition to power equipment the company will require electric haulage equipment, clay mixing machines, shafting, pulleys, belting, etc.

Altoona to Have Theatre Building.

Architects Sholler & Hersh, Altoona, Pa., have plans completed and will soon take bids on the construction of a three-story brick fireproof theatre and office building, for A. Notoporti, Eleventh avenue, Altoona. The building will measure 55x120 feet. The following material have been specified: metal bath, sidewalk lights, hollow tile, ventilators, fireproof doors, ornamental plaster, ornamental iron work, structural steel, marble and tile work, leaded glass, etc.

Take School Bids Next Week.

The Board of Education, Cincinnati, O., will take bids next week on the construction of a two-story and basement brick fireproof school building on War saw avenue. The building will be 110x 140 feet and will contain class rooms, auditorium and swimming pool. Architects Samuel Hannaford & Son, Hulbert block, Cincinnati, who prepared the plans, have specified hollow tile fireproofing, metal bath, metal window sash and frames, cement floors and finish, face brick, etc. The cost of the work will be $115,000.

Lorain to Have Large School.

Plans for the enlargement of the high school building at Lorain, O., for the Board of Education, are now being made by Architect H. E. Ford, Hennecker building, Lorain. The new work will call for a three-story addition 145x 188 feet, brick and reinforced concrete construction, to contain 21 class rooms, manual training and domestic science departments, auditorium, etc. Bids on the new work will be taken about August 1. Material to be specified will consist of composition roofing, fire doors, skylights, ventilators, face brick, reinforced concrete foundations, concrete foundations, concrete roof and floor construction, etc.

Warren Bank to Build.

Preliminary plans are now under way by Architect C. F. Onley, Mahoning Bank building, Youngstown, O., for an eight-story bank and office building, to be erected at Warren, O., for the Western Reserve National Bank at a cost of $150,000. The building will measure 40x180 feet and is to be built of brick, steel and reinforced concrete. The first floor will be used for banking purposes and the remainder of the building for offices. Plans and specifications for the work will be ready for bids about August 24. It has not been decided whether the building will have a terra cotta or granite exterior.

Springfield's Memorial Building.

Plans for the proposed brick and reinforced concrete memorial building, to be constructed at Springfield, O., for the Clarke County Memorial Building Committee have been completed by Frank L. Packard, 16 E Broad street, Columbus, O. The building will be one and three stories high. The front of the building will be 140x160 feet. The material to be used in the construction work will include face brick, reinforced concrete, ornamental plaster, terra cotta, galvanized iron work, fire doors, vacuum cleaning system, sidewalk lights, passenger and freight elevators, etc.

Specifications Completed for Columbus School.

Architects D. Riebel & Son, New First National Bank building, Columbus, O., have completed specifications for the proposed $200,000 grade school to be constructed on Stader avenue for the Board of Education, Columbus. The building will be 155x195 feet, two stories and basement, built of brick and stone with structural steel frame, concrete foundations, face brick exterior, ornamental iron, cut stone, marble and tile work, waterproofing, fireproof doors, vacuum cleaning system, hollow tile partitions, maple and yellow pine flooring, suspended ceilings, sheet metal work, etc.
Local Venting of Plumbing Fixtures Versus Safety First
By IRA A. MANN.

The “Slogan of Safety First” is attracting the attention of thinking people who are in a position to be of practical benefit to mankind, and we are all beginning to realize that it is better to correct a cause than it is to deal with an effect.

Are we, as plumbers and sanitary engineers, giving the subject “Safety First” any serious consideration when designing or installing the work that is entrusted to our care? Do we study the conditions and give sufficient amount of time to considering the complications that can arise from our neglect to look into the minute details concerning our work?

We are engaged in a business, the prosperity of which not only means a living to ourselves, but in gaining our livelihood, we are not only entrusted with the health of the people occupying the buildings upon which we are working, but also the health of the community at large, and we should be conscious of the importance of our work at all times, and would it not be well to stop and consider if we are heeding this “Safety First” warning?

The engineers interested in building construction are endeavoring to bring about a better state of health through adherence to sanitary laws, but how many of these engineers are considering the laws of bacteriology in connection with sanitation? Does the designer of sanitary plumbing fixtures endeavor to make his work conform with the ideas that will lessen the spread of microorganisms, or does he say, “We hear too much about bacteria and microbes, I do not believe in the theory?”

I have talked with a number of persons who are in charge of, and are responsible, for the construction of sanitary lay-outs and installations. These persons tell me that they do not believe in the theory of microbes, bacteria, etc., and, because they do not believe it, that is all that is necessary. The question is settled and it needs no further investigation. It seems to me that an attitude of this kind is taking them very far from the “Safety First” warning. One who assumes an attitude of this kind may have an effect to deal with that is more troublesome than the cause.

I have given considerable thought and some study, to the published works regarding bacterial life. With a thought of “Safety First” I have compared our system of local venting of plumbing fixtures and the utility corridors back of public water closets, with the statements found in these works by eminent physicians.

There is but one of two courses left to the advocate of local venting if he wishes to heed the warning of “Safety First.” This is either to prove the bacteriologist to be wrong in his statements of pathogenic germs, or to abandon the idea of venting plumbing from a point where the excreta cannot splash against the sides of the vents.

While I am not an alarmist or an agitator, except for the good of mankind, I believe this subject should be given a thorough investigation, and if one-half of the things I believe about it are true, the practice of local venting and placing corridors back of plumbing fixtures should be stopped.

I trust this article will call forth a liberal discussion of the subject through all of our trade and medical journals.

The terms “local venting,” “back venting,” “loop venting,” etc., are so confusing to the average person that I am attaching some sketches which will explain what I mean by local venting and the utility corridors, and I will ask you to consider them in connection with this article.

To be explicit, I will state that in speaking of local vents I do not refer to the vents used in connection with the sewer or soil system of plumbing, and I believe the system of venting the sewers and soil pipes as practiced at present, is proper and conductive of the best sanitary results.

In referring to local vents, let me explain what they are and what the excuse is for using them. There is no sanitary need of making them.

If you will refer to Sketch No. 1 you will note a plain syphon jet bowl with local vent horn and a rough sketch of
the vent piping and fan as installed in a Ward School with which I am familiar.

The opening at the top of each closet bowl is connected into a sheet metal pipe connected with a main duct that leads to a mechanically ventilated shaft. This shaft usually terminates above the roof and the air is drawn in through the opening in the plumbing fixtures and exhausted into the air from the end of the ventilating shaft.

The gases, dust, etc., emitted from this shaft will find their resting place according to their respective specific gravities.

In Sketch No. 2 we have a wall outlet closet bowl with a crack at the floor, to make cleaning easy, and the manufacturers have guarded against the entrance of sewer air into the building by making a water sealed outlet pipe.

The office this local vent is intended to safeguard the public health, they have overlooked the real danger point and placed an opening at the top of the bowl to catch the splashing excreta and store up the particles for future delivery in the form of bacillus-laden dust.

After taking all these precautions to perform is to remove the odors arising from the excreta and the gas emitted from the body while the fixture is in use, and it also provides means of ventilating the toilet room by forcing air through the opening in the bowl above the water level into the vent ducts.

In Sketch No. 3 I show a section of a stall urinal (as adopted by a certain Public School Board) with sewer trap below the floor and a local vent taken off from the waste pipe between the fixture and trap.

This local vent is connected to some mechanically ventilated duct or shaft similar to Sketch No. 1 and a current of air is drawn through the waste strainer.

The object of this vent at this point is to afford means of ventilating the toilet room, and primarily, to prevent the odor arising from the warm urine entering the room.

The utility corridors referred to are shown in sketch No. 4. These corridors are made for a number of so-called reasons—

Sometimes the local vents on the closets are connected direct into the corridor, which, in this case, serves as a ventilating shaft.

A great many times the flush valves, tanks, etc., are placed in these corridors and special provision is made to afford a mechanical opportunity to make repairs to the concealed boxes, tanks and valves.

While making repairs the mechanic is given the privilege of inhaling the dust in the corridors gratis. He also has the privilege of scattering it indiscriminately about the building and taking a portion of it home on his clothing.

Let us go into his matter and sum up the advantages derived from this system of plumbing construction, the dangers to health that arise from its use, and also consider the additional cost incurred through installing these ducts and corridors.

From a mechanical standpoint, I can find no excuse for making the utility corridor, as the piping and plumbing fixtures can be installed without special construction of any kind, and the construction of this corridor is a needless expenditure of money and a waste of floor space.

There are numerous mechanical objections to using local vented fixtures, but if there are any mechanical advantages, I am not familiar with them. This venting system is also needless expenditure of money, as the toilet rooms can be effectively ventilated without passing the air separately through each fixture.

