

JULY, 1912

THE · BVILDER

DEVOTED
TO
ARCHITECTVRE



PVBLISHED
AT
PITTSBVRGH
BY · T · M · WALKER ·

TWENTY-FIVE CENTS

SCOTT A. WHITE

LEWIS BUILDING



AKRON VITRIFIED ROOFING TILE



SHAPES: Spanish, French, Roman, Grecian, Norman and Shingle Tile

COLORS: Red, Green, Glaze, Brown, Black, Silver, Mottled Green, Buff and Gray Glaze

Northwestern Terra Cotta

Bath Portland Cement

Slate Asphalt and Gravel Roofing

THE NORTHWESTERN

TERRA-COTTA CO.

MANUFACTURERS OF THE HIGHEST GRADES OF

ARCHITECTURAL

TERRA COTTA

CHICAGO

ILLINOIS

SCOTT A. WHITE,
Pittsburgh Representative,
Lewis Building.

D. J. KENNEDY COMPANY

Lehigh Portland Cement
Blanc White Cement
Keenes Cement
Wall Plaster
Water Proofing
Re-inforcing
Bay State Brick & Cement Coating
Tile and Composition Roofing

FACE BRICK

LIME, SAND, GRAVEL, STONE

BUILDING MATERIAL

of every description

General Offices

6366 Frankstown Ave.

Yards

Braddock Ave. & Thomas St.
Enterprise St. & P. R. R.
26th & Railroad St.
Island Ave. & C. & P. R. R.

James Stewart & Co.

GENERAL CONTRACTORS

Office and Railway Buildings,
Manufacturing Plants,
Reinforced Concrete, Structural Steel,
Terminals and Subways,
Dredging, Dock Work,
Heavy Masonry, Grain Elevators.

OFFICES

Hudson Terminal Building.....New York
Bank of Commerce Building.....St. Louis
Fisher Building.....Chicago
Hibernia Bank Building.....New Orleans
First National Bank Building.....Denver
Eastern Township Bank Building.....Montreal

HENRY W. OLIVER BUILDING,
PITTSBURGH, PA.



Interior Finish Co.

Makers of High-Class

**Interior Cabinet Work,
Mill Work,
Hard Wood Finish, Trim**

N. S. PITTSBURGH.

ENAMELING AND GILDING FOR INTERIOR DECORATIONS

JOHN DEWAR,

House Painting, Enameling and Gilding.

FINISHING AND RE-FINISHING OF HARD WOODS.

Bell 'Phone 211 Cedar.

350 NORTH AVENUE, NORTH SIDE

ASSOCIATED WITH

DEWAR & CLINTON

AND

Dewar, Clinton & Alexander Co.

PENN AVENUE, PITTSBURGH, PA.

Bell 'Phone 1383 Court.

Jas. L. Stuart

**CONSTRUCTING
ENGINEER**

Contracts taken for all Classes of
Building.

Office Buildings, Industrial Plants,
Power Plants, Reinforced Concrete,
Etc.

Bell Phone Grant 3158

Oliver Bldg., Pittsburgh, Pa.

Bernard Gloekler Co.

MAKER OF THE

Celebrated Eclipse Refrigerator



Of Any Design For All Purposes.

OFFICE, FACTORY AND DISPLAY ROOM

1127 to 1133 Penn Avenue.

PITTSBURGH, PA.

THE **BVILDER**

IS ALWAYS ON SALE

BY

R. S. DAVIS & CO.

441 Wood Street



Booksellers and Stationers

and who

Handle all Home and Foreign Books and Periodicals



"Standard" Modern Bath Room, Design P 40

"Standard" Plumbing Fixtures

"A Fixture for Every Requirement"

Architects and Builders frequently experience difficulty in the selection of really suitable fixtures where extraordinary circumstances exist in the bathroom. This difficulty can be largely overcome by installing "Standard" Fixtures. For variety and quality "Standard" fixtures are unsurpassed, and no matter what design, their sanitary efficiency and service-value is of the usual high standard.

When specifying "Standard" plumbing fixtures make your specification complete and emphatic by insisting upon the "Standard" "Green and Gold" five year, or the "Red and Black" two year guarantee labels. They are marks of guaranteed quality and insure satisfaction—both for yourself and your customer.

Standard Sanitary Mfg. Co.

Pittsburgh, Pa.

Showrooms, Offices and Warehouses:

New York.....35-37 W. 31st Street
Boston.....John Hancock Building
St. Louis.....100-102 North Fourth Street
Cleveland.....648-652 Huron Road, S. E.
Toronto, Can.....59 Richmond Street, E.

Houston, Tex....Cgr. Preston & Smith Sts.
Pittsburgh.....949 Penn Avenue
Chicago.....415 Ashland Block
Louisville.....319-323 West Main Street

Philadelphia.....1123 Walnut Street
Montreal, Can.....215 Coristine Building
New Orleans Cor. Baronne & St. Joseph Sts.
San Francisco, Cal. 1303-04 Metropolis Bldg.
London, Eng.....57-60 Holborn Viaduct, E. C.

THE
**NICOLA
BUILDING CO.**

Building . . .
Contractors

FARMERS BANK BUILDING
PITTSBURGH, PA.

WM. MILLER & SON'S CO.

**CONTRACTORS
AND BUILDERS**

530 to 534 Federal Street,

PITTSBURGH, PA.

Bell Phone 1405 Grant.

THE
**W. S. TYLER
COMPANY**

ORNAMENTAL
IRON
AND BRONZE

BESSEMER BUILDING
PITTSBURGH, PA.



JENKINS ARCADE BLDG.

ARCHITECTS ATTENTION.

You want the best for your customers.

HOMEBUILDERS ATTENTION.

You want the best for your homes.

Beautiful homes require beautiful furnishings and amongst the most striking are your rugs. In selecting you want color, tone, and design, together with weave and fabric. To obtain the best results you should confer with authorities on the subject. We are experts from childhood. We assure you of our best efforts to help you secure the right article. Call on us, we will aid you. Our extensive stock for your inspection

H. B. YARDUM & CO.,

Native Importers,

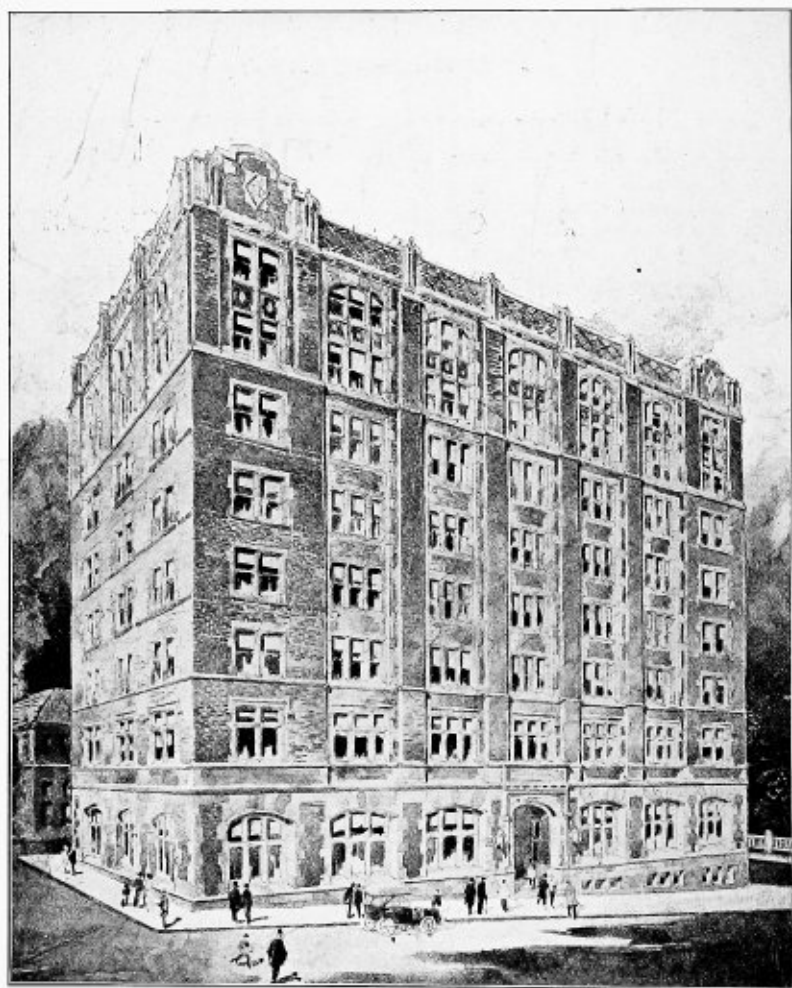
Penn Ave. & Stanwix St.,

Pittsburgh, Pa.

A. & S. WILSON CO.

CONTRACTORS

AND BUILDERS



Building of Jones & Laughlin Steel Company, Pittsburgh, Pa.

OFFICE BUILDINGS, WAREHOUSES, POWER PLANTS,
FINE RESIDENCES, BANK AND OFFICE FIXTURES.

PITTSBURGH, PA.

J. CHAS. WILSON

CONTRACTOR AND BUILDER

JOBGING PROMPTLY ATTENDED TO IN
ALL LINES OF BUILDING

225 COURT

PITTSBURGH, PENNSYLVANIA

Accessible, Quiet, Elegant
For Business Men, Families and Tourists.

THE SOUTHERN HOTEL

(Formerly Hotel Carlton)

54th STREET NEAR BROADWAY

NEW YORK

PERMANENT & TRANSIENT

In the Heart of the theatre and shopping district.

Cars pass the door for all railroad stations.

Parlor, Bedroom and Bath, \$21.00 per week and up.

Single Room and Bath \$1.50, \$2.00 per day and up.

Double Room and Bath \$2.50, \$3.00 per day and up.

European Plan

J. G. VENETOS, Proprietor

Send for Booklet

The Malone Stone Co.

Cleveland, Ohio.

QUARRYMEN OF

AMHERST STONE

Buff and Gray Building Stone
of every description

Euclid Bluestone

Flagging, Steps, Sills.

Plum Creek Liver Rock

PITTSBURG OFFICES

Now Located

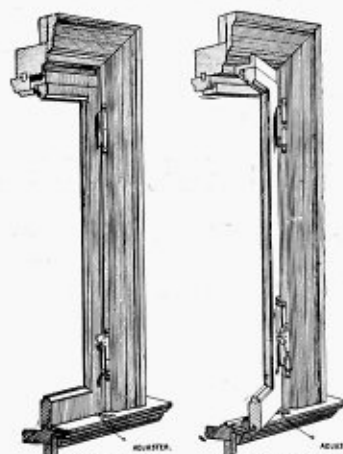
1102 Farmers Bank Building

Phone, Grant 3542

Steiner & Voegtly Hardware Co.

DEALERS IN

Sargent's Fine Builders' Hardware



WINDUP.
WINDOW CLOSED.
GIESEY'S ELEVATING CASEMENT WINDOW HINGE.
PATENTED JULY 1922 1928
MANUFACTURED ONLY BY
STEINER & VOEGTLY, 310 WOOD ST., PITTSBURGH, PA.

Luitink, Acme
Lane & Coburn
Sliding Door
Hangers

Starrett's
Machinists' Tools

Tree Brand
Cutlery & Razors

Manufacturers of

Geisey Casement
Window Pivots
and Hinges

230-234 Diamond Street

PITTSBURGH, PA.

