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JANUARY 1926

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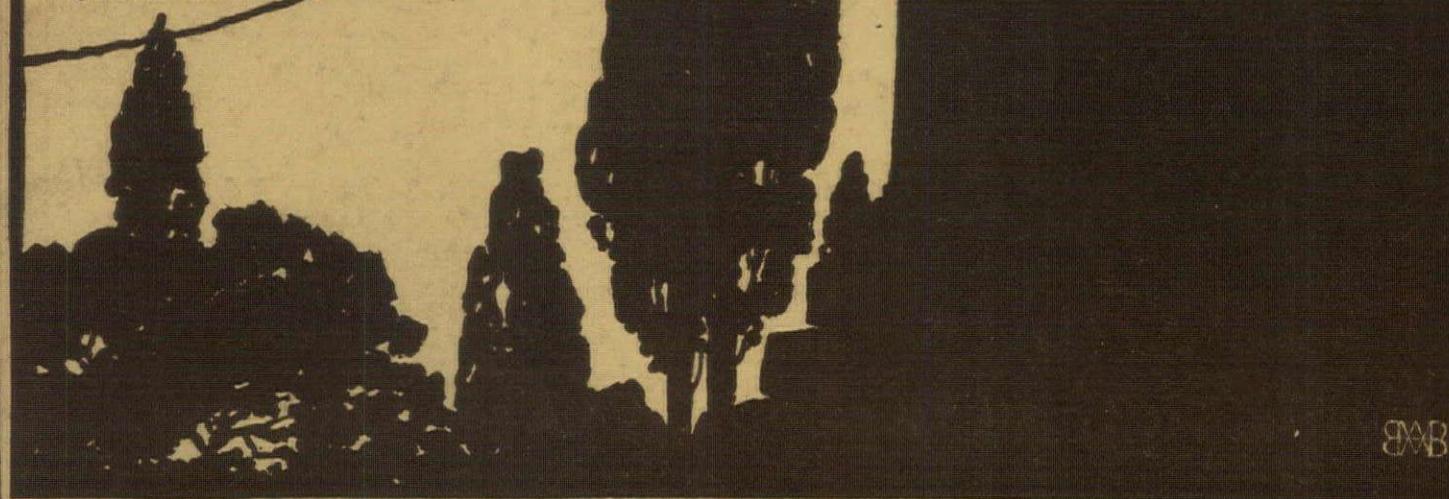
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