While considering the hygienic side of this question, I would like to insert the following self-evident statements, and compare each of these assertions with the practice of local venting, and draw our conclusions from the facts concerning the dangers that can arise from this practice.

There is a publication entitled "Preventative-Medicine and Hygiene" by Dr. Milton J. Rosenau, Dean of Medicine of Harvard University, and I would ask anyone interested in these subjects to read this publication, especially Pages No. 627 to 629 and No. 630 to 635.

Compare Dr. Rosenau's statements regarding bacteria with my idea regarding local venting of plumbing fixtures. If I have erred in my judgment, will someone please set me right on this matter and refer to some standard work that will make the case clear and comprehensible?
According to all medical authority, the gases and odors arising from the excreta or emitted from the body, are sterile, and it would be practically impossible to contract any disease from inhaling them.

According to Dr. Rosenau, even the breath is comparatively sterile and it would be practically impossible to contract disease by inhaling it.

He goes further and states that there are but two diseases that can be air-borne and there is comparatively little proof to support this theory.

Pathogenic germs, then, do not exist in the gases or air unless they are sprayed into it or carried on particles of dust.

The conclusion must be that by local venting we are removing an order that is not dangerous to health.

2.—It would be impossible for the bacteria existing in the wet excreta to be carried by the air, except in the form of a spray, and the distance this spray is carried is determined by the force exerted on the particles, and these particles eventually fall according to the law of gravitation.

Then, it must be the engineer's work to set where these particles are deposited, and it should be his duty to remove every portion of the wet feces from the building before there is any danger of the minutest particle becoming dry.

3.—It is an established fact that a large percentage of the milk, butter and some meats used as food contain a greater or less percentage of tubercle bacilli. If this infected food is eaten by a healthy person, it can be carried through the digestive organs and passed from the bowels without affecting the health of the individual, or destroying the bacilli. In this case, the feces of a healthy person would contain tubercle bacilli. On the other hand if the person had tubercle trouble of any kind, the feces would contain a greater or lesser number of bacilli, according to the stage of the disease or the part of the body affected.

This would include the urine, as well as the faces, and in some cases, the percentage of tubercle bacilli would be very high. In the face of this assertion it should be a duty to be positive that there is no vent horn or duct so placed that the feces to some counter-action that will kill the bacteria before it can become dry.

5.—Where there is an infection of the kidneys and bladder, the urine will carry tubercle bacilli and other bacteria, and should be treated in the same manner as the feces.

6.—The process of drying the excreta in a dark place like a vent duct does not destroy the bacilli. If excreta is reduced to a dust, the particles are easily blown about, especially when they are exhausted into the air from a vent duct.

Dr. Rosenau devotes a chapter in the book mentioned above to the subject of dust and the danger from inhaling it.

7.—It is an established fact that tubercle bacilli live several weeks in the open air. If one ever thinks of "Safety First," would it not be well to think of the consequences of blowing this dust from dried excreta into his neighbor's face?

If one ever thinks of "Safety First," would it not be well to think of the consequences of blowing this dust from dried excreta into his neighbor's face?

The effect upon the health of a person who inhales tubercle will depend upon his physical condition and his ability to ward off disease. Even if it does affect him, it will not necessarily follow that tuberculosis will develop, but an irritation of the throat may result and be referred to as a cold, bronchitis, etc.

I have heard that in certain parts of the South the inhabitants deal roughly with a person who shoots a vulture, as they consider them as scavengers, yet we construct a ventilating system which blows pathogenic germs into our very faces, and call it science.

8.—The air of any building occupied by pupils should be free from bacteria, and as a large percentage of the feces is bacteria, is it not dangerous to allow the dust from the feces to be blown into any school building? Still, a reverse of currents in a ventilating system is liable to fill a room full of this dust from the vent horns of closets and urinals.

This is getting a long way from "Safety First."

9.—It is an established fact that tubercle bacilli live several weeks in the open air and it certainly is had practice to allow dust from the feces to be blown about in the open air where it can be inhaled by either persons or animals. Still, with this system of local venting there is nothing to prevent a constant supply of the dried excreta being blown into the air from the outlet of the vent shaft.

10.—It would be difficult to trace an individual case of any particular disease to this dust being blown about.
However, doctors have realized for years that dust is a potent factor in communicating disease. It is an indisputable fact that the feces contain a greater or less number of tubercle bacilli, and scattering the dust of the feces about, does in no wise lessen the liability of contracting tuberculosis; and does not lessen the work of fighting the “White Plague.”

If I have erred in any of the above statements, I trust I will be publicly corrected, as the object of this article is to correct a practice that I believe is wrong. It is not my idea to establish any new system of ventilation, but I wish to correct the bad part of the existing practice as far as it is dangerous and expensive.

I maintain that all toilet rooms should be ventilated. However, the vent openings should be so placed that there is no possibility of the minutest particle of the excrement or urine coming in contact with the sides of the vent ducts or pipes. This ventilation should be arranged with the idea of introducing pure air into the toilet rooms, as well as to remove the objectionable odors.

From the best authority available, we must admit that the odors we are endeavoring to remove are absolutely sterile, so there is no occasion to worry about disease from the odors, and it is not imperative that they should be removed instantly.

Also, according to the same authority, the dust from dried feces is not sterile, it carries no odor, and can be inhaled without the knowledge of the one breathing it. The smallest particle of the excreta should never be allowed to dry until it has been sterilized or reduced in a purification plant.

It is impossible for the bacteria forming the larger portion of the excrement to be carried in the air while it is wet, and it should be removed from the toilet rooms as soon as possible.

If the feces contain pathogenic germs, and if the germs can be communicated to mortals more readily when in the form of dust, we ought to exert our efforts to prevent the feces from becoming dust.

I have examined a number of different styles of closet bowls having local vent horns, beginning with the old washout bowls, used as far back as 1890, up to the ones used today, and I have yet to see one where it would be impossible for the excreta to splash into the horn. Added to the fact that the excreta can splash into the vent openings, we must take into consideration the fact that the draft from the ventilating system which is attached to this horn, would draw the spray further into the opening or duct and deposit the small particles on the sides of ducts at a point where they could dry, and at some future time be blown out into the air, or by a reversal of the air currents be returned through some vent opening into the room as particles of dust.

The Sketch No. 1 shows a closet bowl as adopted by a Public School Board. In this bowl the local vent is raised above the top of the rim and the vent openings are between the water and the flushing rim.

I was informed that those in charge of this work for the School Board removed over fifty closet bowls to make an examination of the ducts, and all they found was a deposit of dust. They considered this as evidence that the system of local ventilating is correct. I was unable to ascertain if they made any bacterial tests of the dust, or if there were any bacteria in the dust. However, I was given to understand that the finding of nothing more than dust, proved the system to be correct, and they are installing the same system in all of the new buildings.

It has been a recognized fact for a number of years that our public buildings should be constructed of impervious materials. Architects have rounded the corners, used panelless doors and endeavored to eliminate every crack where dust can lodge. If it is good practice to use impervious materials in finishing our rooms, why construct a dark, dust-filled, bacilli store-house back of the water closets in the form of a utility closet?

I have inspected numerous toilet rooms that are mechanically ventilated from a point outside of the plumbing fixture, and I have found the air as pure and wholesome as I did in the ones that are ventilated through the fixture itself.

This system of ventilation where the opening is removed from the immediate locality of the fixture has a number of mechanical advantages over the local venting.

1.—The piping is more simple and the cost of piping is reduced.

2.—Being less complicated, it does not interfere with the necessary sanitary piping in connection with the plumbing fixtures.

3.—It eliminates the necessity of special closet bowls and cheapens the first cost on this fixture.

4.—It expedites repairs, as all special closets are difficult to obtain when needed on short notice.

My opinions in regard to this matter are gathered from a practical knowledge of this construction and the utility corridors and local vents, together with my investigation regarding the dangers from bacteria and the manner in which it is carried in the air.

The only excuse I can find for the practice of local venting is lack of knowledge of the science of bacteriology. The majority of us believe that as long as there are no unpleasant odors, the air in the room is sterile.

I fail to find any medical authority to support the theory that systems like the Smed Wells or local venting (for they are similar in construction) will cause an epidemic of any kind. However, on the other hand, there is indisputable evidence that the dust from either of the above systems is liable to be impregnated with pathogenic germs and that this dust is detrimental to the health of the community, through individuals. If no epidemic occurs, we imagine that things must be running along as they should and an occasional case of sickness cannot be avoided.