C. W. GOERLITZ

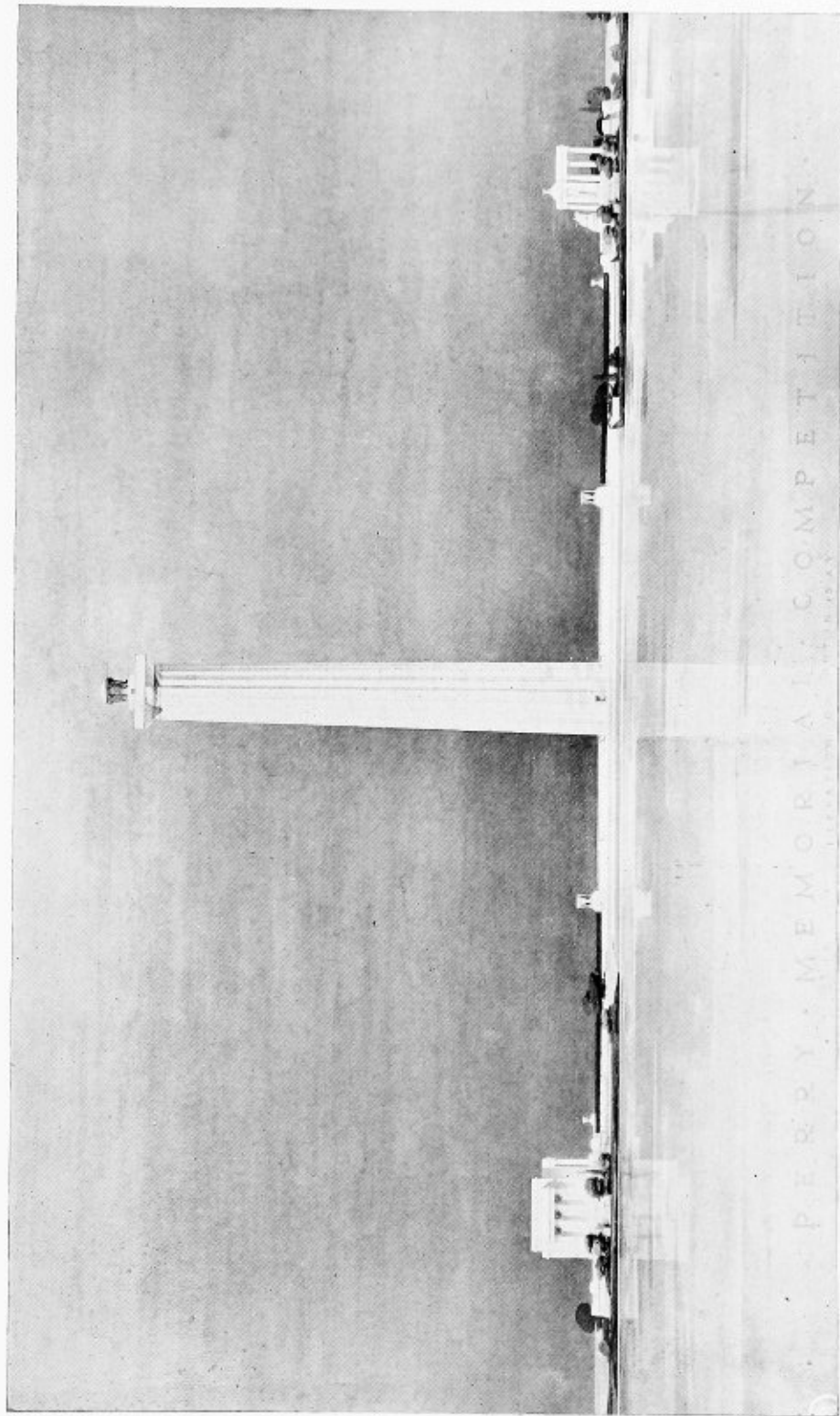
F. F. SCHELLENBERG, C. E.

F. F. Schellenberg
and Company

**CONSTRUCTING
ENGINEERS**

BELL PHONE GRANT 1032

341 Sixth Avenue, PITTSBURGH



ACCEPTED DESIGN, PERRY MEMORIAL COMPETITION, PUT-IN-BAY, OHIO

J. H. Freedlander, A. D. Seymour, Jr., Associated Architects, New York

THE BVILDER

Vol. 30

PITTSBURGH, PA., JULY 1912

No. 3

PUBLISHED MONTHLY

BY

T. M. WALKER

LYCEUM BUILDING

PITTSBURGH, PA.

Entered at the Post office at Pittsburgh, Pa., as Second-Class Matter.

SUBSCRIPTION, INVARIABLY IN ADVANCE, ONE YEAR, \$2

OUR FAIR ARCHITECTURE.

By J. L.

A great many of our institutions in "these most brisk and giddy-paced times" may be said to be reckoning without the host. The host is the public, whose servants undertake to settle the score and receipt the bill without consulting their employer. Architecture is one of the things that would not be the worse for a little better acquaintance with its master—the public.

Architectural language is a strange jargon that the public does not understand. It almost makes one think of the Latin of the pill-makers, not intended to be understood by the consumers of the pills, or the French bill of fare which the majority of patrons have to get the waiters to translate. Writers on architectural subjects have been seeking to gain the applause of the architects rather than to explain to the general public. All of which has resulted in a popular misunderstanding and confusion, with no especial benefit to architecture itself,—rather, injury because the average studious layman is confused when he talks about our architecture. He has a hazy idea that everything is wrong and in bad taste. He cannot see it himself, but the critics say it is bad, so it must be. Things have come to this pass, that to praise is to show lack of culture.

I fear me professional jealousy has something to do with this bad reputation that American architecture had acquired. I, for one, am tired of hearing our fair architecture abused. It would be bad enough if the public were dissatisfied with it, but the vilifiers would seem to be the ones who live by architecture, and the art is "wounded in the house of its friends." Architectural criticism is anachronistic. The standards of the profession are the standards of the past, and our high-brow guides, philosophers and friends keep harking back to things and forms that are dead and gone.

Who is there that isn't familiar with the picture of high-pooed ships of the days of Hendrick Hudson? What if our ships were as our buildings? Call to mind one of these highly-decorated constructions, and then think what some of the big ocean liners of today would look like if their "outsides" were treated in the same "architectural" style. Imagine a group of architects—designers of high poops and carved figureheads—standing on the shore and shouting derisively as each flashily decorated ship went by, calling the figureheads laughable, the stack decoration a frenzy, the pilot house debased, and so on.

Well, that is an impossible picture, of course, in ship architecture, but not in building architecture. And how the blase smatterer will sometimes work himself into a state of contempt for our beautiful (!) skyscrapers, those fine creations that mark our country, which, in fact, name our country—the land of the skyscraper—just as we speak of England as the land of roast beef, and France as the land of the frog.

Not long ago an American was returning to his native heath from a visit to a foreign strand. He was standing on the deck of the good ship as she came up the bay, drinking in with barbaric pride the site of that mountain of buildings which his countrymen have builded on the lower end of Manhattan Island.

As the ship passed into the river and a nearer view was possible, the American, who knew most of the buildings, could not restrain his enthusiasm, and he broke into a description—a kind of seeing-New York lecture—for the benefit of a couple, Lord and Lady Somebody-or-other, who stood on the deck near him.

Now, his lordship was a good fellow, a noted clergyman—a missionary, somebody had said—and her ladyship was a good fellow, too. So they listened with rather unusual complacency to the returned patriot descanting on the beauties of—not nature exactly—well, let us say for the sake of argument the beauties of art, stretched out before him.

"That is the Singer Tower," said the returning native, pointing to the red and gray "monstrosity"—as he had heard it described on several occasions by intelligent American architects.

"Oh, yes, I've heard of it," said her ladyship. She was a sweet, kind woman and very much interested. "That is your tallest building, is it not?"

"No," said the American. "It was the tallest for a few weeks. The tallest is the Metropolitan Tower up there"—pointing into the distance. The Woolworth building wasn't started then.

"Why did they build the Singer Tower?" asked her ladyship. She did most of the talking, but her husband was a very attentive listener and occasionally put in a word.

The manner of the English couple was plainly indicative of their state of mind. The American felt that they were probably thinking of old Kaspar and Peterkin and little Wilhemine and the Battle of Blenheim. He could imagine that her ladyship was inwardly humming the refrain:

"But what good came of it at last?"

Quoth little Peterkin.

"Why, that I cannot tell," said he,

"But 'twas a famous victory."

The American thought of little Peterkin, but he plucked up courage. "Oh," he replied, "they thought it would make a good advertisement," and, after a pause, "maybe they thought it was beautiful, too."

Her ladyship had no comment to make on the astonishing statement that anybody could think that the Singer Tower was beautiful.

"You should see the Singer Building at night," continued the American. "It really is wonderful. There's a kind of halo around it that makes it one of the sights of the world."

The ship had meantime been moving up stream, and the white tower of the Metropolitan Building was more easily discernible.

"There," said our American, "is our tallest building." His pride was self-evident.

An expression of sympathy came to the face of the kind lady who stood thus listening to the boyish—maybe the child's—raptures of the poor deluded barbarian. Undaunted, however, the American returned to the charge.

"The Metropolitan Tower is built of white marble," he said.

"Marble costs a lot of money," said his lordship. "Why did they go to all that expense?"

The American thought again of Peterkin and the Battle of Blenheim.

"Ah, that I cannot tell," thought he, but he said, "Oh, they thought that was beautiful, too." And then, his courage, rising, he continued: "And it is beautiful. That white roof against the sky is a sight to stand and watch by the hour. Sometimes the top of the tower is lost in the mist."

Now, this feeling of these foreigners would not be worthy of notice were it not for the fact that it is typical. Many Americans have assumed a false attitude toward American construction and have affected a contempt for their own architecture. And the funny part of it is that American architects, and their satellites, the architectural critics, have started the talk.

Whoever would think of ridiculing England or Germany for their big ships? They have their great ships and we have our great buildings, and it is about time that the architectural knockers of America should be muzzled. There is hardly a thing in America that has been the object of more indiscriminate abuse than has our architecture.

The trouble is that our every-day American work is compared with the monumental specimens of European architecture. These architectural comparisons are most unfair. The critics have been comparing our commercial buildings with the palaces and museums of Europe.

On an automobile trip from the Riviera to Paris I was afforded an opportunity to observe some indigenous architecture, the "common people's" kind. We happened to run upon a "subdivision." There were the signs of the real estate boomer. Lots for sale, terms, and all the evidences of constructive activity. Here at last was a chance to see what the Frenchman was doing and compare it with the American's work. The houses were substantial, and undoubtedly were for the same class of people that we could find in some healthy American suburb. They were more permanently built than ours would be for the same class of occupancy. The walls were of masonry, the roofs were tile. But one looked in vain for signs of "architecture." The houses seemed to have no single redeeming architectural feature. The walls were yellow stucco with red brick trimmings on the corners. They looked as though they have been designed by the village barber. If they were a fair sample of indigenous, modern French architecture, what is France coming to?

We Americans have listened to enough abuse of our architecture. Let us refuse to stand for it any longer. If they would tell you we are so bad, go over to the "other side" and see some of theirs. If you go, don't look at their dead architecture; look at their live architecture.

HOW BRICKS ARE MADE.

Since our ancestors first built themselves huts of earth, centuries have brought changes and improvements in bricks and brickmaking. The first crude, hand-shaped, sun-dried blocks of clay crumbled ages ago. Even Pharaoh, that famous brick-maker of antiquity, was outclassed by the people of Babylon as well as by the Greeks and the Romans. The long thin brick so effective in many of our fine houses today is called Roman because the conquerors used that shape twenty centuries ago.

A history of brickmaking would be almost a history of the world from the time of the tower of Babylon; for as long ago as that, men said: "Go to, let us make bricks and burn them thoroughly." But this is not a history of brickmaking. It is the story of the making of one nineteenth century brick.

I followed the whole process of making a modern brick from the mines whence the clay comes to the cars in which the finished bricks are shipped to their destination. The clay from which the buff bricks are made, and which, by the way, looks like hard gray stone, is far underground, while the red clay which is mixed with it to make the necessary varieties in color, comes from outside, just beneath the grass and trees of the hills along the Hocking.

When we reached the entrance to the mine, our conveyance was waiting for us. It was one of the empty cars about to make its return trip for clay, and was drawn along a track by a rather bored-

looking mule. We hung on behind somehow and went into the darkness. It was a weird and ghostly journey on and on, through a long narrow tunnel, so low that at times we were forced to stoop nearly to a level with the car; so dark, that at first we could see nothing but the sparkle of the miners' lamps near at hand, or glimmering like fireflies in the distance. After a little, however, as our eyes became accustomed to the darkness, we could see quite distinctly. From the central passage, or entry, many smaller passages or rooms opened off, and in one of these we found a man boring a hole into the wall of clay at the end of the passage. This is literally the first step in the making of a brick. When the hole, which is a little over an inch in diameter, is deep enough, gunpowder and a fuse come into play and from outside one hears a dull rumble and roar very much like thunder or a cannon, or Hendrik Hudson's ghostly bowlers.

After the air is clear again the miners go to work with pick and shovel to break up the blocks of clay and free them from blacktop, coal from the strata above and other foreign substance. It is then loaded on the cars and the mules draw it out into the daylight.

The car stops finally over a square opening in the floor of a shed near the entrance to the mine. The brickworks at the foot of the hill are so far below that this shed is in their third story.

At the proper time the bottom of the cart is withdrawn and the lumps of clay fall through the floor into the crusher, where they are crushed and broken into comparatively small pieces. These pass on down into the dry-pan, a great revolving circular pan, of which the floor is a revolving screen. Here enormous rollers continue to grind the clay till its fragrant pass through the holes in the bottom of the pan. From here they are drawn up in an elevator to the top of a long iron screen or sieve set at an angle of about 45 degrees. All that passes through this is carried up in another elevator to the steamer, while the pieces that are still too large are drawn back through a shaft to the dry-pan, where they begin the pulverizing process again.

In the meantime the clay that has reached the steamer has been subjected to sufficient steam to thoroughly disintegrate it. The one hard, rock like substance, now looks more like soft wet sand than anything else, as it falls from the steamer to the floor, two stories below. Here it lies till it has sweated thoroughly. It is then shoveled into barrows and wheeled away to a second dry-pan, whence it is drawn in an elevator to a second screen. After this final sifting it is ready to be pressed into the brick. What would Pharaoh and his bondmen say of such a process?