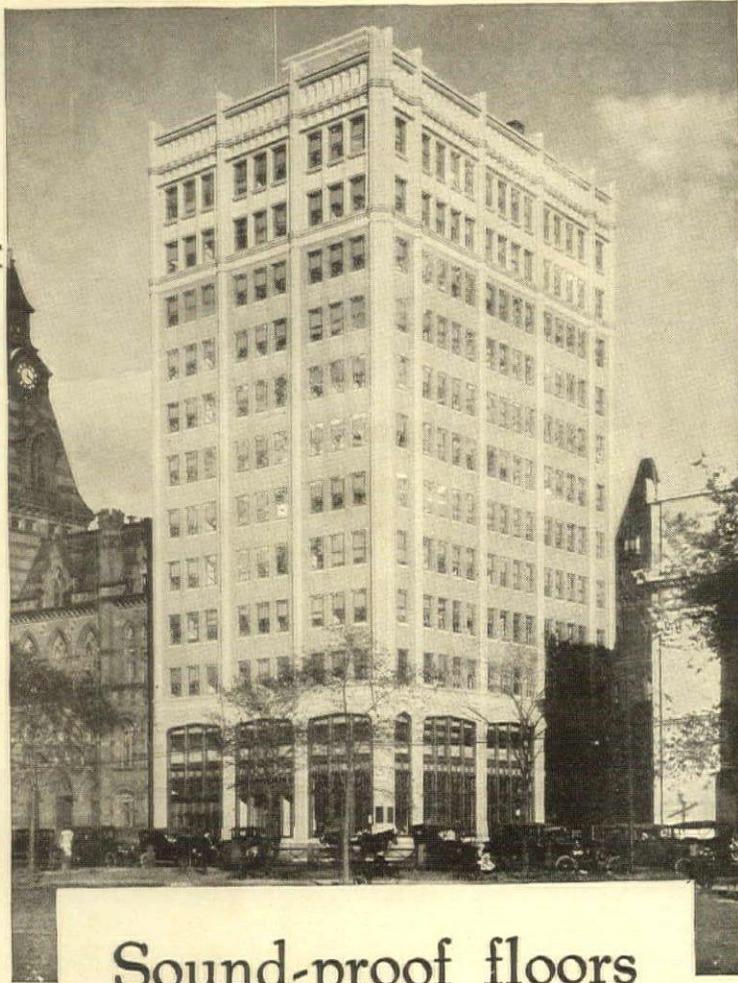
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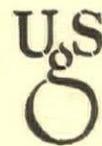
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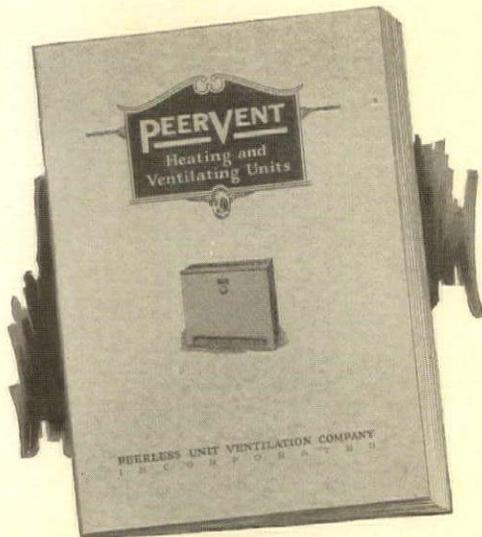