Some would be afraid to go into a room where a person had typhoid fever or to inhale the fumes arising from wet infected feces, still they think nothing about the dangers from inhaling the dried excreta in the form of dust, and these persons will argue in favor of a local vent, because it removes an offensive odor.

Will some reputable medical doctor make the public assertion that it is impossible for the dust from our utility corridors and local vent ducts to affect

(Continued on Page 22.)
Pittsburgh.

Architect S. S. Boman, McCormick building, Chicago, is revising the plans for a one-story addition to the First Church of Christ Scientist, Clyde street near Fifth avenue. The work will cost $8,000.

Bids close July 28 on a 2½-story brick residence building for Berthold Frosch, 1200 Chislett street, the plans for which were prepared by Architect W. K. Beltz, 6212 Stewart street. The work will cost $8,000.


Bids will close August 1 on a three-story brick hotel building, for James J. Coyne, 63 Bates street. Private plans. The work will cost $10,000.

W. F. Trimble & Sons, 1719 Pennsylvania avenue, Northside, have secured the contract to build a two-story brick and fireproof emergency station building, for the Pittsburgh Railway Company, Sixth avenue, plans for which were made by Architect F. Udleshaut. The building will cost $10,000.

The Excelsior Club, 94 S. Thirteenth street, has awarded John Karrenbauer, 192 Arlington avenue the contract to build a one-story brick club building, at a cost of $7,000. The plans were prepared by Architect Edmund B. Lang, 804 Penn avenue.

Rose & Fisher, Pennsylvania avenue, Northside, have been awarded the contract to build an addition to a one-story stone church, for the Ben Avon U. P. Congregation. Plans made by Architect R. M. Trimble, 705 Ferguson building.

Architect F. A. Park, 5415 Kinsed street, is preparing plans for a 2½-story brick veneer residence building, for Mrs. Daily, care Edward D. Eichenhau, 920 Jancy street, to be built at a cost of $5,000.

The City of Pittsburgh has awarded Brown Brothers, 1513 Potomac street, the contract to build a two-story brick dairy barn at a cost of $24,000. Architect J. P. Brennan, City Hall, prepared the plans.

No date has been set for closing on three 2½-story brick and hollow tile residence buildings, for H. P. & E. M. Marsh, 7042 Northumberland street, plans for which were prepared by Architect D. A. Crone, Oliver building. The buildings will cost $3,000 each.

The Shaler Township School, care John McDowell, R. F. D. No. 2, Glenshaw, will select an architect next week to make plans for a two-story brick school building, to be built at a cost of $20,000.

Architect S. F. Heckert, Bessemer building will receive bids until July 25 on erecting a one-story brick fireproof garage and warehouse on Thirty-ninth street, for the Petroleum Products Company, Grant Boulevard and Ridge avenue. Cost $10,000.

Henry Shenk Company. Century building, has started work on altering the interior of the Duquesne Club on 325 Fifth avenue, to cost $8,000. Plans by Architect Edward Stetz, Almonagahela Bank building.

The Seventh Presbyterian Congregation will receive estimates until July 30 on altering the interior of the church on Mt. Lebanon and Potomac avenues, to cost $2,000. Plans by Architect C. W. Hodgdon, 810 Penn building.

Architects MacClure & Spahr, Keystone building, will receive bids until July 25 on erecting a one-story frame residence addition on 5050 Forbes street, for Henry Graham Brown, Tenth street and Duquesne way. Cost $1,200.


Architect W. E. Shuman, Empire building, awarded to the Greenfield Lumber Company, McKees Rocks, the contract for erecting four two-story brick residences on Perrysville avenue, for George E. Diets, 139 Ninth street. Cost $9,000.

Architects Cooley & Fisher, Century building, have plans in progress for a five or six-story brick fireproof bakery addition on Houston street and Pennsylvania Railroad, for the Liberty Baking Company. Cost $90,000.

Charles Boehmer & Son, 1956 Straub avenue, have started excavations for a two-story brick veneered and cement plaster bungalow, to be erected on Perrysville avenue for Samuel Hunter, 829 Beaver avenue. Cost $4,500.

Architects MacClare & Spahr, Keystone building, awarded to Henry Shenk Company, Century building, the contract for erecting a residence addition on 624 Clyde street, for Mrs. J. H. Hammond, Clyde street. Cost $8,500.


Toupet, Beil & Conley, Oliver building, have been awarded the contract to construct a reinforced concrete warehouse on Lambert street, East End, for the East Liberty Wholesale Grocery Company. The work to cost $35,000.

The Hunting-Davis Company, Century building, have been selected to prepare plans for the proposed warehouse to be constructed on Duquesne way and Evans alley, for the Rosenbaum Company. The building will be six stories high and will measure 55x22 feet. It will be of brick and reinforced concrete construction and will have a garage on the first floor. The estimated cost is $100,000.

Bids are being taken by Architects Janssen & Abbott, Renshaw Building, for the construction of a 2½-story brick and stone residence and a 2½-story garage to be built on Woodland Road, near Williams for Edward Pitcairn 5916 Callowhill street. The work will cost $50,000.

C. E. Lee, 319 Barnes Street, Wilkinsburg, received the contract to build a 2½-story brick residence in Dormont for A. S. Reese.

D. T. Riffie Keenan Building, was the low bidder for constructing a one and
The pump illustrated is a Double-Acting Type Goulds Pyramid, built in five sizes, capacities ranging from 12 gallons per minute to 114 gallons per minute, and for total pressures up to 175 feet. All sizes in Pittsburgh stock for belt drive. Direct Connected outfits can be furnished in one week, mounted either on cast iron base or on channels and plate as illustrated.

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two story brick and reinforced concrete factory building on Lincoln avenue, North Side, for the Gem Manufacturing Company. The building will be 132x137 feet in size.

The City of Pittsburgh will ask bids until the 30th inst. for constructing a number of granolithic sidewalks throughout the city. Plans are in the office of W. S. Sprague, Oliver building.

The contract for furnishing metal windows in the new Pennsylvania freight and office building on the Northside, Pittsburgh, has been placed with J. Willis Dalzell, House building, Pittsburgh, representing the Willis Manufacturing Company, Galesburg, III. Mr. Dalzell also secured the contract to furnish the interior mill work for the new $50,000 residence of A. M. Moreland, Pittsburgh.

### Apartments and Dwellings.

**Altoona, Pa.** — Clarence Mountain contemplates the erection of a two-story brick residence building, 2x30, at a cost of $3,000.

**Cincinnati, O.** — J. M. Wolfe has awarded H. C. Hubbell, First National Bank building, the contract to build a 2½-story brick residence building on Blair avenue, at a cost of $7,000.

No date has been set for closing on a two-story pressed brick apartment building, for Linel Kugerman, 2344 Ohio avenue. Architect Max Kau, 2241 Stratford avenue, made the plans. The work will cost $7,500.

Eads close at once on a 2½-story brick apartment building for the National Housing Company, plans for which were prepared by Architect Max Kau, 2241 Stratford avenue. The building consists of 12 apartments at $3,000 each.

**Charleston, W. Va.** — W. T. Gayer has awarded the Central Engineering Company a contract to build a two-story brick residence building on Quarrier street, plans for which were prepared by Architect A. C. Higgenbotham.

**Elola, O.** — J. B. Halpin, 30 Chestnut street, has secured a contract to build a two-story pressed brick residence building for E. H. Steffins, Williamson building, Cleveland, at a cost of $15,000.

**Findlay, O.** — John Fisher, Oakmont, has been awarded the contract to build a 1½-story brick and shingle bungalow for F. Kemena, plans for which were prepared by Architect Pierre Lieech, 18 Fourth avenue, Aspinwall, at a cost of $6,000.

**Oil City, Pa.** — Louis Swartzkopf will take new bids at once on a 2½-story brick and tile residence building, plans for which were prepared by Architect Paul A. Bissman, Lorain. The work will cost $10,000.

**Terra Alta, W. Va.** — Charles Spindler, Kingwood, has secured a contract to build a 2½-story frame and shingle residence building, for the State Board of Control. Architect Johnn Warne, Charleston, prepared the plans. The work will cost $4,000.

The State Board of Control has awarded Charles Spindler, Kingwood, the contract to build two 1½-story frame and shingle cottages, at a cost of $600 each.

**Allegheny Furnace, Pa.** — Architect Julian Millard, Altoona, has plans nearly completed on a two-story stone residence building, for F. W. Bockman. Cost $12,000.

**Altoona, Pa.** — No date set for closing bids on a 3-story brick apartment building for Joseph Klosi, plans for which were prepared by Architects Shoatsl & Hersh, Union Trust building. The work will cost $20,000.