The clay, which is now a fine powder, passes next into the hopper of the brick machine. A plunger presses it into shape and from the moulds the bricks are lifted one, two, or, four at a time, as the case may be, and piled on a truck to be wheeled away for drying.

They are next sanded and stacked in the kilns, the door is walled up and the fires are lighted. The manner of testing the heat of the kilns is very interesting and very simple. Formerly in this there

was a large element of chance. Now little cones, about two inches high, are made, tested and numbered. Number one is of such a chemical composition that it will melt and fall at a certain degree of heat; number two requires so much more and so on. As soon as the proper cone falls the kiln is at the right temperature for the work it is to do. And it must be kept at exactly the same. To do this, men are kept on duty day and night putting on the fire, just so much coal every so many minutes. It is very monotonous work, but so very important that they are not allowed to talk to visitors for fear they will forget even though for only a few moments.

In the course of time the fires are allowed to go out, and when the kiln has cooled the door is opened and the finished bricks are wheeled to a shed to be inspected and sorted. This inspection, which takes place under the strong light from a great sky window is very thorough. The bricks that are whole and sound with no chipped edges nor broken corners, in fact, those that are without flaw, are taken to the cars and packed for shipment.

This is the story of a simple, dry pressed brick—plain buff, gray or red. When the surface of the brick is glazed or enameled or different in any way from the foundation clay there are additional processes. Experiments are first made in the laboratory until a "slip" is obtained of the required color and consistency. The face of a plain brick which has already been made and fired is dipped in the slip. After dry the brick must be fired a second time. The different tints that can thus be given to the bricks are almost endless and the shapes are varied as the colors. For they are by no means all made with flat surfaces and square corners, but are rounded, triangular or any form that is needed in modern building and the faces are ornamented with curves and angles, graceful arabesques and even elaborate modelings of fruit and leaves and flowers.

Almost all of this is done in the drypress, but for certain styles a mud brick is required and then the process is slightly different. After the clay is finally ground and sifted it is mixed with water till it is of the consistency of thick mud. It then goes into the pug mill from which it issues as a solid rectangular block. A lever that is worked by hand is used to cut this off into bricks of the right size. These are then taken into the mould and pressed into the required ornamental form. These mud bricks must be well dried in the air before they can be taken to the kilns at all. To an outsider they look much the same as those that are drypressed.

The curved bricks used for arches have still another experience. After they are fired they are taken to an enormous cast iron grinding wheel over which runs a continuous stream of sand and water. Here the bricks are fastened into frames that are the right angle and are so held until they are ground absolutely exact, for there must not be the slightest roughness of corner nor unevenness of line in arch brick.

In following the bricks through these "changes" I have said nothing of the "chances." Their name is legion. Some one said to me the other day, "If any one wants an unfailing interest in life, let him try a brickyard." There are continued possibilities

of failure from start to finish. Brickmakers are always anxious until the finished product of their mill is delivered to the future owners, and the interest does not end here, but extends to everything that is built with them, from the simplest cottage to a private palace or a public edifice. I have always supposed that when a man is complimented by being called "a brick" it is because he is square and honest and reliable. I find, however, that the definition is "a jolly fellow," and the explanation is so curious that I insert it here: "The word is university slang and comes about thus: A brick is deep red; so a deep read man is a brick. A deep-read man is a good man in university phrase; a good man is a jolly fellow with nonreading men; ergo, a jolly fellow is a brick."

In describing the actual manufacture of the bricks, I have said almost nothing of the artistic side of the work. The possibilities here are infinite. Not only do the colors range from a creamy yellow to buff and dark brown, from palest terra cotta to that deeper shade whose name is brick red, or from the faintest, most delicate gray to the darkest of stone colors, but there are bricks whose manganese speckles make them look like granite from the New Hampshire hills and others that are white and glistening like marble. The faces of others are chiseled by hand into the semblance of rough-hewn stone.

Again bricks are not only ground for doorways and arches, and embossed and ornamented for moldings and cornices, but are pressed into shape for massive cornerstones, or into circular blocks from which to build mighty buttresses or slender, graceful columns.

Surely we can make our modern cities as beautiful as that great brick city of old, that wonderful Babylon which Nebuchadnezzar built "by the might of his power and for the honor of His Majesty."

DESIGN OF ROMAN LAMPS.

When the Romans invaded Britain and settled in many quarters they used small clay lamps, some opening like a shell, others covered, with only a small hole left to allow of the lamp being filled with oil. Open clay cups with two hollows were also common, one hollow being provided for the wick, the capillary attraction drawing the oil from the other.

Many beautiful bronze lamps are discovered in these ancient Roman camps, illustrating by these simple domestic articles the perfection to which art has been carried when nothing was considered too ordinary to be beautiful. Dr. Hill Burton, referring to the beauty of design and manufacture, says:

"They afford traces of decoration sufficient to show an elevation which the pottery of the present day is only now reaching, and that rather by slavish imitation than by original development." The same historian also records that "a good many terracotta candelabra or lamps have been found of that peculiar form which has ever since it existed in its purity been contorted into ornamental service."

The origin of the *cruisic* has been found among Roman antiquities, and, strange to relate, this simple lamp appears to have been adopted wherever the Roman settled with his conquering legions—France, Italy and other Africa—producing them with little variation from the Roman original.

NERO'S GOLDEN HOUSE.

On that part of the ruins of imperial Rome lying between the Palatine and the Esquiline hills—a space that was more than a mile in breadth—Nero erected his celebrated "Golden House," as he called the new place in which he fixed his abode. The vast extent and the varied magnificence of this imperial residence and its ornamental grounds almost surpass belief; but, if the details that have come down to us respecting it were not too well authenticated to admit of doubt, they might be regarded as fabulous.

Within its inclosure were comprised spacious fields, groves, orchards and vineyards, artificial lakes, hills and dense woods, after the manner of a solitude of wilderness.

The palace itself consisted of magnificent buildings, raised on the shores of the lake. The various wings were united by galleries, each a mile in length. The house or immediate dwelling of the Emperor was decorated in a style of excessive gorgeousness. It was roofed entirely with golden tiles, and with the same precious metal also the marble sheathing of the walls was also profusely decked, being at the same time embellished with ornaments of mother of pearl—in those times valued even more highly than gold—and with a profusion of precious stones.

The ceilings and woodwork were inlaid with iron and gold. The roof of the grand banqueting hall was constructed to resemble the firmament. It was contrived to have a rotary motion, so as to imitate the motion of the heavenly bodies.

The vaulted ceilings of ivory opened and let fall on the guests a profusion of flowers, and golden pipes sprayed over them the most delicious perfumes.

The vastness of the plan prevented the Golden House of Nero being finished during his lifetime. Vespasian drained the principal lake of this fairy region, on which he built the Coliseum, and pulled down all that Nero had erected beyond the Palatine, reducing the imperial palace to the hill that once contained Rome. Domitian built up what his predecessor had pulled down, and added to the palace the Adonis, or halls and gardens of Adonis, the splendid wonder of that age of magnificence. Septimus Severus made several additions to the south of the Palatine, especially the Septizonium, the site of which is much disputed, while in later days Pope Sixtus V. carried off to St. Peter's the three orders of columns of which it was composed.

Among the modern discoveries of the palace were a room full of Roman coins and a hall hung with cloth of gold, and in another part of the Palatine a spacious hall covered with paintings.

SOME POINTS ON ESTIMATING.

It is the close figures that makes the most reliable estimate, and where contracts generally prove satisfactory all around. Every inch of material and every minute of time should be counted, and the figures should always avoid that dangerous risk "that's near enough." There is no such thing in successful estimating as "near enough;" "exactly right" is what is required, then you know what you are doing. Remember always, that it costs more to do the same work in an upper story than it does in a lower one. Doors, same size, equal finish, same time, and furnished with same style of hardware, cost from one to three per cent more to finish when in an upper story. The higher up, the higher the cost, and what is true of doors is true of every other kind of work. It is utterly impossible to tell the exact cost of one part of a building by comparing it with the cost of a similar piece of work. You may get near it, but you should not be satisfied with that. It pays to estimator to estimate on everything and to be exact in every estimate. Avoid accepting figures that are not your own, and, above all, put no trust in estimates of cost as given in architectural books and journals, unless such estimates are itemized and you have gone over the figures yourself. Many a young builder has lost his reputation—and his money—by taking it for granted that a certain house, illustrated, can be finished complete for the sum stated in book or journal. These are traps and snares for the unwary—avoid them. Estimates obtained at an architect's office are generally correct so far as quantities are concerned, but are generally woefully lacking in the time, labor and prices. There are so many things the architect wots not of, such as scaffolding, handling material, and other things, that render his figures doubtful, that it is always better to make your own. It is just as bad to overdo an estimate as to underdo it, for in one case you lose your work and in the other your money, and in these days of close—yea, savage competition, it is the man who figures everything, and figures exact, that takes the work. If you cannot estimate with confidence in your own ability, or have no trusted workman who can estimate, you had better let "contracting" alone, or you will find yourself in deep water before you are aware of it.

SIR CHRISTOPHER WREN AND ST. PAUL'S CATHEDRAL.

By J. B. Black

Inscribed on the unpretentious tomb of an unpretentious but very great man, in the crypt of St. Paul's Cathedral, is an inscription which reads: "If you seek a monument, look about you." The tomb contains the mortal remains of Sir Christopher Wren, the most brilliant architect that the English-speaking race has produced, and one of the greatest geniuses of the Seventeenth Century; and the sublimely eloquent legend directs attention to his crowning work, the noble cathedral edifice itself.

Christopher Wren was born in the year 1662, in the stirring times when Charles the First was

King of England. In childhood he was believed to be of frail bodily constitution, though he proved himself to be of versatile and precocious mind, with a strong bent for mechanics and philosophy. At the age of thirteen he had invented an astronomical instrument and a pneumatic machine—the forerunners of a long list of ingenious contrivances which he produced as a sort of by-product to the main work of his exceedingly active life—and entered Oxford University when he was fourteen. The boy's studies were pursued under difficulties enough. His relatives, all royalists, were harried from place to place and imprisoned in the Tower of London by the "Roundheads" who were triumphing under Oliver Cromwell. Notwithstanding the turmoil in which the country was plunged, however, young Wren managed to stick to his work of getting a thorough education; but that he learned more from his own keen and well-directed observation outside the class room than from dusty books is well attested by his success as a practical man in after life. At this time his proficiency in mathematics was expressed in a series of remarkable Latin verses and essays, and in 1660 he became one of the founders of the Royal Society—that once ridiculed but soon famous nursery of learning. The charter of incorporation of this society, written by Wren, and his inaugural address (in Latin) upon his election at twenty-four years of age to the Professorship of Astronomy at Gresham College, London, revealed wonderful mental grasp and attainments. The address especially, in its English translation, is fascinating reading from the way in which the youthful orator points out the services rendered by astronomy to its sister sciences, and from his engaging modesty in receiving the honor conferred upon him. A catalog of "new theories, inventions, and mechanick improvements" exhibited by him at Oxford including a large number of models of astronomical and mathematical problems, machines for raising water, instruments and munitions of war, musical instruments, methods of fortification and mining, methods of navigation (including submarine navigation!) of fishing, writing, printing, weather observing. Christopher Wren was probably the first to make practical use of the barometer, shortly after it had been invented by the Italian philosopher Torricelli; applying this laboratory instrument to meteorology and weather forecasting very much as Marconi has utilized electric waves, discovered by another, in his own invention of wireless telegraphy. One of Wren's projects was "to perfect coaches for ease, strength and lightness, etc.," which might be of interest and value to our automobile manufacturers! Among his close friends was Robert Boyle, the distinguished physicist and chemist, destined to become famous for his researches in the laws of gases, and John Evelyn, whose diary sets forth graphically for us today the manners and customs of those times; and another friend and philosophic opponent was Blaise Pascal, the great French savant and theologian whose precocious talents were so like those of Wren himself.

But it was due to the discerning patronage of Charles the Second—and surely offsetting some of the many careless follies of that "merry monarch!"—that our admirable young philosopher was to

emerge into the full glory of his life work. Curiously enough, though he had already made a European reputation—at a time when most young men are still at their books, or their apprenticeship in business or professional life—Wren had at this time no special knowledge of architecture. In order to see how it became possible for the name of Wren to express in one syllable the most distinguished architecture of the last half of the Seventeenth Century, we must go back a little to glance at old St. Paul's church (completed nearly 250 years earlier) and make the acquaintance of the talented artist and architect who had recently embellished that building. Inigo Jones, about sixty years Wren's senior in age.