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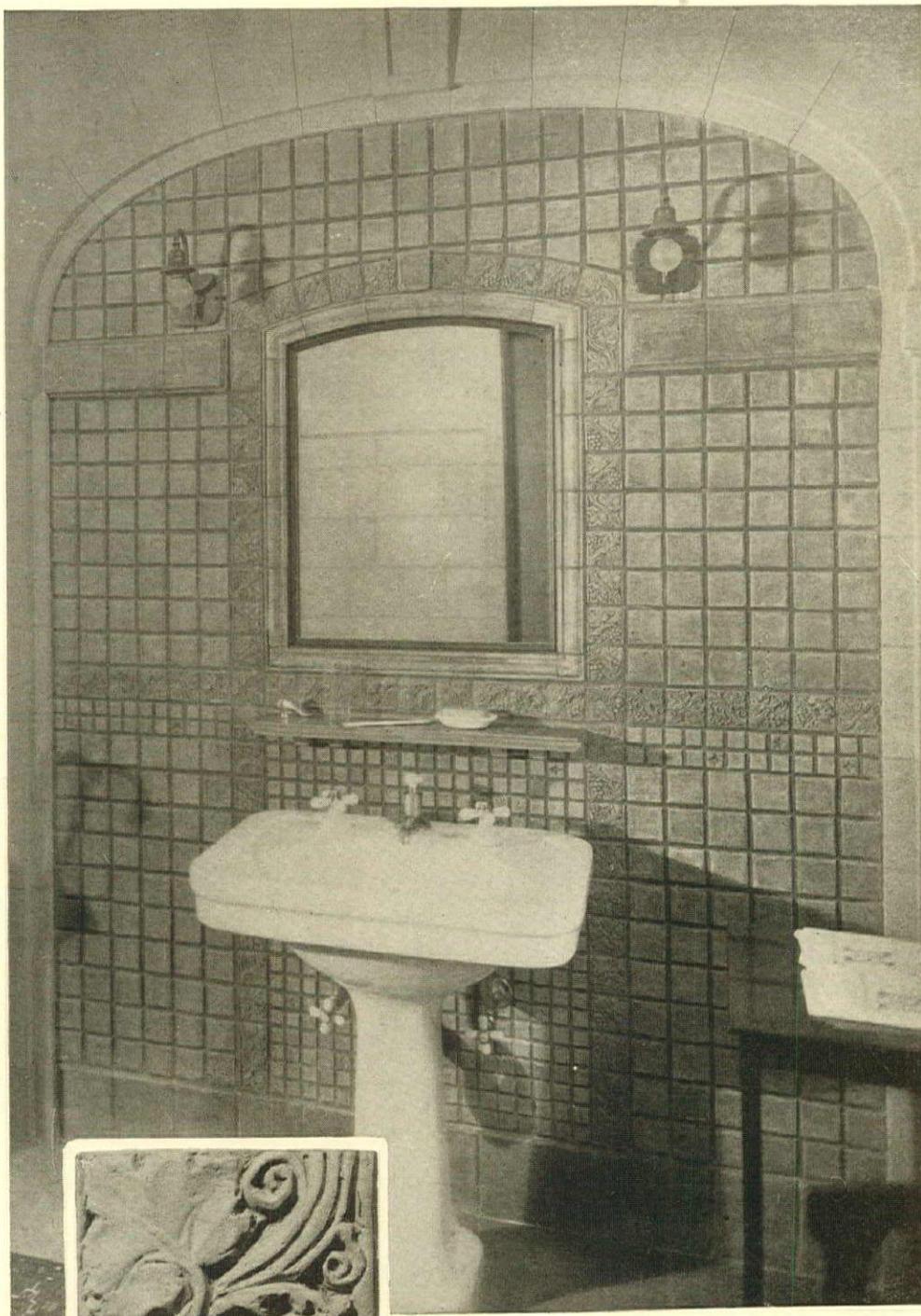
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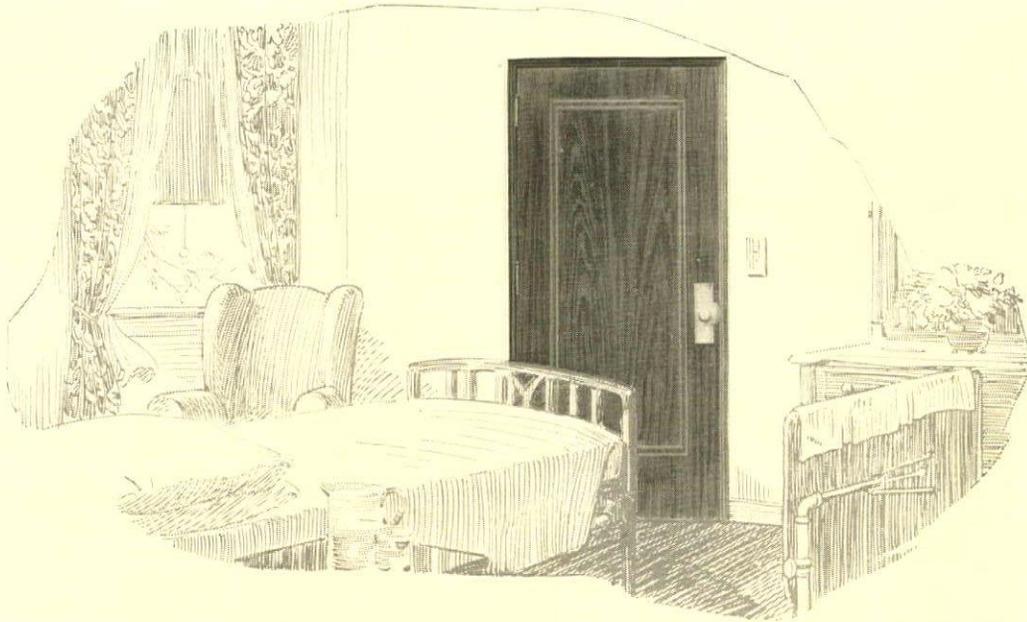