**Altoona, Pa.** — No date set for closing bids on a three-story brick apartment building for Joseph Klosi, plans for which were prepared by Architects Shoatsl & Hersh, Union Trust building. The work will cost $20,000.

Architect Julian Millard is preparing plans for a two-story brick and stone residence building, store and auditorium building, for the Protestant Episcopal Congregaton, at a cost of $30,000.

**Ambridge, Pa.** — James Hink has awarded Paul Blanek a contract to build a two-story brick store and apartment building on Merchant street. Plans were prepared by Architect Henry Law.

**Charleston, W. Va.** — Architect David Dick has started plans for a two-story brick residence building on Pennsylvania avenue, for B. A. Brawley. The work will cost $8,000.

**Cincinnati, O.** — Architects W. W. Franklin & Son, 528 Walnut street, have completed plans for a 2½-story pressed brick residence and office building, on Dorchester and Josephine streets, for Dr. Charles C. Smith, 224 Dorchester street.

**Cleveland, O.** — A. Garber, 101 South street, Lorain, is taking sub-bids on a two-story frame residence building, for Charles Bonser, 301 Twelfth street, Lorain, at a cost of $6,500.

**Dayton, O.** — No date set for closing on a three-story brick apartment building, on Hickory and Horton avenues, for Mrs. L. Rike, plans for which were prepared by Architects F. J. Hughes & Company, U. B. Annex. The work will cost $25,000.

**Ebensburg, Pa.** — Architect W. S. Powell, Johnstown, has plans in progress for a two-story brick residence building for John A. Shetler, to cost $5,000.

**Lorain, O.** — No date set for closing on a two-story frame residence building on Ninth street, for R. W. Mills, 1008 N. Ninth street, plans for which were prepared by Architect H. T. Durmer.

**Penna Boro, W. Va.** — Architects Holmboe & Lafferty, Empire building, Clarksburg, have completed plans for a 2½-story brick and tile residence building, for H. L. Lambert. The work will cost $10,000.

**Wheeling, W. Va.** — Bids close next week on a 2½-story brick and tile residence building, for H. C. Whitaker, plans for which were prepared by Architect E. F. Fransheim, Schumback building, at a cost of $25,000.

**Willoughby, O.** — No date has been set for closing on a 2½-story stone country residence building for Stanley Tucker, 1856 Nineteenth street, Cleveland, plans for which were prepared by Architects Meads & Hamilton, 1002 Garfield building, Cleveland.

William Bingham has awarded R. J. Brakeman, 110 Bank street, Painesville, a contract to build a two-story frame residence building, plans for which were made by Architect Abram Garfield, 915 Garfield building, Cleveland. The work will cost $5,000.

**Oakmont, Pa.** — Architect E. B. Lee, Pittsburgh Bank for Savings building, plans in progress for two tile and stucco residence buildings, to be built for private parties.

**Washington, Pa.** — Plans will be completed about August 7 by Architect E. B. Lee, 12th floor Pittsburgh Bank for Savings building, for a tile and cement stucco residence building, for William McKay Smith. The work will cost $7,500.

**Akron, O.** — F. A. Seiberling has awarded the Hayden Company, New York City, the contract for the interior of a 2½-story brick, stone and stucco and steel residence building, plans for which were made by Architect Charles S. Schneider, 2248 Euclid avenue, New York.

**Chillicothe, O.** — C. N. Notch, W. Second street, contemplates the erection of a two-story brick and tile residence building, plans for which were prepared by Architects F. J. Hughes & Company, U. B. Annex. The work will cost $25,000.
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tion of a two-story brick residence building, at a cost of $5,000.

Columbus, O. — C. A. Silby, 103 W. Patterson avenue, has secured the contract to build a two-story stucco on metal lath residence building, for Clyde S. Reed, 30 E. Broad street, plans for which were made by Architects Howell & Thomas, 151 E. Broad street.

John Atzinger, 55 E. Main street, has awarded H. J. Eickemeyer, 702 Gamblitt Place avenue, the contract to build a two-story brick and stone residence building, at a cost of $6,000. Plans were prepared by Architect J. U. Gribben, 935 Columbus Savings & Trust building.

Dunbar, W. Va. — R. C. Rhem has been awarded the contract to build three two-story frame residences, for Scher - Morton Company, Parkersburg, plans for which were made by Architect Davie Dick, Charleston.

Elyria, O. — E. S. Brown, Lodi and Lake streets, has private plans for a two-story frame residence building, to be built at a cost of $6,000.

Franklin, Pa. — Wayne J. Bleakley, 1225 Liberty street, has awarded U. H. Fethelman the contract to build a 2 1/2-story brick vencer residence building, plans for which were prepared by Architects Brady & Brady, Franklin Trust building. The work will cost $15,000.

Maysville, Ky. — Architects Weber, Werner & Atkins, 414 Walnut street, Cincinnati, have plans in progress for a 2 1/2-story brick residence building, for E. T. Kirk to be built at a cost of $15,000.

Meyersdale, Pa. — Architect George Samsbury, Cumberland, will have plans completed about August 16 for a two-story single residence building, for H. B. Snyder, to be built at a cost of $4,500.

Titusville, Pa. — Roscoe Ferdick, E. Main street, has awarded S. P. Conners the contract to build a one-story frame residence building, at a cost of $3,500.

Warren, O. — Architect Thomas Coe, 105 Main street, has preliminary plans in progress for a 2 1/2-story brick residence building, for W. Templeton, Stiles avenue. The work will cost $4,000.

S. Ernest, N. Elm street, is taking bids on a 2 1/2-story frame residence building, plans for which were made by Architect Thomas Coe.

No date has been set for closing on a 2 1/2-story brick residence building, for M. Chatley, Main street, to be built at a cost of $5,000.

No date has been set for closing on a 2 1/2-story brick residence building, for R. A. Sheats, Belmont avenue, Architect Thomas Coe, 103 S. Main street, prepared the plans.

Bethesda, O. — W. H. Patterson & Son, Barnesville, have secured the contract to build a two-story brick and tile residence building, for D. V. Orrison, plans for which were made by Architect Charles W. Bates, Board of Trade building, Wheeling.

Cetina, O. — Architect Joseph N. Udel, Wapakoneta, is preparing plans for a two-story brick residence building, for St. Johns Lutheran Church, to be built at a cost of $5,000.

Cleveland, O. — The Commonwealth Realty & Building Company, 719 Garfield building, contemplates the erection of 19 two-story frame residences, at a cost of $25,000 each.

Architect A. Sharowsky, 4005 Woodland avenue, has plans for a two-story brick apartment building, for Norrey Brothers, 273 E. Fifty-first street. The work will cost $7,500.

Architect Paul Wilkes, 10418 Adams avenue, is taking bids on a two-story brick residence building, for D. H. Thomas, 1450 E. Fifty-seventh street, to be built at a cost of $5,000.

Plans for a two-story brick apartment building have been completed by Architect George E. Rudolph, Stoneham building, for the M. Frank Realty Company, 10614 Pasadena avenue. The building will cost $10,000.

Bids on a two-story frame residence building close August 1 for A. T. Whitehouse, 719 E. One Hundred and Eighteenth street. Plans were prepared by Architect J. D. Aley, 131 E. One Hundred and Thirty-eighth street.

Architect George E. Rudolph, Stoneham building, has plans for a two-story brick apartment building, for the M. Frank Realty Company, 10614 Pasadena avenue. The work will cost $13,000.

Plans have been completed by Architect M. Altschuld, 2548 E. Fifty-sixth street, for a two-story brick apartment building, for M. Berton, 2398 E. Forty-sixth street, to be built at a cost of $14,000.

Cleveland, O. — Architect A. F. Janowitz, 746 Eicoln avenue, has plans completed for a two-story brick apartment building, for E. B. Birmingham, 3144 Fulton road. The work will cost $7,500.

Columbus, O. — Architects Dawson & Hollowell, 613 Outlook building, are preparing plans for a two-story brick residence building, for C. A. Woodward, 128 Battles avenue, to be built at a cost of $6,000.

Elyria, O. — Architects Henry Beck, Masonic Temple building, is preparing sketches for a two-story brick apartment and laundry building, 40x80.

Logan, W. Va. — No date has been set for closing on a two-story brick and stone residence building, for Dr. S. L. Lawson, plans for which were prepared by Architects Barber & Kine, Knoxville. The work will cost $15,000.

Monessen, Pa. — The Westmoreland Lumber Company has secured the contract to build a three-story brick store and apartment building, for Michael Giba at a cost of $35,000.

Turtle Creek, Pa. — No date has been set for closing on a two-story brick and stone residence building, for D. W. Byers, plans for which were prepared by Architect A. S. Schmider, Ardmore Farms. The work will cost $4,000.