On the site of old St. Paul's there stood, it is supposed, a temple of Diana, the Roman goddess of the chase, in the far-off days of the Roman occupation of Britain. Indeed, a rude altar to this goddess was found during some excavations in the year 1830. It is stated that these invaders abandoned the country in the early years of the Fifth Century, and that in the year A. D. 604 King Ethelbert built for the East Saxons the church of St. Paul; a rude edifice which was doubtless many times destroyed and rebuilt, but which by the end of the Seventh Century had become the local sanctuary of the Christian religion. Following the Saxon and Norman occupation, the reign of Plantagenet kings, the wars of insurgent citizens, the year 1315 saw at length the completion of old St. Paul's by the erection of a steeple (which Wren estimated to be 460 feet high without the cross). In the reign of James the First an agitation was started to restore the neglected and decayed fabric, and a Royal Commission for this purpose was appointed, including the Lord Mayor of London and the Surveyor of the Royal Works, Inigo Jones. When Charles the First became king a handsome sum was collected and expended in substantial repairs, including a noble classical portico at the west end, designed by Jones. But evil days for the Cathedral were approaching. The outbreak of the Civil War put an end to the Commission, and the moneys were confiscated. From 1643 Inigo Jones ceased to act as Surveyor, and ere long passed away. The grand old temple became a cavalry barrack, horses stamped in the cannons' stalls, Paul's cross was swept altogether away, and the lead roof of the church melted into bullets. Among the least of the indignities perpetrated by the Roundheads were the defacing and destruction of the monuments, and the hacking up of the new portico, which was turned into stalls for merchandise. Then came the Restoration.

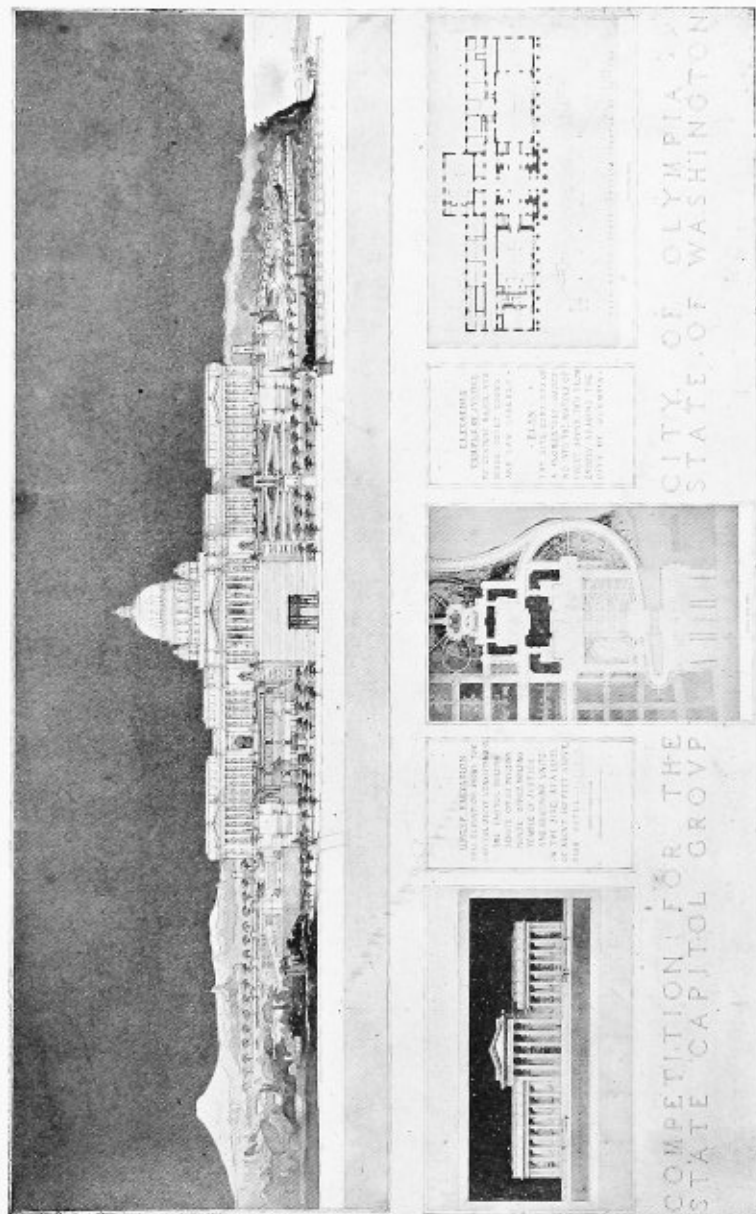
It is at this juncture that Wren enters the scene, about to transform St. Paul's and ecclesiastical London with his genius. He was appointed Surveyor, and suggested an enlargement of the interior of the Cathedral—a plan born of recent very active studies of his uncle's cathedral of Ely and observation of cathedral and other architecture on the Continent. But for the fit exercise of his consummate genius a special opportunity was needed, and such an opportunity came with the Great Fire of London in 1666. During the plague that preceded the Fire, the interior of St. Paul's was turned into

a hospital; and now the devoted old building, the scene of so many vicissitudes during the centuries of its existence, was destined to total destruction by fire. In Evelyn's *Memoirs* there is a stirring account of the conflagration. Under date of Monday, September 3, he writes: "I went on foot—and saw the whole north side of the city burning from Cheapside to the Thames." He goes on to say that the fire "was now taking hold of St. Paul's Church, to which the scaffolds contributed exceedingly.—September 4, the burning still rages, and it is now gotten as far as the Inner Temple. All Fleet Street, the Old Bailey, Ludgate Hill, Warwick Lane, Newgate, Paul's Chain, Watling Street, now flaming and most of it reduced to ashes; the stones of St. Paul's flew like grenades, the melting lead (from the roof) running down the streets in a stream, and the very pavements glowing with a fiery redness." So perished the old, time-honored cathedral—only to rise again from its ashes, like a phoenix, into the majestic and enduring pile which stands firm to this day.

If the Great Fire, erasing London Town and with it the Cathedral which had stood since the reign of William the Conqueror at least, was a national calamity, the opportunity that accompanied it was the directing force to Wren's ambition. In his official capacity he made an exhaustive survey of the ruins, and submitted plans not only for the entire rebuilding of the Cathedral but for the laying out of the whole city in a regular and commodious manner, with broad avenues and fine buildings in advantageous contrast to the narrow streets and lanes, and the ill-constructed and poorly lighted and ventilated houses of the London of the Middle Ages which the fire had unlike, in spirit, the one which was carried out for our own city of Washington nearly a century and a half later—was too far in advance of the time to be accepted by the population, though it received the approval of the Government. But the unbound energy of the new Surveyor-General found scope enough in the rebuilding of St. Paul's and in the design and erection of over fifty churches and other buildings which sprang up in the burned area with a rapidity which surprised continental Europe, of a monument commemorating the Great Fire, and of Temple Bar (the gate of the "City" of London, pulled down during the last decades of the Nineteenth Century.)

The rearing of St. Paul's alone was a sufficiently difficult problem. The cathedral was over forty years in building, and from the very start the work drew liberally upon Wren's talents. Even the two years' work of demolishing the ruins of the old structure (left by the Fire), which he supervised, called out the great architect's full resourcefulness. He used gunpowder most skillfully to bring down the old walls; but a frightful explosion having resulted from the bungling of one of his foremen one day, in Wren's absence, the latter was obliged to give up the use of powder, and turned to the battering ram with equal success. It is recorded that he set thirty men at work swinging a heavy, iron-shod mast against one of the walls. The men complained of what they thought was a foolish endeavor

(Continued on Page 35)



COMPETITION FOR THE STATE CAPITOL GROUP, CITY OF OLYMPIA, WASHINGTON

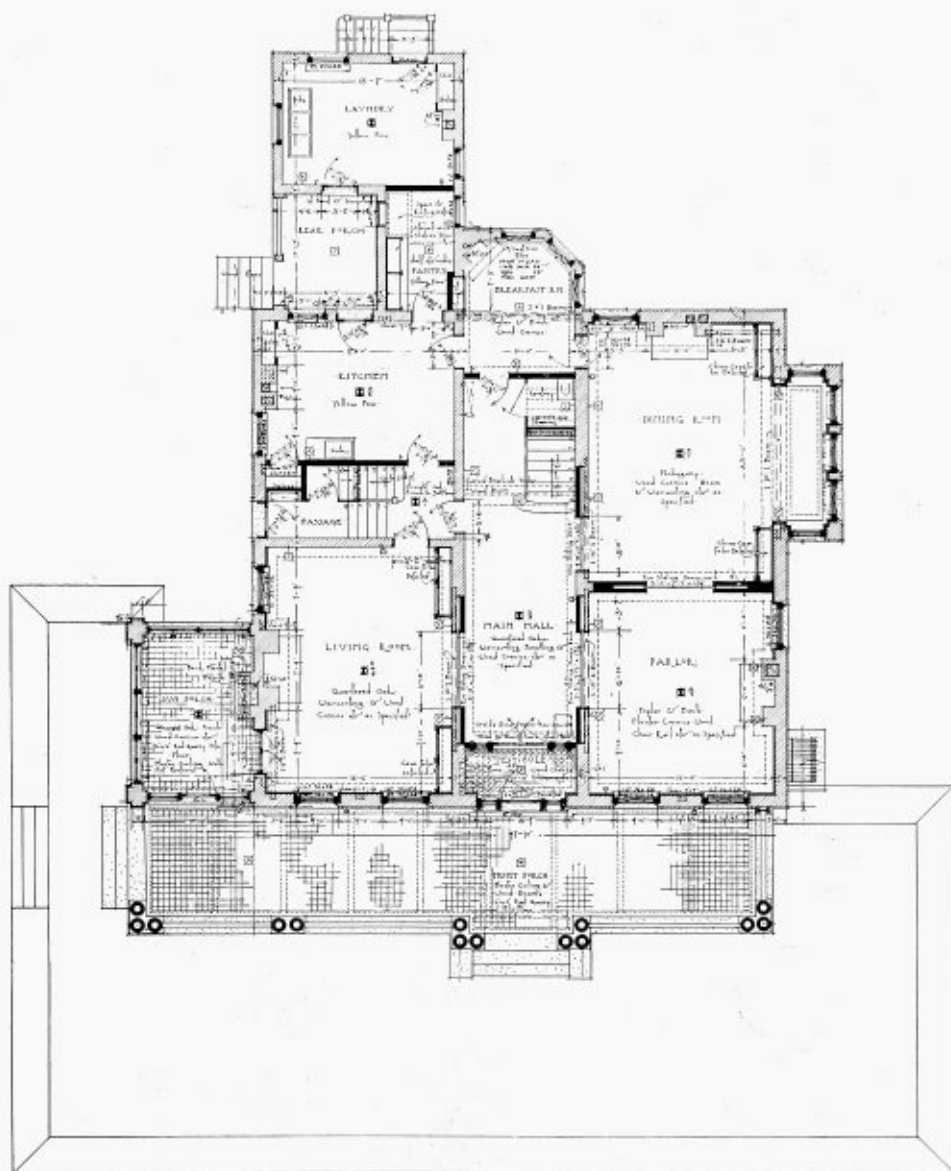
HOWELLS & STOKES, ARCHITECTS, NEW YORK.



" KNOCKCOID "

HOME OF MR. JOHN DEWAR, BELLEVUE.

J. L. BEATTY, ARCHITECT.



FIRST FLOOR PLAN
 "KNOCKOID"
 HOME OF MR. JOHN DEWAR, BELLEVUE.