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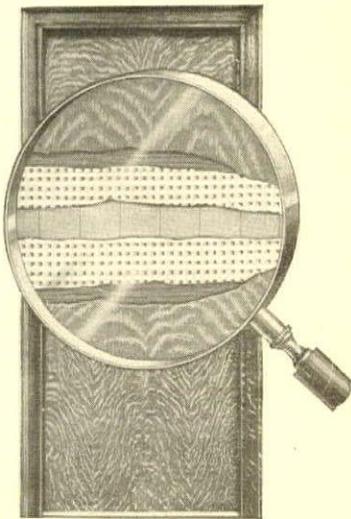
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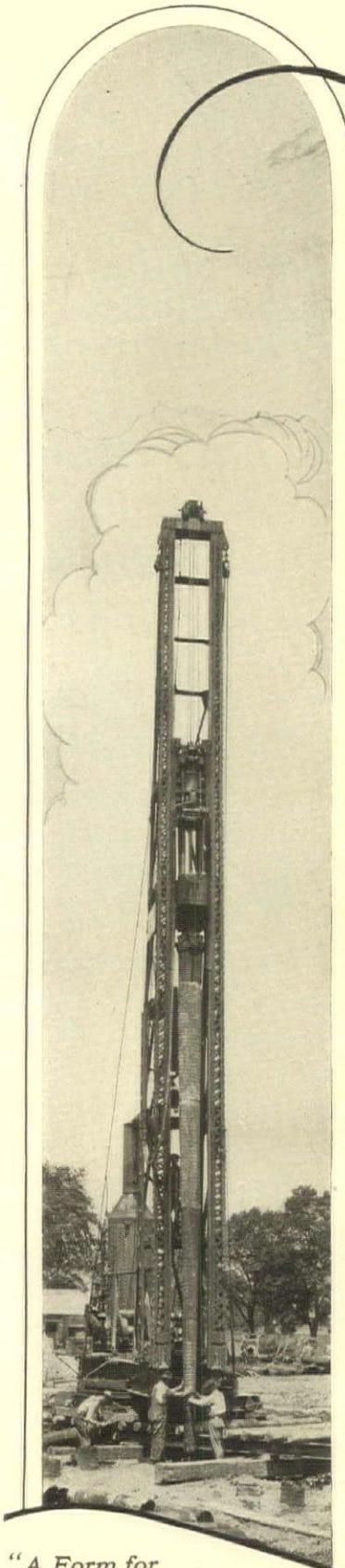
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