Wilmerding, Pa. — The Christ Evangelical Lutheran Congregation, 628 Middle street, is taking bids on a two-story brick parsonage to be built at a cost of $4,600.

Middletown, O. — Charles E. Denny was the low bidder on a two-story brick and hallow tile residence building, for William J. Sebald, 103 E. Third street, plans for which were prepared by Architect C. E. Oeden, Jacoby building. The work will cost $8,000.

Architect C. E. Oeden, Jacoby building, has plans in progress for a two-story frame residence building, for Dr. Smith, to be built at a cost of $4,500.

Architect E. E. Dearth, 210 Fifth street, is preparing sketches for a two-story brick vencer or frame residence building, for Mrs. H. Mahathee, Third and Broadway, to be built at a cost of $6,000.

Architect C. E. Oeden, Jacoby building, is taking bids on a two-story brick and frame residence and Garage building, for Z. W. Rank, 288 S. Main street, to be built at a cost of $5,800.

Warren, Pa. — L. C. Gamble, 207 Madison avenue, has secured the contract to build a 2 1/2-story brick and shingle residence building, for Harry S. Peterson, 4085 Hazel street, plans for which were prepared by Architect E. A. Phillips, Warren Trust building.

Butler, Pa. — Architect William Foster, Butler County National Bank building, is taking separate bids on a one-story brick bungalow, for A. N. Lloyd, to be built at a cost of $3,000.

Cleveland, O. — K. Forster, 406 Park building, will build two two-story brick and frame residences, plans for which
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Business Buildings.

Altoona, Pa. — W. S. Axsom, 1428 Eleventh avenue, has selected Architect George Puderbaugh, Hutchinson building, to make plans for a four-story brick fireproof store building, 100x120, at a cost of $60,000.

Charleston, W. Va. — Architect H. Rus Warne, Capitol street, is preparing plans for a three-story brick, semi-fireproof store building, for the Salvation Army, to be built at a cost of $35,000.

Johnstown, Pa. — Architect H. M. Rogers, Johnstown Trust Building, is asking bids on the erection of a two-story double brick residence in Westmont for Mrs. P. Martin to cost $5,000.

Alliance, O. — The Williams Estate, care C. C. Williams, & Ruggedy building, Columbus, has awarded E. B. Sil­ver a contract to build a three-story brick store and apartment building, at a cost of $19,000.

Akre, O. — The Carmichael Construction Company has secured a contract to build a six-story brick fireproof bakery and office building, for the Permanent Savings & Loan Company. Architect Fichter & Brooker, Second National Bank building, prepared the plans. The building will cost $75,000.

Ashland, Ky. — H. W. Savage awarded E. Wilson a contract to build a three-story brick and terra cotta store and office building, plans for which were prepared by Architect Versus T. Ritter, Union Bank building, Huntington, at a cost of $55,000.

Cleveland, O. — Masters & Mulken, Rose building, were awarded the contract to build a three-story brick and steel office building for the Grabler Manufacturing Company, at a cost of $150,000.

The Associated Investors Company has awarded Crowell-Lundood-Little Company the contract to build a two-story brick, steel and reinforced concrete fireproof store building, 80x172 feet.

Charleston, W. Va. — Architect David Dick, Capitol street, has completed plans for the rebuilding and enlarging a four-story brick fireproof store building, for H. B. Smith, at a cost of $22,000.

The Associated Investors Company will close about August 1, plans for which were made by Architect W. H. St. Clair, 1016 Washington street.

Clarksburg, W. Va. — G. S. Warne, Pike street, has awarded J. E. White the contract to build a three-story brick, semi-fireproof store and office building, plans for which were prepared by Architect Edmond J. Wood, Lowndes building. The work will cost $25,000.


Youngstown, O. — The South Side Banking Company has selected Architects L. Baucherd & Son, Stambaugh building, to make plans for a four-story reinforced concrete fireproof store building, for Henry Binns, 315 E. First street, plans for which were prepared by Architect F. J. Hughes, U. B. Annex building.

Columbus, O. — Architects Taussig & Flesch, Chicago, have plans in progress for remodeling a store for the E. & R. Lazarus Company. The work consists of adding new department and new fixtures.

Dayton, O. — A. Bentley & Sons Company were the low bidders on a three-story brick residence building, for Mrs. T. W. Diukins, 219 First street, has private plans for building a two-story frame bungalow, for Charles Herr, to be built at a cost of $3,000.

Joseph E. Bollinger, 411 N. High street, has plans nearly completed for a 1½-story frame residence, consisting of 10 two-story brick residences.

Greenville, O. — Architects Vance & Company, Louis building, Dayton, have plans nearly completed for a 1½-story frame residence building, for Fred IT. Doebler, 640 Fifth street, plans for which were prepared by Architect W. B. Smith.

Earnest Moor has secured the contract to build a two-story brick and stucco residence building, for C. H. Doebler, 600 Fifth street, plans for which were made by Architect L. J. Dean, Foster building. The work will cost $4,000.

No date has been set for closing on a two-story brick residence building, for Lee Monroe, plans for which were prepared by Architect W. B. Smith.

James H. Byers has awarded Edward Smith the contract to build a two-story brick residence building, at a cost of $4,500. Architect L. J. Foster prepared the plans.

Keneda, W. Va. — Isaac Brothers have agreed to contract the building of a two-story frame residence building for Joseph Mantel, plans for which were prepared by Architect John R. Gieske, Huntington.

Meaville, Pa. — M. K. Byham has secured the contract to build a 2½-story brick residence building, for Fred B. Snowden, 158 Peoples street, at a cost of $3,500.

Welsh, W. Va. — W. C. Cook is taking bids on material for a two-story brick residence building, plans for which were prepared by Architect U. B. Smith, Harvey building, Huntington. The work will cost $6,500.

Dayton, O. — Plans will be ready for bids by Architects Thies & Thies Bollinger building, for the construction of a two-story brick duplex residence to be built on Jefferson street for John B. Forester, 206 W. Lexington street. Cost $7,600.

Eric, Pa. — J. V. Henry, 834 Twenty-first street, has private plans for build-
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brick and stone bank and office building, to be built at a cost of $50,000.

Henry Friedman, 1224 Market street, contemplates the erection of a two-story brick store building, to be built on Elm street, near Broadway.

Warren, O. — Architect C. F. Owlesley, Mahoning Bank building, Youngstown, has preliminary plans for an eight-story brick, steel and reinforced concrete bank and office building, for the Western Reserve National Bank, at a cost of $150,000.

Akron, O. — Architect Vernon Redding, Bird building, Mansfield, is revising plans for a brick, steel and concrete store, motion picture theatre and hotel building, for F. S. Ozier & Lowery, 2176 W. Thirteenth street, Los Angeles, California, care Ozier & McCready, 55 S. Main street, Akron. The work will cost $190,000.

Toledo, O.—Architects Mills, Rhines, Bellman & Nordhoff, Ohio building, are preparing plans for a three-story brick, concrete and steel fireproof warehouse, for E. L. Close Realty Company, 612 Madison avenue.

Warren, O. — Architect E. F. Giffons, 1900 Euclid avenue, Cleveland, has plans for a four-story brick and concrete warehouse, for the Gilder-Augsstad Coal & Supply Company. The work will cost about $30,000.

Woodlawn, Pa. — Bids close August 1 on a three-story brick store and apartment building, for Agnetz Kulpa, 140 Hemen street, Pittsburgh, plans for which were prepared by Architect F. A. Park, 130 S. Fifteenth street, Philadelphia. The work will cost $14,000.

Branchland, W. Va. — No date has been set for closing on a two-story frame store and lodge building, for A. A. Hoofers, plans for which were made by Architect L. Lowe, Huntington.

Cleveland, O. — Bids close August 31 on a one-story brick addition to a publishing plant, for the Rocker Publishing Company, 2804 E. Fifteenth street, plans for which were made by Architect W. G. Sloan, Bank & Trust building, Greensburg, to make plans for a three-story brick and store building, to be built at a cost of $20,000.

Youngwood, Pa. — The I. O. O. F. has selected Architect W. G. Sloan, Bank & Trust building, Greensburg, to make plans for a three-story brick and store building, to be built at a cost of $20,000.

Cleveland, O. — The East Ohio Gas Company, E. Sixth street, has selected Architect Wm. E. Tubby, 81 Fulton street, New York City, to prepare plans for a six story office building which will be constructed on E. Sixth street and Rockwell Avenue.

Erie, Pa.—W. E. Hayes, 16 E. Tenth street, contemplates remodeling the front store front at 917 and 919 State street. New copper fronts will be placed.