J. L. BEATTY, ARCHITECT.



SCHENLEY
SCHENLEY

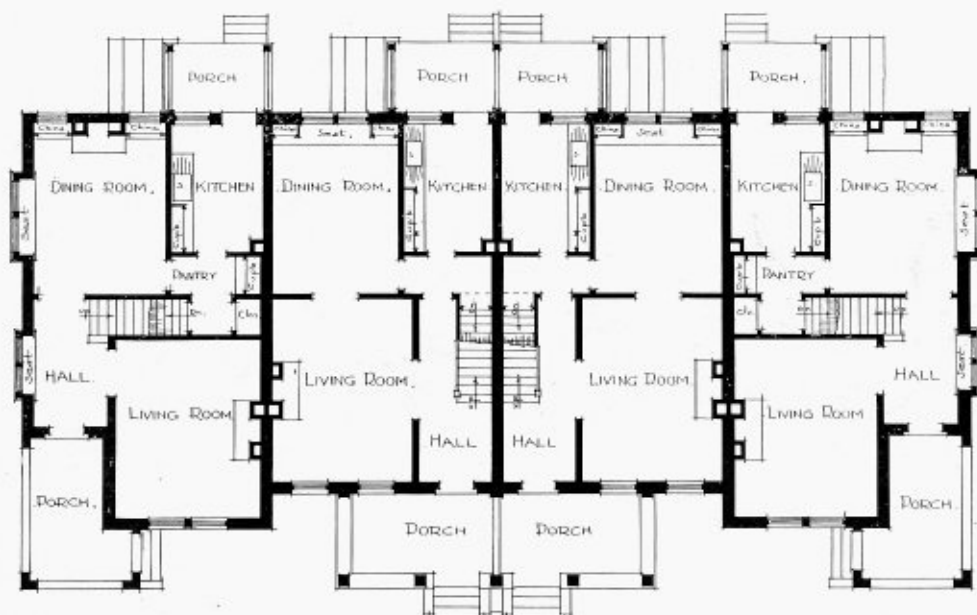
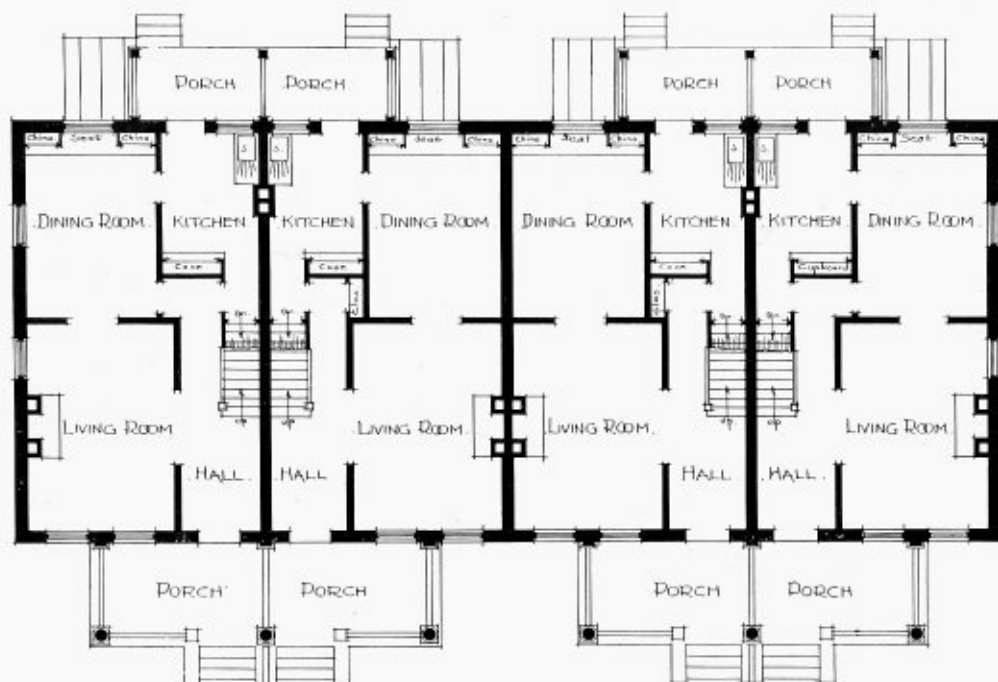


FARMS TERRACE
EY FARMS

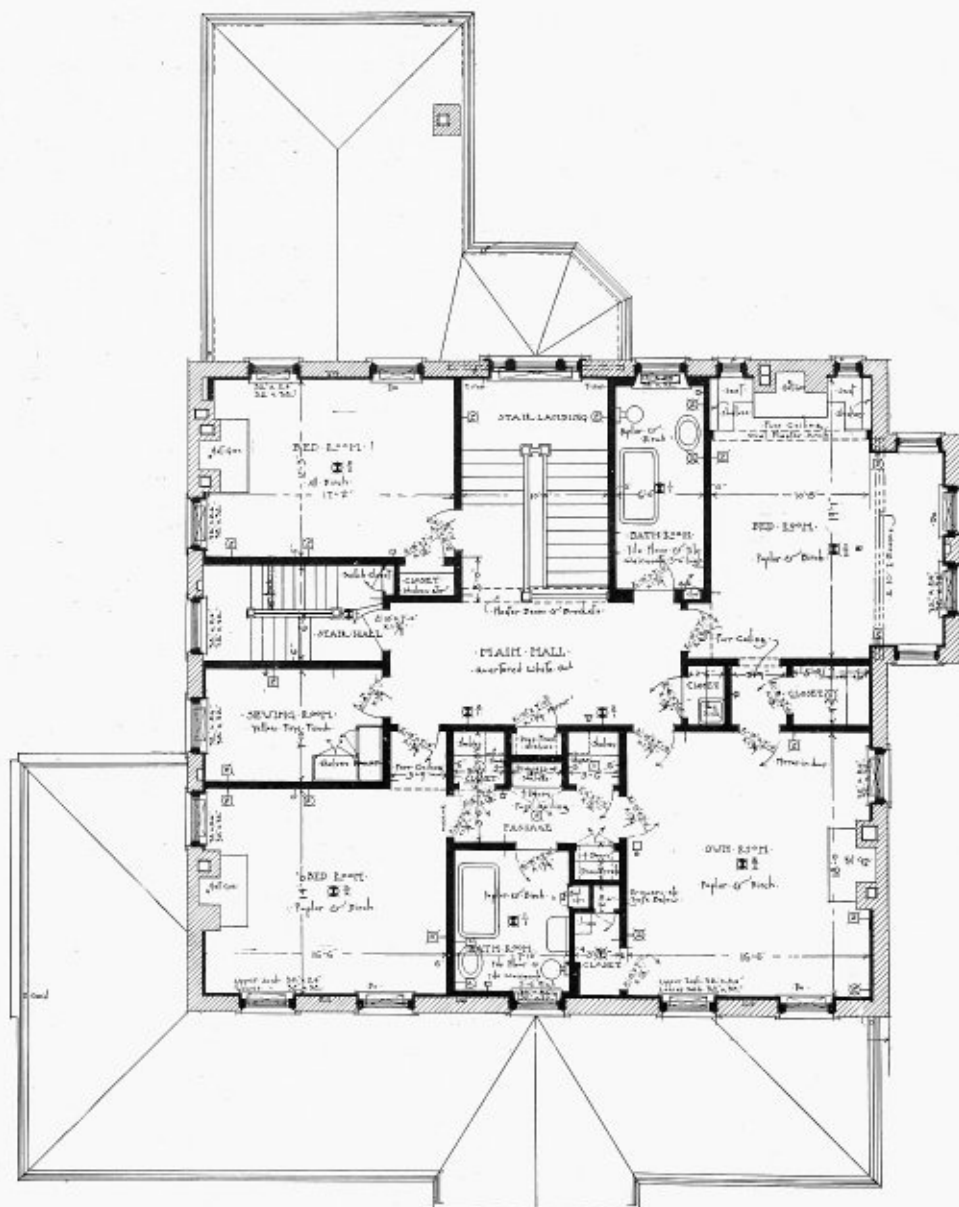


ROW COLTART SQUARE

CLEPPER & MOFFITT, ARCHITECTS.



FLOOR PLAN ROW COLTART SQUARE



SECOND FLOOR PLAN
 "KNOCKCOID"
 HOME OF MR. JOHN DEWAR, BELLEVUE.

J. L. BEATTY, ARCHITECT.

(Continued from Page 18)

—but on the second day the wall gave way! The finally accepted design for the new cathedral, the outcome of no less than three successive drafts, called for a splendid dome; and it is of interest that the noble excellence of the design as it stands today was due largely to the practice that Wren obtained in the erection of some of his other churches, six of which had domes. Even a brief account of the Wren churches in London—many of which are still standing—would make a story by itself. To the architect every one of them is a valuable study in planning, especially in adapting a beautiful structure to a difficult site, and in securing a given result. Then there are the other important edifices in London and in England which he was commissioned to build as his reputation grew apace. But the great Cathedral must here suffice to show the inexhaustible fertility of invention combined with good natural taste and profound knowledge of the principles of art. Wren's architecture is the perfection of that modern style which adapts forms and models essentially Gothic to the orders and ornaments of classical antiquity. The pictures of the exterior and interior tell their own story of the dignity and splendor of this magnificent pile on the banks of Thames, which has aptly been compared, as a mighty work of art, to Milton's poem, "Paradise Lost." On the ground plan of the long or Latin cross rise the walls of Portland stone, without visible buttresses, supporting a roof which is so flattened as to be almost invisible from the outside and above which rise the delicately beautiful pair of bell towers, and the majestic dome surmounted by its stone lantern and cross 365 feet above the ground. A study of the construction of St. Paul's is a comprehensive lesson in architecture, and the dome is by itself a masterpiece. This structure consists of the vast but delicately beautiful exterior dome which so dominates the Londoner's view from all directions; the intermediate brickwork cone, which, though visible neither from without nor from within the edifice, yet serves to support the lantern and its accessories of 700 tons weight; and the interior shell, also of brick, with its top fifty or sixty feet below the top of the outer dome.

Although the dome of St. Paul's was not finished till 1710, most of Wren's active labors seem to have been over five years earlier, at which time his work on Greenwich Hospital, another worthy monument of his genius, was completed. The latter years of his life were embittered by the petty annoyances of inferior men, malicious attacks and innuendoes aimed at his towering reputation and his envied position under the Government; but from his eighty-sixth year, after holding the office of Surveyor-General for nearly half a century, he retired to his residence at Hampton Court and busied himself with those mathematical and scientific problems with which, as we have seen, he early made his reputation. At the end of February, 1723, he quietly fell asleep in his chair; and a few days later his remains were interred in the church which stands as his greatest memorial.

Sir Christopher Wren's life teaches a valuable and encouraging lesson of the possibilities of

achievement by the determination to give only one's best, and to make that best better by incessant study and practice. His genius was based on "an infinite capacity for taking pains" as well as extraordinary natural gifts. These things are indeed a broad and deep foundation for a life-work; and if he had not taken up architecture he would undoubtedly have secured a scientific position higher than any of the men of his time, barring only Sir Isaac Newton. That the motives of his vast achievements were not mere human will-power or selfish ambition is amply proved by the fact that he remained simple and honest throughout his long career, unspoiled by praise and unmoved by Court favor or popular applause and equally dignified and unmoved under the assaults of enemies. Thus it was eminently characteristic that the sum he stipulated as his remuneration for the arduous labor of supervising the construction of St. Paul's was only 200 pounds a year!—if ever a man "earned more than he was paid for" it was Sir Christopher Wren. It was well said of him early in his career that the divine felicity of his genius was beautifully matched by a sweet humanity of disposition; and he was truly one of those greater men that sojourn on earth to show the Maker's likeness to the ages. Such a man it is that Kipling must have in mind when he writes:

If you can talk with crowds and keep your virtue,
Or walk with Kings—nor lose the common touch,
If neither foes nor loving friends can hurt you,
If all men count with you, but none too much;
If you can fill the unforgetting minute
With sixty seconds' worth of distance run,
Yours is the Earth, and everything that's in it,
And—which is more—you'll be a Man, my son!

REMARKABLE TOWNS.

The marine village of Tupuselei, in New Guinea, would take a lot of beating on the score of singularity. Here are houses all supported on piles, and stand right out into the ocean some considerable distance from the shore. The object of this strange position is to protect the inhabitants against sudden attacks of the dreaded head hunters, who are always on the lookout for victims. Other villages in this happy land are perched up in all but inaccessible trees, for the same weighty reason.

Another curious place is a town without a name on one of the arms of Lake Huron. This consists of some 500 wooden huts. During the summer these little dwellings are hidden away in a clearing on shore, and the town contains not a single inhabitant. But on the arrival of winter, when the lake is frozen over with a thick coating of ice, the owners of the huts arrive and proceed to move their houses out on to the surface of the lake. The floor of the hut is taken off and a hole cut through the ice. Through these holes the residents fish, carrying on their operations until the spring releases the lake from its icy bonds, when this extraordinary town is once more broken up, the shanties go back to their resting place and the fishermen scatter over the country. This place even boasts a curing factory and a church, not to mention several saloons—all on the ice.

Athos, a town situated on a promontory on the

coast of Macedonia, well deserves the title of the most curious town in the universe. The peninsula is known as "The Mountain of the Monks," from the fact that a score or so of monasteries are dotted about the rough hillsides or the valleys. In these establishments dwell a numerous body of ascetics, kind and hospitable to wanderers, but full of superstition, and believing in the doctrine of separation to a wonderful degree.

The actual town, as distinct from its monastic environs, is called Caryes, and supplies the simple wants of the monks. Here are to be found streets of shops, crowded bazars, flourishing trades and all the bustle and energy of a modern town. But one thing soon strikes the visitor as strange. There is no female to be seen anywhere, for the gentler sex is rigorously banished from the place. Even the small Turkish garrison, from the commandant down to the privates, consists of bachelors.