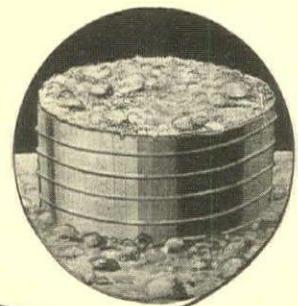


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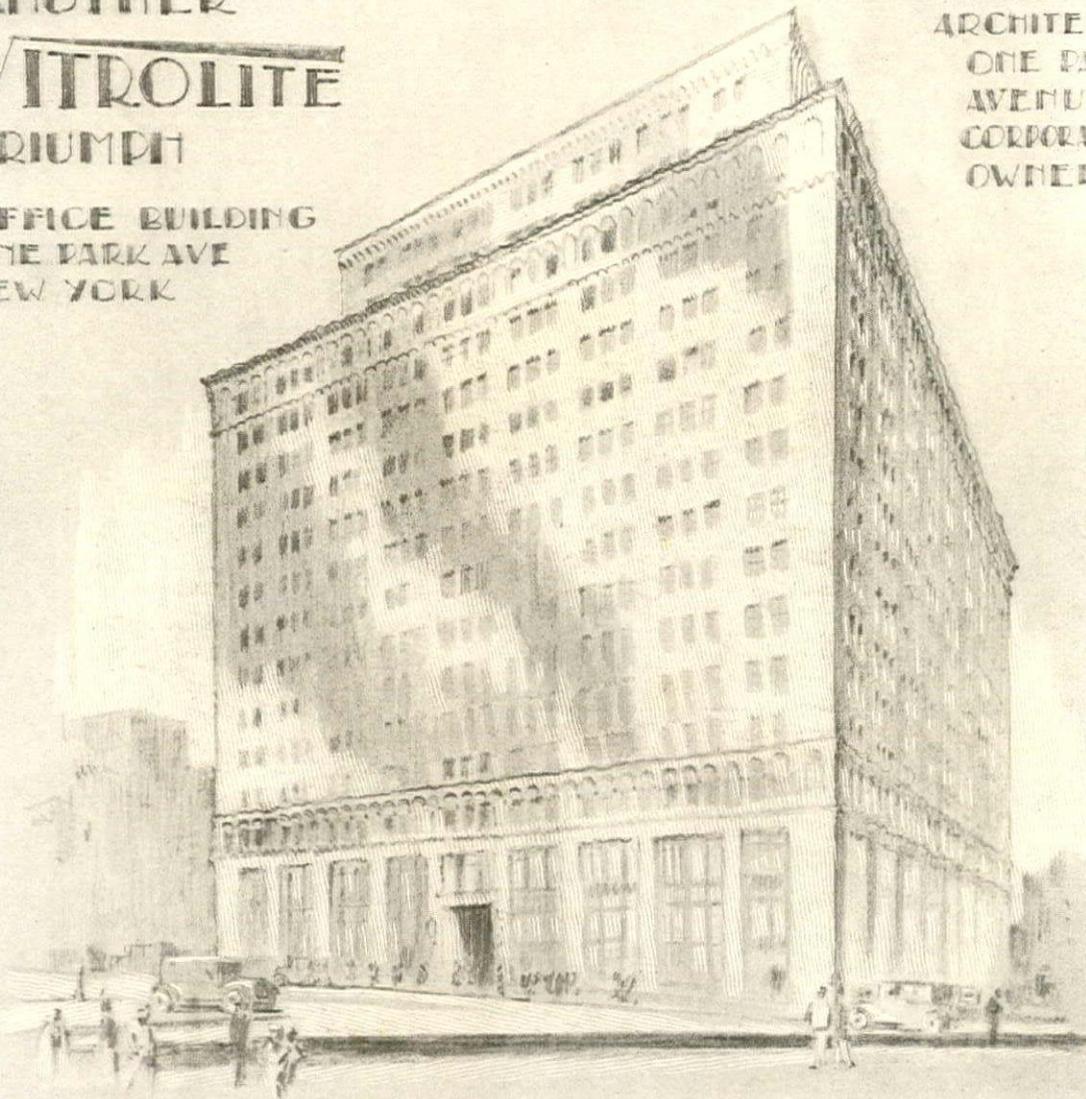


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