Johnstown, Pa.—Bermey Brothers, 433 Lincoln Avenue, complete a plan building a six story store and warehouse building. No architect has been selected for the work.

Portage, Pa.—Dr. Calvin C. Rush, is asking bids on the construction of a brick store and apartment building plans being made by Architect John Molinar, 130 S. Fifteenth street, Philadelphia.

Portsmouth, O.—C. E. Nourse secured the contract to build a two story and basement store building 41x94 feet for Thos. Jones, Chillicothe street. It will be of brick construction and will cost $14,000.

Urbana, O. — Architect A. G. Mueller, Rentschler building, Hamilton, has plans about completed for an addition to a church building for the Howard Paper Company.

Youngstown, O. — Bids close next week for a one-story brick and reinforced concrete, fireproof office and theatre building, for the Youngstown Hippodrome Company, plans for which were prepared by Architect Knox & Eliott, Rockefeller building, Cleveland. The building will cost $45,000.

Youngwood, Pa. — The I. O. O. F. has selected Architect W. G. Sloan, Bank & Trust building, Greensburg, to make plans for a three-story brick and store building, to be built at a cost of $20,000.

Cleveland, O. — Bids close August 1 on a one-story and basement stone, steel and reinforced concrete church building, for the First Baptist Church, Court street, to be built at a cost of $15,000.

Hamilton, O. — Sketches will be received soon for a four-story brick and reinforced concrete, fireproof church building, for the First Baptist Church, Franklin street, plans for which were prepared by Architect C. F. Bowdle, 72 Young building. The work will cost $23,000.

Johnstown, Pa. — Architects Fulton & Butler, Uniontown, have plans in progress for a one-story brick and stone church building, for the Moriah Lutheran Congregation.

Erie, Pa. — Architect W. P. Ginther, Akron, has plans about completed for a two-story brick and steel, fireproof church building, for the St. Andrews Roman Catholic Congregation, to be built at a cost of $100,000.

Huntington, W. Va. — The Baptist Congregation contemplates the erection of a church building. The details have not yet been decided.

Windber, Pa. — Architect W. S. Powell, Ohio street, Jefferson, will start plans at once for a one-story brick and stone trim church building, also remodeling old church building into school, for the St. Mary's Greek Catholic Congregation. The work will cost $35,000.

Botkins, O. — Plans have been completed by Architect J. N. Uhler, Wapakoneta, O., for a one-story brick church building 54x60 feet for the Botkins Lutheran Congregation. Bids will be asked for shortly.

Lorain, O.—N. B. Stouder, 1050 Ninth street received the contract to build a $15,000 building for the St. Nicholas Greek Catholic Congregation.

Religious.

Cincinnati, O. — No date set for closing on a one-story stone and brick church building on Beechwood avenue, for the Mt. Washington Presbyterian Church, plans for which were prepared by Architects Samuel Hanaaford & Sons, Herbert Block. The building will cost $17,000.

Chillicothe, O. — Architect John Schweitzer has plans for a one-story brick church, for the High Street United Brethren Church, to be built at a cost of $10,000.

Athens, W. Va. — Architect H. R. Warne, Capitol street, Charleston, is revising the plans for an addition to a two-story brick fireproof school building, for the State Board of Control, Charleston. The work will cost $10,000.
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WARREN, O.
Dayton, O. — Bids close July 27 on a two-story reinforced concrete fireproof school building, for St. Anthony's Roman Catholic Congregation, plans for which were prepared by Architect W. L. Jackle, 130 U. B. building. The work will cost $30,000.

Lorain, O. — Architect H. E. Ford, Henecker building, has plans for a three-story brick and reinforced concrete school building, for the Board of Education, to be built at a cost of $225,000.

Louisville, Ky. — Bids close August 10 on an eight-room school building on Preston street, for the Board of Education, plans for which were prepared by Architect J. Howard Hicks, Dennis Block, Washington Court House, O. The building will cost $75,000.

New Martinsburg, O. — Board of Education of Perry Payne township, is taking bids on a one-story frame school building, plans for which were made by Architect J. Howard Hicks, Dennis Block, Washington Court House, O. The building will cost $3,000.

Cincinnati, O. — Bids will be taken about August 1 on a two-story brick and fireproof school building, costing $175,000, for the Board of Education, plans for which were prepared by Architect Samuel Hansford & Sons, Hubert Block.

Geishman, Pa. — The Board of Education has awarded H. H. Hardner, Cleveland street, Johnstown, a contract to build a one-story and basement school building, at a cost of $6,000.

Middleport, O. — Architects Weber, Werner & Adkins, Walnut street, Cincinnati, have plans for a two-story brick and terra cotta, semi-fireproof school building, for the Board of Education, at a cost of $25,000.

North Strabane Township, Pa. — F. M. King, Canonsburg, has been awarded a contract to build a one-story addition to a school building, for the School Board of North Strabane Township, plans for which were prepared by Architects Taylor & Crawford, Canonsburg.

Toledo, O. — The Board of Education contemplates the erection of a two-story brick school building, at a cost of $25,000.

Uniontown, Pa. — Bids close August 1 on a two-story brick and steel, fireproof school building, to cost $90,000, for the Board of Education, plans for which were prepared by Architect Harry W. Allman, First National Bank building.

Bridgeport, O. — Bids close July 31 on a two-story brick fireproof school building, for the Board of Education, of the Bridgeport Village School District, plans for which were made by Architect F. F. Fairris, Schenall building, Wheeling.

Logan, W. Va. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, have sketches for a two-story brick school building, for the Board of Education, plans for which were prepared by Architect E. P. Packard, Hayden building, Columbus. The work will cost $90,000.

Ridgley, W. Va. — Architect George S. Saursbury, Cumberland, will start to prepare plans for a two-story brick school building, for the Board of Education, at a cost of $3,000.

South Lebanon, O. — Architects Weber, Werner & Adkins, 414 Walnut street, Cincinnati, are preparing plans for a one-story and basement brick veneer school building, for the Board of Education. The work will cost $3,000.

Youngstown, O. — Bids close August 6 on a two-story brick and stone semi-fireproof school building, for the Board of Education, plans for which were prepared by Architect E. R. Thompson, Realty Trust building. The building will cost $25,000.

Elida, O. — The City of Elida, care Board of Education, has awarded Siff Brothers, Lima, O., the contract to build a two-story brick and semi-fireproof school building, plans for which were prepared by Architects Leech & Leach, Public Square, Lima. The work will cost $18,000.

Hopewell, O. — Bids close August 7 on two one-story brick veneer, semi-fireproof school buildings, for the Board of Education, plans for which were prepared by Architect Charles F. McCarty, National Exchange building, Wheeling.

Ingam, Pa. — The Board of Education is taking bids on a two-story brick and stone fireproof school building, plans for which were prepared by Architect Press C. Dowler, Arrott building, Pittsburgh. Cost $100,000.

McClellandtown, Pa. — The German Township School Board has selected Architect A. P. Cooper, Uniontown, to make plans for a two-story brick and terra cotta, fireproof school building, to be built at a cost of $70,000.

Bittman, O. — Bids close August 14 on a two-story brick and fireproof school building, for the Board of Education, plans for which were made by The National Engineering Company, 504 Marshall building, Cleveland. The work will cost $100,000.

Waynesburg, Pa. — The School Board of Franklin township, has awarded James Stillwell the contract to build a two-story brick school building, at a cost of $25,000. Architect Henry K. Coffroth prepared the plans.

Canton, O. — The Board of Education of New Beginning, plans for which were prepared by Architect C. C. & A. L. Thayer, New Castle. Cost $35,000.

Kent, O. — R. H. Evans, Columbus, has secured the contract to build a two-story or three-story brick and stone school building, plans for which were prepared by Architect J. F. Adams, Johnstown. The work will cost $35,000.


Faribault, Pa. — Bids will be taken about August 1 on a two-story brick and semi-fireproof school building, for the Board of Education, plans for which were prepared by Architect J. E. Adams, Johnstown. The work will cost $35,000.

Dayton, O. — Bids close July 27 on an addition to a factory building, for F. B. Starnes Company, plans for which were prepared by Architect Albert Kahl Ernest Wilby, 560 Lafayette boulevard, Chicago. The work will cost $100,000.

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company has awarded G. N. Griffin Company, the contract to build a three-story brick and reinforced concrete factory building, plans for which were prepared by Architect H. McGeorge.

Cleveland, O. — The McClintic-Marshall Construction Company, Oliver building, Pittsburgh, has secured the contract to build a one-story brick and steel heating and power plant, for the Parish & Bingham Company, plans for which were prepared by Ernest McGeorge, 851 Leader News building.