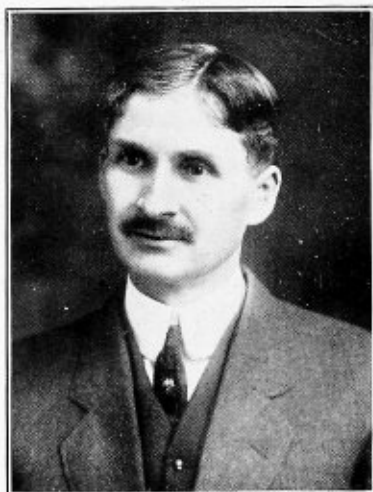
This extraordinary law is carried out even among the domestic animals. Only the wild birds evade it, and then only when free, for no female bird is ever brought to table; the fowl one has for dinner is sure to be a cockerel. For this unparalleled state of affairs there is only a legend to account. Although to our practical minds flimsy to a degree, it is implicitly believed in by the inhabitants. It appears that in one of the chief monasteries on the promontory there is a miraculous icon, which is a picture or image sacred to members of the Russo-Greek Church. This particular picture is a representation of the Virgin, and the legend says that one day as the Empress Pulcheria, who had liberally endowed the church, as well as beautified and restored it, was engaged in her devotions, the Virgin spoke, asking what she, a woman, was doing in the church. The pious lady, no doubt amazed, did not reply, whereupon the voice commanded her to leave, saying that the feet of a woman should never again tread the floor. The Empress, probably surprised at the seeming ingratitude of the speech, as well as awestruck, left the place, which no female has since entered. How the prohibition thus arbitrarily established came to comprehend the length and breadth of the promontory is not very clear. As a residence for bashful bachelors, we should imagine, Athos would be hard to surpass.

THE MERCHANTS' BANK OF PITTSBURGH.

The Merchants' Bank of Pittsburgh is one of the new financial organizations that is making rapid progress, and largely because of the men who are identified with its official management. The bank was opened for business on May 11, of this year, and since that time has made a record of continuous progress. Its officers selected a location for its operations that was convenient, and by their diligence and energy have been able to draw to it a clientele that promises to make of it one of the solid institutions of Pittsburgh—a city, by the way, that possesses more banking capital than any other in the State, and more than any other city of the country outside of New York.

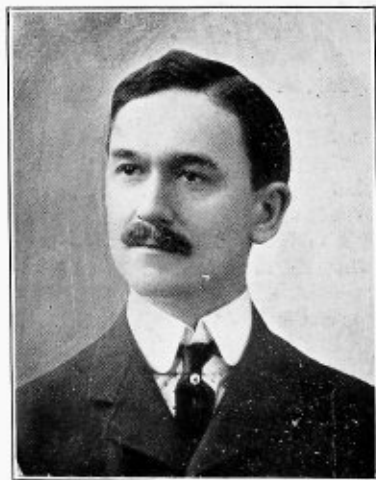
The officers and directors of the Merchants' Bank are well known business men of the city of the

younger generation, but their personal successes in the conduct of their private affairs bespeaks for them the same judiciousness in the management of the bank which their private affairs have received, which is one of the surest guaranties of care and prudence in doing business for others.



A. H. BOYD, President

The bank does a general commercial and savings deposit business, and has adopted the policy of keeping its doors open continuously on Saturdays from 9 o'clock A. M. until 9 o'clock P. M. This is a convenience that many business men depositors appreciate as is evidenced by the fact that a large number of them have opened accounts in order to be available for the conveniences this policy affords.



WM. L. STEWART, Vice President

The official roster is made up of the following well-known business men of the lower section of the city, within which the bank has established itself at Sixth and Liberty avenues. A. Hillis Boyd, president of the B. B. & B. Trunk Company, president; George E. Deitz, wholesale hatter; Truman S. Morgan, treasurer of the F. W. Dodge Company, and W. L. Stewart, of Stewart Bros. & Company,

wholesale shoe merchants, vice presidents; J. S. M. Phillips, long connected with various Pittsburgh financial institutions in official capacities to which he rose from a junior position to more important ones in a continuous progression, is cashier. A. J. Bien, a merchant in tailors' findings; Claude

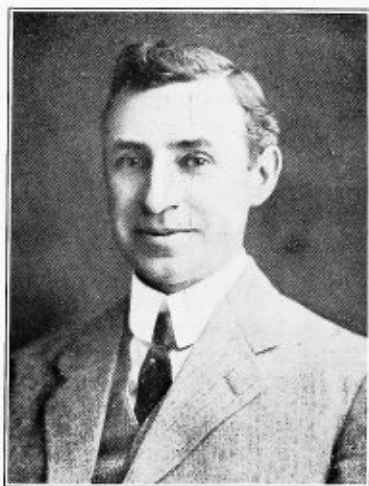
ing every one of them. He is a sound thinker, a careful and deliberate business man, and has a large and favoring acquaintance with the men particularly interested in the building and construction industries and manufacturers of building materials. As treasurer of the F. W. Dodge Company he is



TRUMAN S. MORGAN, Vice President

Davis, restaurateur; Roger Knox, attorney-at-law; Richard Laird, wholesale shoe merchant; Wm. C. Walters, traffic manager, and George S. White, fire-proofing dealer, and the executive officers are directors.

From the nature of the business in which these men are engaged it will readily be observed that



GEO. E. DIETZ, Vice President

they are "hustlers" in a business way, and that their experiences, gained in learning their own lines of business, and their successes in developing them, peculiarly qualifies them to direct banking affairs with discretion, care and a strong out-look as to credits, etc.

Mr. Morgan has been personally known to the writer for a number of years, and he has advanced from one height to another in a continuous way dur-

peculiarly in position to inquire into credit matters, and his connection with the Merchants' Bank gives to the institution a facility for determining credits of its customers not possessed by any other bank in the city.

Mr. Phillips, the cashier, is now serving his fourth consecutive term as secretary of Group 8, of the Pennsylvania Bankers' Association, is a director of the Bankers' & Bank Clerks' Mutual Benefit Association, and is an ex-president of the Pittsburgh Chapter, American Institute of Bankers. The fact that he has been so freely honored by his associates among bankers and bank clerks is a high testimonial to his character and to his knowledge and judgment as a banker.

SGME ODD SAWS.

Saws were used by the ancient Egyptians. One that was discovered, with several other carpenters' tools in a private tomb at Thebes, is now preserved in the British Museum. The blade, which appears to be of brass, is $10\frac{1}{2}$ inches long and $1\frac{1}{4}$ inches broad at the widest part. The teeth are irregular, and appear to have been formed by striking a blunt-edged instrument against the edge of the plate, the burr, or rough shoulder, thus produced not being removed.

A painting copied in Rosellini's work on Egyptian antiquities represents a man using a similar saw, the piece of wood he is cutting being held between two upright posts. In other representations the timber is bound with ropes to a single post, and in one, also copied by Rosellini, the workman is engaged in tightening the rope, having left the saw sticking in the cut.

In an engraving given in the third volume of "Wilkinson's Manners and Customs of the Ancient

Egyptians," a saw is represented of much larger dimensions, its length being, by comparison with the man, not less than three or four feet. It does not appear that the Egyptians used saws worked by two men.

The invention of saws was variously attributed by the Greeks to two or three individuals, who are supposed to have taken the idea from the jawbone of a snake or the backbone of a fish. There is a very curious picture among the remains discovered in the ruins of Herculaneum, representing the interior of a carpenter's workshop, with two genii cutting wood with a frame saw, and on an altar preserved in the Capitoline Museum at Rome there is a perfect representation of a bow saw, exactly resembling, in the form of a frame and the twisted cord for tightening it, those used by modern carpenters. From these remains it is evident that these forms of the instruments were known to the ancients.

BISKRA, THE OLD ALGERIAN CITY AT THE EDGE OF THE SAHARA—THE TOMB OF SIDI ZAZOUR AND ITS MYSTIC GUAR- DIAN—THE LOCUST VENDOR'S TRADE.

C. F. and L. Grant.

Biskra, the present terminus of the railway which runs southward from Philippeville on the Mediterranean, is the Mecca of the casual tourist to this part of Algeria, who, with little trouble and without wandering from the region of the large hotels—without, indeed, changing his train—may wish to believe that he has seen the desert. And because at Biskra the tourist is largely represented it follows that the "guides" are numerous also. "Guides," indeed, there are of every description—pleasant companions generally. As a study of Oriental life, a varied experience with them is both interesting and amusing.

There is the guide who is nominally attached to the hotel, whose role, by means of annual divorces, appears to be the providing of marriage ceremonies for the benefit of visitors, while they in their turn are expected to supply the two or three pounds which, however often given, always seem to be still needed before the wedding can take place.

There is the smart, good-looking, youthful guide, who borrows luster from an alleged descent from the Prophet and is always appearing in gorgeous new clothes, obtained, it is whispered, from the shops for the purchase of supposed "clients," worn for a day and then returned as unsuitable.

There is the quiet, reliable, studious young guide, who is too proud to ask for employment, and perhaps has no need; for he seems to be a general favorite, and to be employed by the same people when they have returned to Biskra year after year. Of his employers he speaks with the greatest pride and admiration, as indeed do all the "guides."

When a card of recommendation is obtained it is greatly treasured, carried about in a leather case, and brought out to be shown at every opportunity.

"He is a very great man in England," they say, perhaps, or one of their clients, or of another, "He is a great English marabout." Occasionally they are a little supercilious in their remarks, as, for instance, one of the Arab guides who had been employed by an English writer whose rapid tour through the country had resulted in a book. "I know how these books are made," said the guide. "I tell them five words, and they make ten pages." All this takes place in the modern Biskra of the tourist, and the French Government, and the Hotel de Ville, and European shops and hotels.

The real Biskra—the ancient Bescera and capital of the Ziban, the brown earthen village surrounded by palm trees and inclosed by mud walls, through whose narrow streets, only wide enough for a donkey to go, small streams meander; which was presided over by the Roman fort, and later by the Turkish one—is a distinct place, and a very different one. The ebb and flow of native life, it is true, has reached and flooded the market place built in New Biskra by the French. Here you may see occasionally a native squatting beside a heap of queer brown objects like huge winged grass-hoppers, which are locusts. They are cooked and being sold to the people, who pull off the legs and wings and devour them upon the spot in the same way that a European might eat shrimps, and apparently with as much enjoyment.

In a corner of the market sometimes may be seen a couple of old women, half blind and hideously ugly, selling the dried flowers of the acacia or mimosa, mixed with gums which are used for incense. From them also may be bought for a few pence delightful little censers made of pottery in which the sweet-smelling stuff is burnt in the tombs of marabouts, at religious rites, and upon all holy spots. But Oriental life, though it is always interesting, needs as a setting and background the rich coloring and picturesqueness of the purely native souk or bazaar, and these are not to be found at Biskra.

In an open space between the town and the negro village stands the statue of Lavigerie, the French bishop who worked so hard in North Africa for the natives and the Arabs. Beyond, upon the edge of the Sahara, is the wonderful garden—wonderful for this reason, that it is so near the desert. Its splendid palms and bushy shrubs actually touch the arid waste, its faultlessly kept footpaths are made of sand. You may stand in the dim shadows of its trees—the palms which, according to the Eastern proverb, must have their feet in the water, while their heads are in the fires of heaven—with the wilderness spread out before your eyes. Only a few steps are needed to bring you into its blazing heat. Herein lies the romance of the garden. It is too prim, too conventional to be really beautiful, with a primness which is more accidental than studied or essential. For it is not that of the delightful old English garden with its set walks and formal hedges; nor has its conventionality anything in common with the well-considered grandeur of the Italian plaisance.

Some elements there are which go to the spoiling of a garden. It is invaded by matter-of-fact,

unimaginative people, anxious to prove the identity of certain spots and to connect them with the characters in a novel; these meet you at every turn. Vendors of carpets and of miscellaneous wares dodge and follow you, successfully eluding all your efforts to escape them. Finally they settle themselves on the ground at your feet, hoping by sheer importunity to drive you to an undesired bargain. All this vulgarizes, though it cannot entirely destroy, the charm of the garden.

Outside, and just upon its fringe, flows the river Qued Biskra. Its wide, stony bed is dry in the winter. In its midst is set a little square, white-domed building, the tomb of the marabout Sidi Zazour, one of the most revered in this part of the Sahara. The guardian of the tomb is a queer, half-savage looking old man, who is somewhat of a mystic. He goes home to sleep every night in the little Arab village of M'cid, close by. Most of the day he may be found in the small stone cell adjoining the sepulcher inside the building. Here he prays and meditates, and hopes himself, perhaps, to become a marabout in time, or lies upon the floor curled up in his burnoose, half or wholly asleep. Close by, in the little funeral chamber that is hung around with great colored lamps and silken flags and pictures of Mohammedan worship, sleeps the marabout Sidi Zazour. His grave is enclosed by a green-plaited grill, and is covered by a catafalque, upon which are spread, one upon another, a dozen gaudy palls. Over them all repose the usual rosary, formed of a hundred great round wooden beads, used for counting the ninety-nine attributes of God, with the essential name of Allah indicated by the hundredth bead.