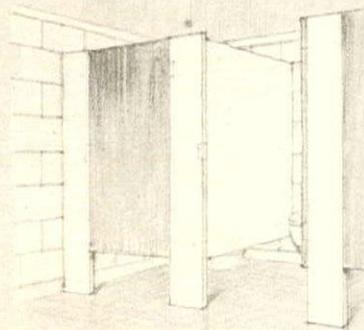
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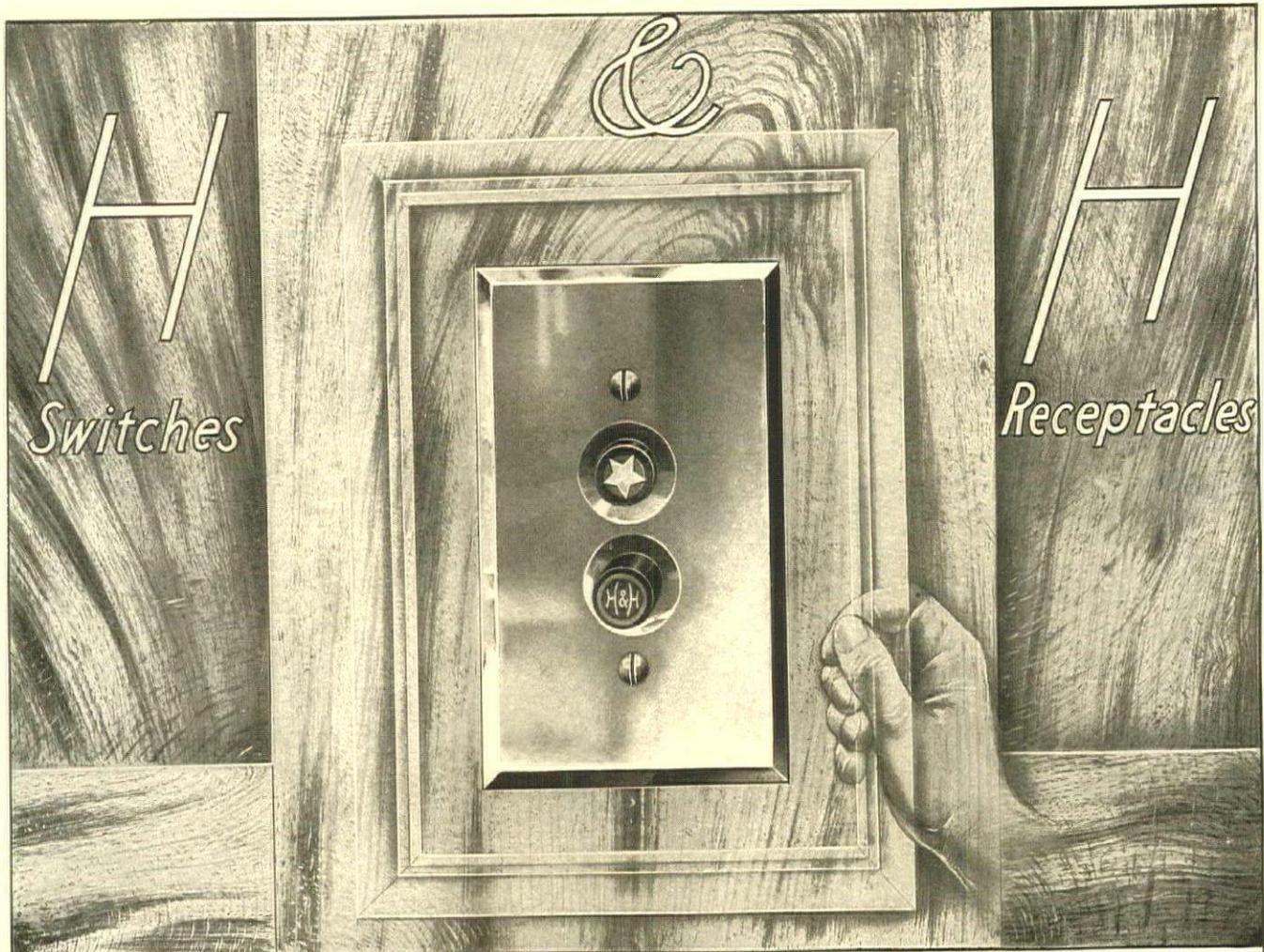
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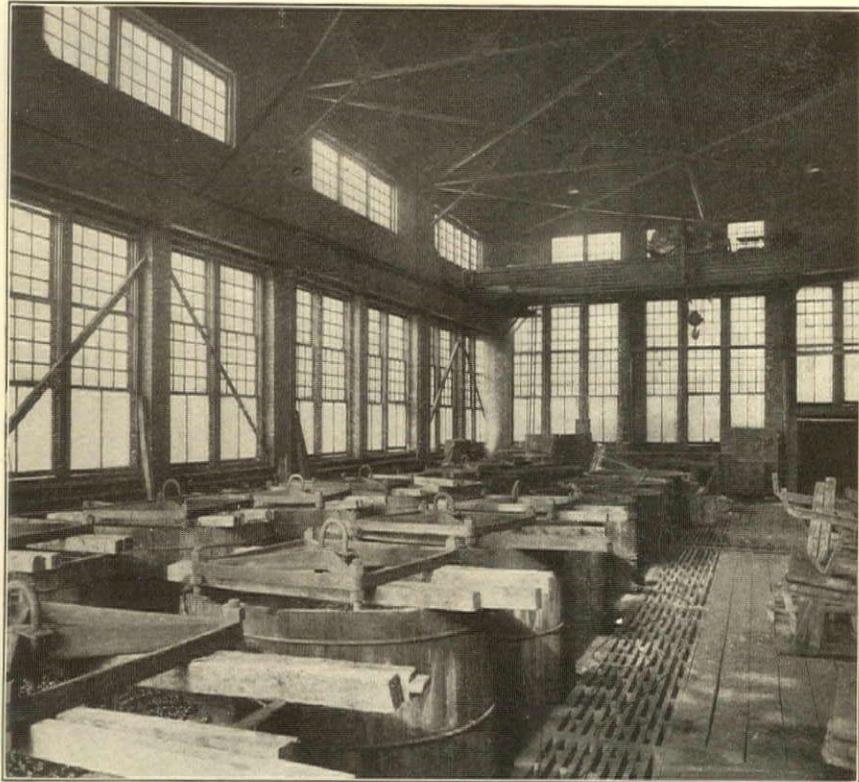