Meadville, Pa. — The Mill Run Lumber Company is preparing plans for the remodeling of a boiler house for the Board of Trustees of Allegheny College, at a cost of $2,500.

Charleston, W. Va. — The Becker Steel Company contemplates the remodeling of a steel plant. Details not decided.

Titusville, O. — No date has been set for closing bids on the erection of a one-story brick foundry building 210x340 feet with a two-story building 50x150 feet for the Titusville Iron Company.

State, County and Municipal.

Amherst, O. — Architect H. O. Warriner, 627 Broadway, Lorain, has plans for a two-story brick, stone and steel post office and office building, for United States Government, at a cost of $10,000.

Cincinnati, O. — United States Government has awarded Ohio Building & Construction Company a contract to build a two-story brick, cement weather observatory's residence, plans for which were prepared by Architect Des Jarlins & Hayard, 20 Pickering building, at a cost of $15,000.

Tiffin, O. — No date has been set for closing bids on the erection of a one-story brick hall for the Sandonato Society, at a cost of $6,500.

Lorain County, O. — The Board of County Commissioners has awarded Elvira Construction Company the contract to grade and pave Milan-Elyria road, at a cost of $49,869.

Spangler, Pa. — The Borough of Spangler contemplates the erection of a two-story brick municipal building, at a cost of $8,600.

Akron, O. — The Foreage Engineering Company, Akron, has been awarded the contract to pave Loyal Oak Road for the Board of County Commissioners, at a cost of $53,000.

Springfield, O. — Architect Frank L. Packard, 16 E. Broad street, Columbus, has plans for a three-story brick and reinforced concrete fireproof memorial building, at a cost of $275,000.

Terra Alta, W. Va. — The State Board of Control has awarded Charles Spindler, Kingwood, the contract to build a 1½-story frame and shingle receiving building, plans for which were prepared by Architect H. Rus Warne, Charleston.

Archbold, O. — Engineer George Champy, Nashy building, Toledo, has plans in progress for water works system for the village of Archbold. The work will cost $15,000.

Kittanning, Pa. — Engineer A. M. Morgan, 111 W. Monroe street, Chicago, has plans in progress for water works and electric light plant, for the City of Kittanning. The work will cost $125,000.

Warren, O. — Architect P. T. Siddell, 413 W. Union avenue, has plans for a two-story brick and stone and steel police station, for the City of Warren, to be built at a cost of $22,000.

Alliance, O. — Bids close August 3 on the erection of a three-story brick and reinforced concrete, fireproof city building, costing $75,000, for the Board of Public Service, plans for which were prepared by Architect L. W. Thomas, Pythian building, Cleveland.

Bowling Green, O. — The Board of County Commissioners are taking bids on remodeling a three-story stone court house building, plans for which were made by Architects Stewart & Son. The work will cost $15,000.

Charleston, W. Va. — Engineer G. S. Brown, Capitol street, is preparing plans for the paving and grading of Quarrier street, Elizabeth to Jefferson street, for the Board of Public Affairs. The work will cost $17,600.

Canton, O. — United States Government has awarded Frank M. Weakley, Meridian, Miss., the contract for extending, repairing and altering the post office building, at a cost of $20,000.

Lancaster, O. — The contract for a three-story brick and stone armory and memorial building, for the City of Lancaster, plans for which were prepared by Architect Karl I. Brest, Hayden building, Columbus, will be awarded this week. The work will cost $86,000.

Dayton, O. — Bids close next week on a one-story concrete and frame public comfort station, for the Board of County Commissioners, plans for which were prepared by Architect Gustave A. Niehues, Calhoun building, to be built at a cost of $8,600.

Kanawha County, W. Va. — Engineer F. A. Buodette, Charleston, has plans in progress for improving the road from Charleston to Tyler Mountain, for the Board of County Commissioners.

Mt. Vernon, O. — Architects Marriott, Allen & Hall, Hayden-Clinton Bank building, Columbus, have revised plans about completed for a three-story brick and concrete house, for the Board of County Commissioners. The work will cost $25,600.

Somerset County, Pa. — Bids close next week on several concrete bridges to be built for the Board of County Commissioners, care Clark, Somerset.

Erie, Pa. — The Lielieh-Binney Construction Company secured the work of building a one-story frame and galvanized iron loading shed for garbage purposes for the City of Erie.

Huntington, W. Va. — The Board of Commissioners has awarded to the Stuss Construction Company, Bluffield, the contract for sewer work amounting to $70,000.

Wooster, O. — R. H. Hunter city engineer, has plans under way for water works improvements the work to cost about $150,000. Bids will be taken by the Board of Public Service.

Society and Club Buildings.

Martins Ferry, O. — Schemp & Forrest were the low bidders on a two-story brick and steel lodge building, for the Odd Fellows & Red Men's Association, plans for which were prepared by Architect F. F. Paris, Schummach building, Wheeling. The work will cost $25,000.

Altoona, Pa. — Work will be started at once by Stade Brothers, on a two-story brick hall for the Sandonato Society, at a cost of $5,000.

New Philadelphia, O. — No date has been set for closing bids on a two-story brick fireproof lodge and store building, for the Masonic Lodge, plans for which were prepared by Architect Langdon & Hofty, Nicholas building, Toledo.

Hamilton, O. — Architect F. G. Mueller, 725 Reatcliff building, has plans about completed for a two-story reinforced concrete and brick fireproof lodge building, for the Hamilton Lodge No. 73 B. P. O. Elks, care E. D. Meyers, Chrm building. The work will cost $75,000.

Meadville, Pa. — The Board of Trustees of I. O. O. F., Home, W. C. M., Mortiz, secretary, has sketches for an addition to a two-story brick house.

Logan, W. Va. — The Odd Fellows, care Charles Avis, contemplates the erection of a four-story brick lodge building, at a cost of $16,000.

Miscellaneous.

Cleveland, O. — George J. Bletcher Company has awarded George A. Rutherford Company the contract to build a one-story brick and reinforced concrete fireproof garage, 30x60, on Caton street, at a cost of $6,000.
THE CONSTRUCTION RECORD

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cost of finished plastered surface of any type of metal lath.
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Cumberland, Md. — The Western & Maryland Railroad has awarded Vaus Construction Company, Cumberland, the contract for a railroad extension, to cost $75,000. The work consists of retaining walls, viaducts and abutments.

Youngstown, O. — W. D. Jones Company, 248 W. Federal street, contemplates the addition to a one-story tile company, 248 W. Federal street, containing a multi-story brick and reinforced concrete building. The structure will be built at a cost of $35,000.

Maryland Railroad has awarded Yang Construction Company, Pittsburgh, for the Twin City Hospital Association, to be built at a cost of $35,000.

State Board of Control, plans for which were prepared by Architect H. Rus Weeks, 1900 Euclid building, have plans well under way on a three-story hospital building, at a cost of $200,000.

Meadville, Pa. — The Board of Trustees of the Poor have awarded Lawrence Casey the contract to enlarge and remodel the building for the asylum. The work will cost $80,000.

Cincinnati, O. — The Little Sisters of the Poor have awarded Lawrence Magee to construct the electric wiring for a 21/2-story brick dwelling in Brown Place, Squirrel Hill, Pittsburgh, for $1,850.


Charles Papale vs. Walter Yates, owner and contractor. Building in Second ward, Wilkinsburg. Three items, cost $95.10, $60.80 and $95.30.


N. P. Sipe Electric Company vs. Presbyterian Congregation of Sewickley. Agreement made July 6 and filed July 14, to construct the electric wiring system in the new church to be erected on Beaver road, Sewickley, for $967.

J. E. & A. L. Penrock vs Pennsylvania Railroad Company. Agreement made and filed July 15 to furnish all labor and material.

EMPORIUM, Pa. — Boro of Emporium has awarded Peter Schweiker the contract to build a one-story brick power plant, at a cost of $10,000.

Akrone, O. — The contract for building a brick and stone fireproof hospital building, for the Peoples Hospital Association, has been awarded to the Dawson Construction Company, Pittsburgh. About $100,000 will be spent in the work.

Lakewood, O. — The Hankin-Conkey Construction Company, Cuyahoga building, Cleveland, secured the contract to build a four story brick and reinforced concrete building for the Lakewood Hospital. The building will measure 30,394 feet and will cost $100,000.

Chillicothe, O. — Architect Harry Hake, President Bank building, Cincinnati, has preliminary plans for a brick and concrete hotel building. The work will cost $15,000.

Hospitals.

Moundsville, W. Va. — Work will be started soon on a one-story brick addition, to a hospital building, for the State Board of Control, plans for which were prepared by Architect H. Rus Warne, Charleston.