A strange silence reigns in the solitary tomb. Sometimes the old man, its guardian, says the silence is broken. As he sits there alone watching, the dead marabout speaks to him. When he goes at night to light the taper he feels a hand upon his arm and the marabout utters a weird, low cry. "I am all alone," he says; "there is no one who understands me." And the old man clutches your arm with a half-wild expression as he tells you of it. Sometimes the old guardian hears more voices. Sidi Abderahmen from Algiers, who can make the journey in a quarter of an hour, or some other dead marabout, has come to converse with Sidi Zazour. "Are you not afraid?" I asked the old guardian, "when you hear the voices?" "Oh, no," he answers. "What is there to be afraid of; they are all holy men—they will do me no harm." And the old man, who is a half-mystic, half-savage devotee, smiles with a fierce satisfaction and he rolls himself up once more in his burnoose upon the floor. He interested us; we wanted to hear more of his strange experiences, but he knew very little French and was very difficult to understand; to talk much it was necessary to have an interpreter who spoke Arabic. So one day we decided to go again and visit the old man in the tomb, taking with us a young Arab of about eighteen who had sometimes been out with us before. We met him in the souk in the morning and engaged him for the afternoon. He was to meet us just outside the hotel. As soon as the arrangement was made, he asked for an advance of one franc

upon his afternoon fee. What did he want it for? we asked. To this question he gave the somewhat astonishing answer, "To buy some shoes for my mother." As he had told me before that his mother lived some distance off at Old Biskra, I questioned the likelihood of his buying the shoes and taking them to his mother before we started on the expedition, directly after luncheon. However, he declared that he should certainly do so, and went off with the franc which we very unwisely gave him.

He showed an extreme disinclination for walking when he arrived at the time appointed in the afternoon. It was very hot, he suggested; would we not like to take a carriage? This suggestion was repeated two or three times, at intervals of about five minutes, without the success that he wished. We intended to walk to Sidi Zazour; if it was not too hot for us, it certainly was not too hot for an Arab; so we went on, while our young guide, who had always before been pleasant and communicative, walked sulkily and silently behind.

The suspicion was unpleasantly forced upon us that certain hints given us by another guide were not without reason. The franc that we had advanced at his request had, as we might have anticipated, not found its way to the shoemaker's. The boy had been drinking absinthe. The suspicion became a conviction when finally we arrived at Sidi Zazour. There was no interesting talk with the guardian of the tomb in store for us, through the interpreter, that afternoon. We found the old man rolled up in his burnoose half asleep upon the floor

TELEPHONE 4780 COURT

SCHUTZ, SCHREINER
& CLYDE CO.

MAY BUILDING

CONTRACTORS
AND BUILDERS

PITTSBURGH, PA.

JOSEPH HORNE CO.

LOWER FIFTH AVE.
AT PENN AVENUE.

Interior Decorating

is one of our specialties. Our facilities for executing special work under this head are complete.

We have varied examples of fine interior decorating, executed by us, which should commend themselves to every one who values artistic work.

We employ specialists of technical skill and creative ability, in connection with a staff of designers who give their whole attention to arranging and originating interior decorations.

The following different departments work together for the complete and artistic furnishment of a house:—

Interior Hardwood Finish,
Mural Decorations,
Lace Curtains,
Special Furniture,

Imported and Domestic Wall Papers,
Fabrics for Wall Hangings,
Leaded Glass,
Fine Oriental Rugs,

Hardwood Floors.

Upon request representatives are sent to study requirements, and original drawings are submitted without charge.

of the little cell. He seemed less inclined to be communicative than at the time of our last visit. The boy was hopeless. The walk and the heat had caused the absinthe by this time to have full effect. He likewise rolled himself up in his burnoose and went to sleep, though when we roused him presently and reprimanded him he denied the fact. He was "only meditating," he declared. It was "good to meditate in a holy place." To our suggestion that we did not engage him for the afternoon and bring him to Sidi Zazour for that purpose he made no reply. When we inquired as to the subject of his meditations, he answered cheerfully, "The shortness of life." So, disgustedly, we left him to pursue them, and the strange things that we might have learned that day remained still locked in the bosom of the old mystic.

The tomb of Sidi Zazour is a great resort for sick people who desire to be healed of their diseases. Many miracles are said to be wrought there. It is indeed a wonderful place, this old tomb where the marabout lies, out in the middle of the river bed. For the guardian told us, and the same tale was told in Biskra by a young educated Arab who held a post under the French Government, that however high the river may rise, even when it washes the walls of the little building and beats against them, it never enters the openings in the stone which form the windows. The gaudy coverings of the catafalque are not even splashed. This is by the natives looked upon as a marvelous miracle. To more skeptical minds the rounded back of the building

that is set against the rush of waters, and the low protecting wall upon one side, suggest an explanation of the mystery.

This protection is necessary, for the Qued Biskra is very strong when it is in flood. Only a year ago a terrible thing happened. The river had come down, bringing with it a quantity of wood, which, when the water had dried up, was left upon its stony bed; numbers of children and women came down to gather it, for wood is a most precious thing in the little villages of the Sahara. Suddenly, whilst they were all busy and unheeding, the river rose again; a great wave came rushing down with tremendous force. In an instant a swirling torrent swept down the dry river bed, and thirty-one women and children were borne to their death.

"Do you see that man with the roll of blue prints under his arm?" asked a successful machinery manufacturer on a Euclid-av car. "That's John —. The name doesn't mean much now, to him or anyone else, but he and I graduated together from the same technical school, he with second honors and I down near the tail. You couldn't have found a man in the whole school who didn't prophesy that some day John — would be a big man."

The man under discussion was hanging to a strap. Every line of his long thin body indicated weariness, hopelessness and dull indifference.

"What's he taking the blue prints home for?" asked the machinery manufacturer's friend.

"Oh, he's got to do 'em all over again, most likely. He never gets anything quite right.

Never gets anything quite right! That, then, accounted for the apathetic despair of the man. It accounted for the defects in a face which basely escaped being remarkable.

The brow was high, arched and broad. The eyes, large, prominent and glazed, stared with a dull intentness—nowhere. The nose was long and aquiline. The cheeks sunken and the flesh under the heavy eyes was wrinkled and lay in purplish, unhealthy folds. The corners of the grim mouth drooped in fixed melancholy. The chin, too small for the rest of the face, receded.

The hand which clutched the blue print roll was lean, big-knuckled, brown-skinned and dry. The man's clothes were old and shabby, baggy at knees, shiny at elbows, and hanging from his bony shoulders in a manner to emphasize his angles.

"You say he was a comer once?" inquired the friend.

"We thought so," the manufacturer replied. "Some of us though he ought to have had first honors. I remember him in class. He had the most remarkable mind I ever knew. He wanted to be an engineer. In conception he was positively brilliant. His ideas would have made another man famous and rich.

"He had only one fault—he could not appreciate the importance of minute details. And that's important, you know, when you're drawing plans for complicated machinery, for example.

"The shade of a hair out of the way—and your drawings spoiled. John always said: 'O what's the difference?' He wanted to do big things—build railroads and bridges.

"After our tech days we went to work in the same shop, making drawings. I never pretended to be brilliant, but I knew the importance of getting drawings exactly right.

John didn't. The consequence was that, when, after a few years, I was drawing plans for whole machines, John was still on the simplest parts.

"It hurt his pride. He told me so. He knew he was clever, you understand, and he thought the firm would recognize genius. But when he was tried on a big job he always made a mistake, small in itself, but fatal sometimes, and always costly.

"I got out of the firm to work for a younger one, and now I am a member of it.

"I'd lost track of John. I heard he had married, and had children. Then I heard he was sick a long time. A year after that I met a man who told me John had taken to morphine. It had been given to him when he was sick and he got the habit.

"For old sake's sake I looked him up one evening. His wife looked tired and slatternly, and there were babies. The house was horribly unclean and the babies cried most of the time.

"John didn't seem very glad to see me. I tried to cheer him up by talking about old 'Tech.' No go. He was sore. Raved about trusts, and unions, and said there was no chance for a man with brains.

"I suppose he is still drawing machine parts and still making mistakes. Thirty years he's been at it, pouring over a drawing board, and not getting anywhere.

BELL 760-W. Wilkins

R. C. KING

PAINTING HARDWOOD FINISHING

1233 PENN AVENUE,

WILKINSBURG, PA.

Martsolf Bros.

Contractors and Builders

No. 4 Smithfield Street

New Brighton, Pa.

Pittsburgh, Pa.

MARSHALL ELEVATORS

PASSENGER---FREIGHT

MADE IN PITTSBURGH

MARSHALL BROS.

21st and Mary Sts.

SOUTH SIDE



WANTED--A RIDER AGENT

IN EACH TOWN and district to ride and exhibit a sample Latest Model "Ranger" bicycle furnished by us. Our agents everywhere are making money fast. Write for full particulars and special offer at once.

NO MONEY REQUIRED until you receive and approve of your bicycle. We ship to anyone anywhere in the U. S. without a cent deposit in advance, *prepay freight*, and allow **TEN DAYS' FREE TRIAL** during which time you may ride the bicycle and put it to any test you wish. If you are then not perfectly satisfied or do not wish to keep the bicycle ship it back to us at our expense and you will not be out one cent.

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 profits by buying direct of us and have the manufacturer's guarantee behind your bicycle. **DO NOT BUY** a bicycle or a pair of tires from anyone at any price until you receive our catalogues and learn our unheard of factory prices and remarkable special offers to rider agents.

YOU WILL BE ASTONISHED when you receive our beautiful catalogue and study our superb models at the wonderful prices we can make you this year. We sell the highest grade bicycles for less money than any other factory. We are satisfied with \$1.00 profit above factory cost. **BICYCLE DEALERS**, you can sell our bicycles under your own name plate at double our prices. Orders filled the day received.

SECOND HAND BICYCLES. We do not regularly handle second hand bicycles, but usually have a number on hand taken in trade by our Chicago retail stores. These we clear out promptly at prices ranging from \$3 to \$8 or \$10. Descriptive bargain lists mailed free. **COASTER-BRAKES**, single wheels, imported roller chains and pedals, parts, repairs and equipment of all kinds at half the regular retail prices.

\$10.00 Hedgethorn Puncture-Proof **\$4.80**
Self-healing Tires **A SAMPLE PAIR**
TO INTRODUCE, ONLY

The regular retail price of these tires is \$10.00 per pair, but to introduce we will sell you a sample pair for \$4.80 (cash with order \$4.55).

NO MORE TROUBLE FROM PUNCTURES

AILS, Tacks, or Glass will not let the air out. A hundred thousand pairs sold last year.

DESCRIPTION: Made in all sizes. It is lively and 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 the air to escape.

We have hundreds of letters from satisfied customers stating that their tires have only been pumped up once or twice in a whole season. They weigh 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 \$10.00 per pair, but for advertising purposes we are making a special factory price to the rider of only \$4.80 per pair. All orders shipped same day letter is received. We ship C. O. D. on approval. You do not pay a cent until you have examined and found them strictly as represented.

We will allow a cash discount of 5 per cent (thereby making the price \$4.55 per pair) if you send **FULL CASH** WITH ORDER and enclose this advertisement. You run no risk in sending us an order as the tires may be returned at **OUR** expense if for any reason they are not satisfactory on examination. We are perfectly reliable and money sent to us is as safe as in a bank. If you order a pair of these tires, you will find that they will ride easier, run faster, wear better, last longer and look dearer than any tire you have ever used or seen at any price. We know that you will be so well pleased that when you want a bicycle you will give us your order. We want you to send us a trial order at once, hence this remarkable tire offer.

IF YOU NEED TIRES don't buy any kind at any price until you send for a pair of Hedgethorn Puncture-Proof tires on approval and trial at the special introductory price quoted above; or write for our big Tire and Sundry Catalogue which describes and quotes all makes and kinds of tires at about half the usual prices.

DO NOT WAIT but write us a postal today. **DO NOT THINK OF BUYING** a bicycle or a pair of tires from anyone until you know the new and wonderful offers we are making. It only costs a postal to learn everything. Write it **NOW**.

J. L. MEAD CYCLE COMPANY, CHICAGO, ILL.



Notice the thick rubber tread "A" and puncture strips "B" and "D" also rim strip "H" to prevent rim cutting. This tire will outlast any other make--SOFT, ELASTIC and EASY RIDING.

GOLDEN & CRICK

**BUILDING
CONTRACTORS**

PITTSBURGH, PA.

Pittsburgh Clay Product Company

DISTRIBUTORS OF ALL KINDS OF

Face Brick

Enameled Brick

Architectural Terra Cotta

Fire Proofing

Paving Brick

Jumbo Hollow Brick

1504 KEENAN BLDG.

Telephones
3309 Grant
974 Main

PITTSBURGH



**DETROIT
CLEVELAND
BUFFALO
NIAGARA
FALLS**

THE COAST LINE
TO
MACKINAC



**TOLEDO
PT. HURON
GODERICH
ALPENA
ST. IGNACE**



THE LUXURY OF A LAKE TRIP

Where will you spend your summer vacation? Why not enjoy the charms of our Inland Seas, the most pleasant and economical outing in America?

Daily service is operated between Detroit and Cleveland, Detroit and Buffalo; four trips weekly between Toledo, Detroit, Mackinac Island and way ports; three trips weekly between Toledo, Cleveland and Put-in-Bay.