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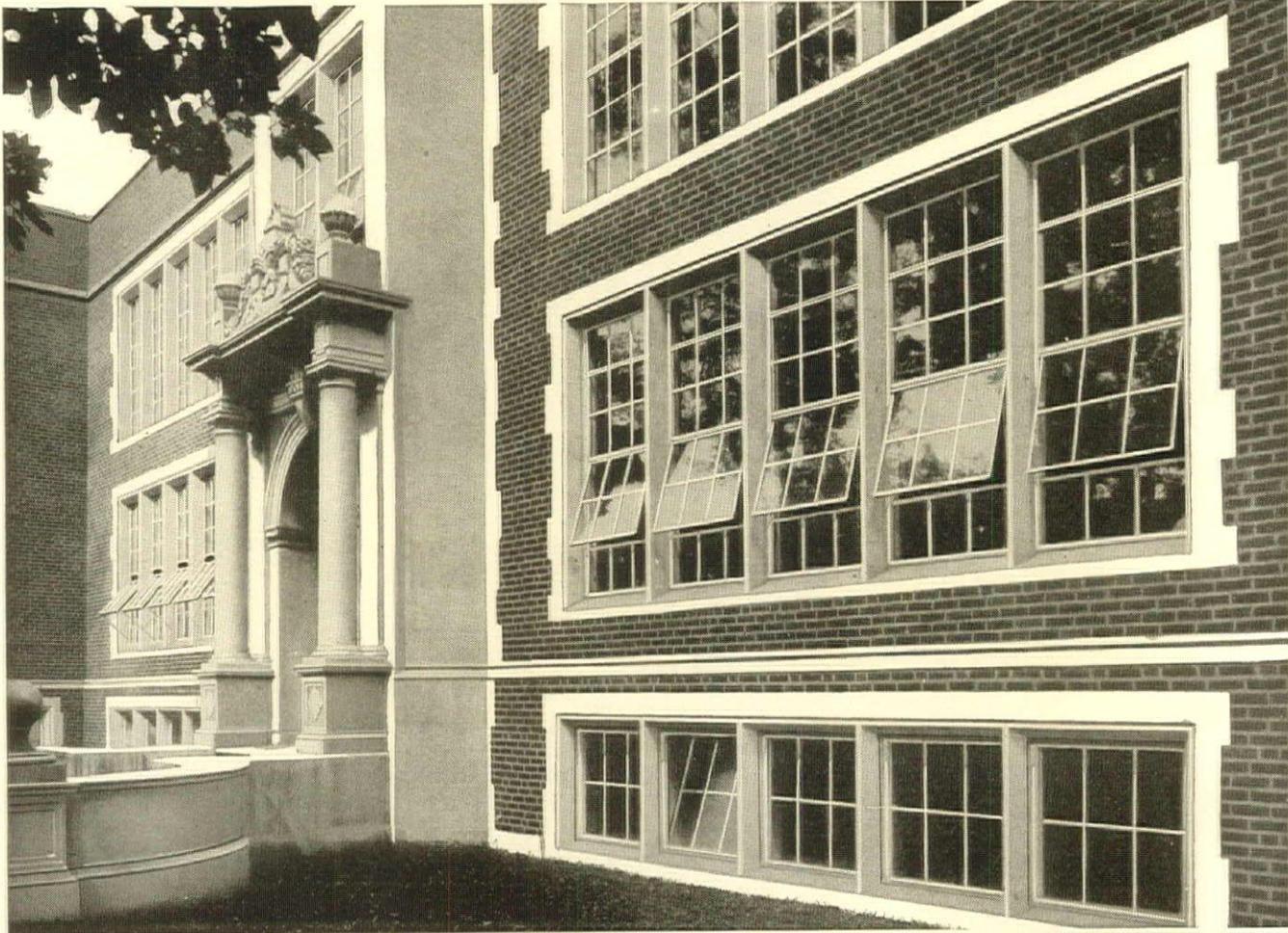


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Interior of H. S. SNYDER'S residence, Farmersville, Pa.