Cincinnati, O. — The Little Sisters of the Poor have awarded Lawrence Magee the contract to enlarge and remodel the building for the asylum. The work will cost $80,000.

Cleveland, O. — Architects Walker & Weeks, 1900 Euclid building, have plans for the addition and remodeling of a hospital building for the Charity Hospital, at a cost of $200,000.

Meadville, Pa. — The Board of Trustees of the Poor have awarded Lawrence Magee the contract to enlarge and remodel the building for the asylum. The work will cost $80,000.

Charles S. Smith vs. Esquire's, Church Wards and Vestrymen of St. Stephen's Church, Sewickley. Agreement made July 3 and filed July 17 to make alterations and additions to church buildings at corner of Broad street and Frederick avenue, Sewickley, for $13,989.


Cranford Construction Company vs. Harry Davis Enterprise Company, Agreement made July 10 and filed July 17 to provide all material and perform all work to complete the concrete piers required for a theatre, loft and arcade building, at corner of Oliver avenue and Cherry way, Pittsburgh, for $5,500.

W. F. Trimble & Sons vs. Pressed Steel Car Company. Agreement made July 8 and filed July 17 to erect a passenger car store house No. 2 at McKees Rocks, for $34,740.

ERIE OFFICE BUILDING.

The Mayer Brothers Construction Company, State and Fifth streets, Erie, Pa., has the concrete work up to the third floor on the new $250,000 store and office building being built for Epiphany Mayer. The contractors for the weather strips, vacuum cleaning system, cast iron store fronts, ornamental iron, skylights, steel rolling doors, are still to be awarded. Most of the other sub-work will be done by the contractors.
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LOCAL VENTING OF PLUMBING FIXTURES VS. SAFETY FIRST.

(Continued from Page 5.)

the health of those coming in contact with it?

It may be a workman, it may be a student in our public schools, or it may be a pedestrian, but the question is, "Is there the least danger of the dust from these ducts and corridors affecting their health? "SAFETY FIRST!"

I believe the utility corridor to be a waste of floor space and a needless expenditure of money. I believe the local vent to be an extravagant waste of money, and both the local venting and utility corridor to be a menace to the general health.

WORK ON CLEVELAND CITY HALL

Bids on the interior completion work for the City Hall building, at Cleveland, O., will close August 18. The Board of Public Service will take bids on ornamental iron work, electric work, steam heating and ventilating, plumbing, sheet metal work, metal lathing and finishing, sidewalk lights, plastering, bronze work, painting, glass, elevators, etc. W. S. Lougee, City Hall building, is superintendent of construction.

PLANNING HOSPITAL IMPROVEMENTS.

The Charity Hospital, Cleveland, is to be enlarged and remodelled from plans which are now being made by Architects Walker & Weeks, 1900 Euclid building, Cleveland. The new addition will be five stories high, 62x169 feet, and is to be constructed of stone, steel brick fireproof construction, and will be used for ward rooms, X-ray department, operating rooms. Complete details of construction have not been decided upon and the time for taking bids is indefinite.

CLEVELAND CHURCH WORK OPEN.

Bids will close next week on the enclosure work for the new church building of the St. Coleman Congregation, W. Sixty-fifth street, Cleveland, O. Plans being made by Architect E. J. Schneider, Cuyahoga building, Cleveland. The structure will be 95x187 feet, brick fireproof construction, and will be used for ward rooms, X-ray department and operating rooms. Complete details of construction have not been decided upon and the time for taking bids is indefinite.

REJECT TECH SCHOOL BIDS.

Estimates which have been submitted for building two wings to the School of Applied Science, Schenley Park, Pittsburgh, for the Carnegie School of Technology, have been rejected. Plans will be revised by Architect Henry Hornbostel and new bids asked about December 1.

BUILDING TROUBLES SETTLED.

The internal strife between labor organizations, which caused a cessation of building operation in Pittsburgh for the past few weeks has been satisfactorily adjusted and the men are all back on the work. The charter of one union which had been revoked by the parent organization has been restored. The strike of the employes was an unfortunate occurrence, but no blame has been attached to any one of the building contractors for any breach of contract with the labor organizations.

MONTGOMERY SCHUYLER.

Montgomery Schuyler, probably the best known architectural critic in the country, died at his residence in New York City, last week after a brief illness of pneumonia. Mr. Schuyler was an influential journalist and author and was widely known for his published studies in architecture. He was a corresponding member of the American Institute of Architects, member of the National Institute of Arts and Letters and a frequent contributor to the leading architectural magazines.

GENERAL NEWS.

The plumbing, heating and electric work to be installed in the Concord Presbyterian Church, Carick, Pittsburgh, will be taken up for bids in about a week or two. Architect George Schwan, Peoples Bank building, Pittsburgh, prepared the plans.

The Carter Electric Company, Oliver building, Pittsburgh, has been awarded the contract for the electric work in the new Gazette-Times building, Pittsburgh.

Bids will close August 10 on the heating, lighting and plumbing work necessary in the new 80,000 church building, being built at Lima, O., for the Grace Methodist Congregation.

The Proctor & Gamble Company, Cincinnati, O., soap manufacturers, has in contemplation the erection of a plant near Hamilton, Ohio, which will be built at a cost of $1,000,000. The plant will consist of several buildings and a powerhouse.

J. Willis Dalzell, House building, Pittsburgh, has closed negotiations to represent the L. Schreiber & Sons Company, Cincinnati, O., manufacturers of ornamental iron and bronze and structural steel, in addition to which he has secured the agency for the Flexstone Manufacturing Company, Columbus, O., manufacturers of composition flooring. The latter company intends building a large plant near Morgantown, W. Va., in the near future.

The Richmond Structural Steel Company, Richmond, Va., was awarded the steel work on the $70,000 school building for the Board of Education, Charleston, W. Va.

Architect George Barkman, Reily building, Hamilton, O., will be ready about August 6 for bids on lighting, heating and plumbing for the store and office building being built at Middleburg, O., for the William Seabird Realty Company.

The electric work in the $75,000 school building being built for the Board of Education, Johnstown, Pa., has been awarded to the Johnstown Electric Appliance Company.

George M. Hall Company, Homestead, Pa., which has the contract to build a brick church for the Methodist Episcopal Congregation, Wilmerding, Pa., has let the steel work to the Des Moines Bridge Company, Pittsburgh; cast stone work to the Iron City Stone Company, Wilkinsburg; plastering to the A. F. C. Plastering Company, Musshall, Pa., and slate roofing to Nebco Brothers, Homestead.

The marble and tile work for the orphanage home at Erie, Pa., for the B'nai Brith Hebrew Society, has been awarded to the Erie Mantel & Tile Company, Erie.

BUILDING CONDITIONS.

The following statistical table, compiled from Dodge Reports, throughout Western Pennsylvania, Ohio and West Virginia, gives comparative figures on building construction for the past five years:

- Contracts Awarded -
  - January 1, 1914, to date $80,040,000
  - Corresponding period 1913 $90,435,000
  - Corresponding period 1912 $38,674,000
  - Corresponding period 1911 $81,779,000
  - Corresponding period 1910 $65,249,000
  - Corresponding period 1909 $81,755,000
  - Week ending July 22, 1914 $2,429,000
  - Corresponding period 1913 $2,610,000
  - Corresponding period 1912 $2,241,000
  - Corresponding period 1911 $4,872,000
  - Corresponding period 1910 $1,836,000
  - Corresponding period 1909 $2,956,000
  - Week ending July 15, 1914 $1,885,000
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THE CONSTRUCTION RECORD

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ARCHITECTURAL TERRA COTTA.

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Warnack & Finney, Oliver Building, Pittsburgh, Pa.

ART AND STAINED GLASS.
Hyde-Murphy Co., Ridgway, Pa.

ARTIFICIAL GARDENS.


ASSOCIATION PAPERS.

GENERAL PRO-TRACTORS.


BLUE PRINT PAPER.

H. C. Bemis, Bradford, Pa.

BLUE PRINTING.

Seager Brothers, Pittsburgh, Pa.

BUILDING CONTRACTORS.


BUILDING PAPER.

Mathew Gravity Carrier Co., Eitwood City, Pa.

BUILDING PAPER.

Seager Brothers, Pittsburgh, Pa.

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- W. J. Dallzell, Pittsburgh, Pa.

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- Empire Flooring Co., Jenkins Arcade, Pittsburgh.

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#### Private Water Systems
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#### Wire Guards
- Hahn, Chas. G., 856 North Ave., Northside, Pittsburgh, Pa.
- W. H. Knodell, 510 Weiser St., Northside, Pittsburgh, Pa.
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