A Cleveland to Mackinac special steamer will be operated two trips weekly from June 15th to September 10th, stopping only at Detroit every trip and Goderich, Ont., every other trip.—Special Day Trips Between Detroit and Cleveland, During July and August.—Railroad Tickets Available on Steamers.

Send 2 cent stamp for Illustrated Pamphlet and Great Lakes Map.

Address: L. G. Lewis, G. P. A., Detroit, Mich.
Philip H. McMillan, Pres. A. A. Schantz, Gen'l Mgr.
Detroit & Cleveland Navigation Co.

JOS. A. LANGDON AND SONS

HEATING AND
VENTILATING
ENGINEERS

219 Grandview Ave.

Bell Phone 1463 Hill

PITTSBURGH, PA.

Hotel Normandie

CONGRESS STREET

Near Woodward Avenue

DETROIT, MICH.



American Plan, \$2.50 per Day and upwards

European Plan, \$1.00 per Day and upwards

Hot and Cold Running Water in all Rooms.

Rooms with Bath extra

A High Grade Cafe

Restaurant and Buffet in connection

GEORGE FULWELL, Proprietor.

M. B. JOHNSON

MAURICE J. RYAN

C. B. LOVATT CO.**Brick Contractors**

16 North Diamond Street, East
ALLEGHENY, PA.

TELEPHONES: Bell Court 1048. P. & A. Main 3493.

Pittsburg Ladder & Scaffolding Co.

(FRANK BROWN, Manager.)

506 Fourth Ave.

**SECTIONAL
EXTENSION
AND STEP**

Adjustable Scaffold Jacks—Swing Stages
Scaffolding for Hire

L
A
D
D
E
R
S

ROBERT W. ARDARY

JOHN G. BURNS

Ardary-Burns Co.

CONTRACTORS FOR

**HEAVY and GENERAL HAULING
TEAMS FOR HIRE**

LIBERTY AVE. and 31st ST. PITTSBURGH, PA.

Telephones: P. & A. 103 Lawrence—Bell 103 Fisk.

**HENRY SHENK
COMPANY****Contractors and Builders**

LEWIS BUILDING, PITTSBURGH

W. N. Kratzer & Co.*Manufacturers***STRUCTURAL STEEL**

and STEEL CONSTRUCTION.

Buildings, Roof Trusses, Girders, Columns, &c.

*Structural Shapes in stock
for hurry orders. . . .*

3212-50 Smallman St. PITTSBURGH, PA.

ESTABLISHED 1842

PITTSBURGH IRON & WIRE WORKS

TAYLOR & DEAN

FIRE ESCAPES FIRE PROOF PORCHES
ELEVATOR CABS BANK and OFFICE RAILING
ELEVATOR ENCLOSURES BUILDERS IRON WORK
WROUGHT IRON FENCES and PORCH RAILING
ARTISTIC GRILL WORK IN BRASS, BRONZE OR IRON

General Office and Works, Penn. Ave. and 25th St.

PITTSBURGH, PA.

Bell Telephone 817 Grant

P. & A. Telephone 3094 Main

RUDY BROS. CO.

DESIGNERS AND
WORKERS IN GLASS—
STAINED, MOSAIC
AND LEADED. :: :: ::



HIGHLAND AND CENTER AVENUES,
E. E. PITTSBURGH, PA.

SANKEY BROTHERS

MANUFACTURERS OF

ALL GRADES OF

RED BRICK

OFFICE: 2112 CARSON STREET, SOUTH SIDE,
PITTSBURGH

BOTH PHONES

Some of the Advantages of Standard Fire Proof Construction of TERRA COTTA HOLLOW TILE

From the Standpoint of Practical and Economical Construction.

INDEPENDENCE OF WEATHER.

Floor Arches of Hollow Tile may be laid at any time of year regardless of weather temperature, rain or snow.

SPEED IN PLASTERING.

Arches may be plastered the day after they are laid, if necessary to rush work.

BRACING FOR STRUCTURE.

Tile Arches assist the wind bracing of the structure because they fill the total depth of the steel beams, and act as horizontal bracing for the entire structure. In comparison with this, concrete floor slabs rest only upon the upper third of the beams, are usually one-third as deep as Tile Arches, can not efficiently transmit the horizontal stresses caused by wind pressure in high buildings, and, by reducing the efficiency of the floors as braces, increase the amount of steel necessary to provide against horizontal stresses.

MINIMUM WEIGHT.

Tile Arches weigh less per square foot than any other form of fire proof floor construction of equal strength, and, consequently, greatly reduce the dead load on the structural steel and foundations.

SOUND PROOF.

Hollow Tile Arches have usually from two to four cells and are therefore excellent non-conductors of sound. An extremely important consideration in hotels, hospitals, office buildings and structures of similar occupancy.

RAPID CONSTRUCTION.

The false work, or centering, required in setting Tile Arches may be removed within twenty-four hours after arches are laid. Centering for concrete floors must, under the most favorable conditions, remain in place at least ninety-six hours, and, in event of constant rain or low temperature weather, must frequently be kept standing two weeks or more, necessitating great delay in completing building, as contractors for other work can not proceed while centering remains in place.

ELIMINATION OF MOISTURE.

The cement mortar joints in Tile Arches dry out rapidly, permitting of the immediate laying of finish flooring and wood trim without risk of damage by moisture. Concrete floors are set in a wet, plastic condition, dry slowly, and the moisture remaining in them frequently causes the warping and buckling of floor finish and trim.

How can you be sure of the best and most economical fire-proofing—or either—unless you figure with the largest company in the world devoted exclusively to the manufacture and erection of *fire proofing for buildings?*

NATIONAL FIRE PROOFING COMPANY

Manufacturers of

TERRA COTTA HOLLOW TILE FIRE PROOFING

Contractors for Fire Proof Construction

Capital Twelve and One-Half Million Dollars

Pittsburgh, -	Fulton Building	Washington, -	Colorado Building	Minneapolis, -	Lumber Exchange
New York, -	Flat Iron Building	Canton, -	City Nat'l Bank Building	San Francisco, -	Monadnock Building
Boston, -	Old South Building	Cincinnati, -	Union Trust Building	Toronto, Can.,	Traders Bank Building
Chicago, Commercial Nat'l Bank Bldg.	Cleveland, -	-	Cuyahoga Building		
Philadelphia, -	Land Title Building	St. Louis, -	Bank of Commerce Bldg.		

26 Factories Throughout the United States

Bell 1774 Grant,

P. & A. 1774 Main.

The Garter Electric Co.**ELECTRICAL CONTRACTORS**

Electrical Construction Work of all Descriptions

OLIVER BUILDING**PITTSBURGH, PA.****LOUIS B. TITZEL**
Painter**HARD WOOD**
FINISHER**No. 30 East Robinson Street**

North Side

PITTSBURGH, PENNSYLVANIATelephones 589 { Cedar
NorthResidence Bell Telephone
21 Glenshaw**Kittanning Brick & Fire Clay Company**

= AND =

Martin Brick Company

MANUFACTURERS OF

**HIGH GRADE GRAY, BUFF, MOTTLED AND
RED BRICK.**

Empire Building

PITTSBURGH, PA.**The Graff Company****MANTELS and TILING****955 Liberty Street,****PITTSBURGH, PA.****E. J. Detrick Co.****MARBLE AND MOSAIC WORK
FINE MANTEL AND FIREPLACE WORK
TILES FOR FLOORS, WALLS, BATH ROOMS, ETC.**We solicit opportunity from Archi-
ects and Builders to estimate**FIFTH FLOOR, HEEREN BUILDING*****Penn Ave. and Eighth St., Pittsburgh, Pa.***

R. H. ELLIOTT

E. KENNEWEG

**Twin City Art Glass Works****Corner SANDUSKY and ROBINSON Streets****P. & A. PHONE 515 NORTH
BELL PHONE 334-R CEDAR****ALLEGHENY, PA.****W. W. MILLER****General Contractor****540 WINEBIDDLE AVENUE, E. E.****PITTSBURGH**

P. & A. TELEPHONE 757

ROOFING

ROOF PAINTING

W. H. KNOELL
TINNER**510 East Diamond Street****ALLEGHENY, PA.****CONDUCTORS REPAIRING GUTTERS**

Bell Phone Brady 355.

P. & A. Phone Chester 68.

BRUCKMAN LUMBER CO.

DEALERS IN ALL KINDS OF

Building and Hardwood Lumber, Mill Work

Yards: West Market Street and Preble Avenue

Office: Preble Avenue near Island Avenue

ALLEGHENY, PA.**FLOOR SUPPLIES FLOORS REFINISHED****THE PENN FLOOR CO.****FINE HARDWOOD FLOORS****20 West North Avenue****Bell Phone 2001 Cedar****N. S. PITTSBURGH, PA.****P. LeGOULLON**

SUCCESSOR TO

W. B. LUPTON & CO.

ACTINOLITE, ASPHALT, SLATE,
TILE AND GRAVEL**ROOFERS**

DEALER IN

ROOFING SLATE AND ROOFING MATERIALS

ROOMS 614 BESSEMER BUILDING

TELEPHONE 539

PITTSBURGH, PA.

LONG DISTANCE TELEPHONE, FISK 90

VILSACK, MARTIN & COMPANY**Ornamental Iron and Wire Works,**Iron Stairs and Railing, Fire Proof Porches and Escapes,
Fencing and Entrance Gates. Work of Every Description
for General Contractors and Builders.**3222 TO 3238 PENN AVENUE PITTSBURGH, PA.****T. W. JONES****STAIR BUILDER****2603 PENN AVENUE****PITTSBURGH, PA.****PATTERSON & SHAW****BUILDERS and
CONTRACTORS****No. 30 East Robinson Street, North,
PITTSBURGH.****W. H. HOFFMANN****Decorator****FARMERS BANK BUILDING
PITTSBURGH.**

TELEPHONES: Bell, 1353 Court—P. & A. 2292 Main

RODGERS SAND COMPANY

DEALERS AND SHIPPERS OF

ALL KINDS OF SAND AND GRAVEL**BY BOAT, RAIL OR WAGON****123 Water Street****PITTSBURGH, PA.**

HIGH GRADE

ZENITH GAS RANGES, FURNACES
AND LAUNDRY STOVES**Stephenson Manufacturing Co.**

JOHN C. BASH, Manager.

Bell L. D. Telephone 860 Cedar

P. & A. Telephone 696 North

207 - 209 Sandusky St.
ALLEGHENY, PENN'A.**ARCHITECTS'**
AND
BUILDERS'
TRANSITS
AND
LEVELS

Manufactured by

Pittsburg Instrument & Machine Co.

236 THIRD AVE., PITTSBURG, PA.

Repairing of Scientific Instruments

BELL PHONE 4690 COURT.

ANDREW HILL & SONS**Wall Paper and Interior Decorations**

501 SAILOR BUILDING

432 WOOD STREET

PHONE 215-R WALNUT

J. C. DAVIS CO.

Mantels, Tiles and Fire Places

TILE FLOORS AND WALLS A SPECIALTY

114 Wabash Avenue,

West End,

PITTSBURG, PA.

George A. Cochrane, Jr.

Rob't K. Cochrane.

George A. Cochrane Co.

General Building Contractors

1210-1216 WASHINGTON AVENUE,
ALLEGHENY, PA.

Telephones: P. & A., Chester 127; Bell, Brady 127.

HOTEL VICTORIA
ChicagoIn the Heart of Wholesale, Retail and Theatri-
cal District.

FIREPROOF CONSTRUCTION.

Remodeled and Refurnished at an Expense of
Over \$150,000.OPPOSITE LA SALLE
DEPOT.

Cor. Clark & Van Buren Sts.,

ELMER C. PUFFER,
Managing Director.**Enterprise Contracting Co.**

ALBERT KLICHER, Manager.

Pile Driving, Trestle and Dock Building,
Excavating, Dredging, Seep Wells
and Concrete Work.

Fulton Building,

PITTSBURGH, PA.

BELL 2694 GRANT.

Schenley Farms Plan



more than $\frac{1}{2}$ sold in 3 years

**The Place Par Excellence
For Fine Homes**

. . . THE . . .

SCHENLEY

FARMS

**The City's Social, Educational, Club and
Best Residence Center.**

BRICK

HIGH GRADE

BRICK

FACE BRICK

Buff, Mottled, Vitrified, Waterproof, Various Shades

PAVING BRICK

Prices Reasonable—Service Prompt

PAVING BLOCK

Satisfaction Guaranteed.

PITTSBURG - BUFFALO COMPANY

(Sole Selling Agents United States Sewer Pipe Co.)

The Jones Interests

Founded in 1876

FRICK BUILDING

PITTSBURG

ALSO

CLEVELAND

CINCINNATI

DETROIT

BUFFALO

YOUNGSTOWN

PHILADELPHIA

CHICAGO

BALTIMORE

BRICK

INQUIRIES SOLICITED

PRICES ON REQUEST

BRICK