DUNCAN FRASER, Architect, New York City

Why RADIATORS

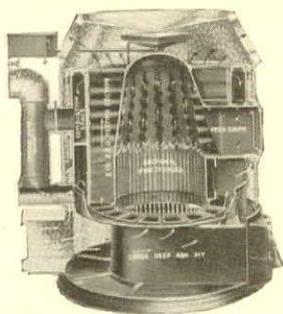
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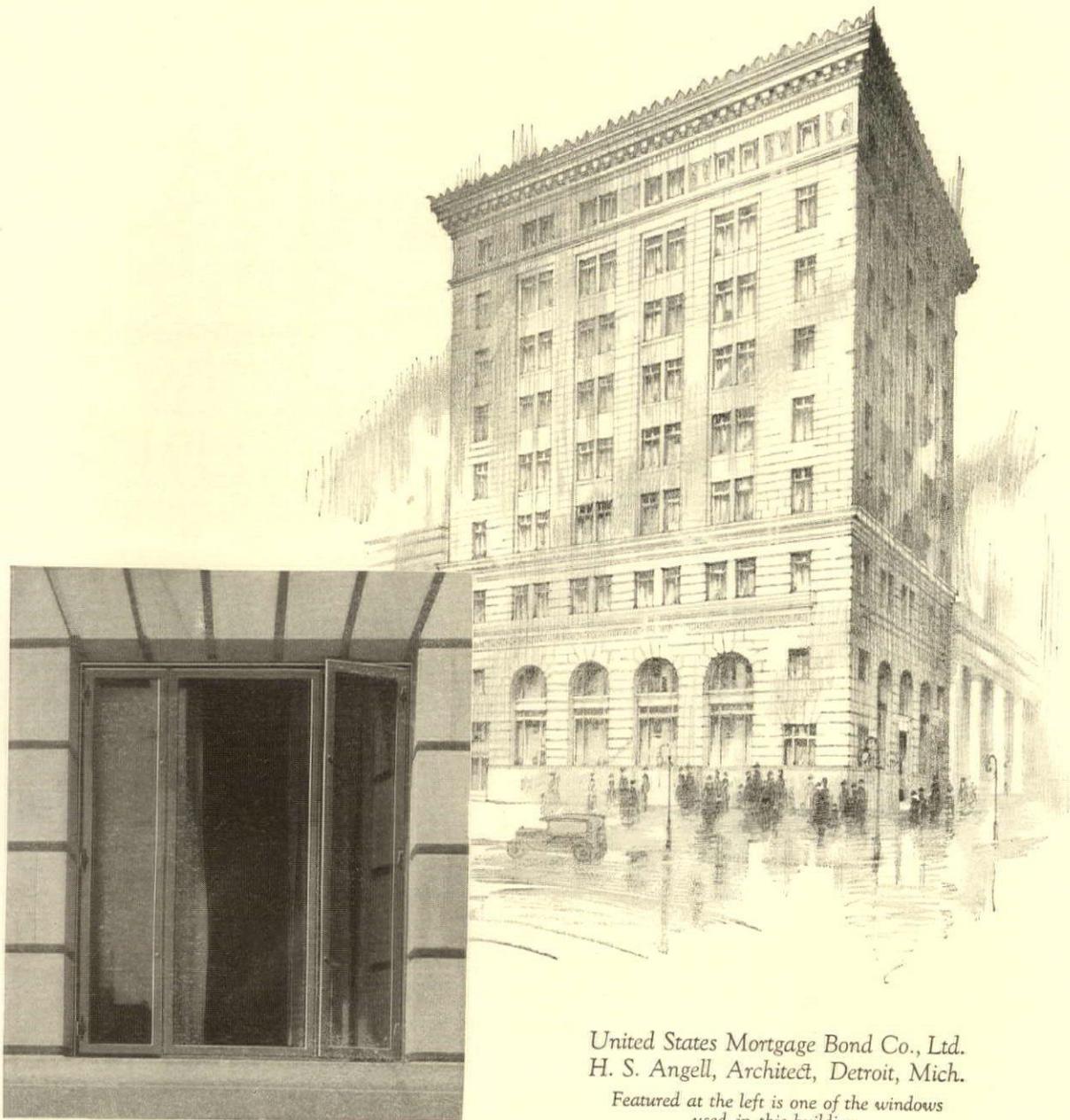
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The original cost of Kawneer windows is the final cost. The sturdy mouldings which are formed from heavy gauge rustless metal are securely welded at all joints. Painting and finish-

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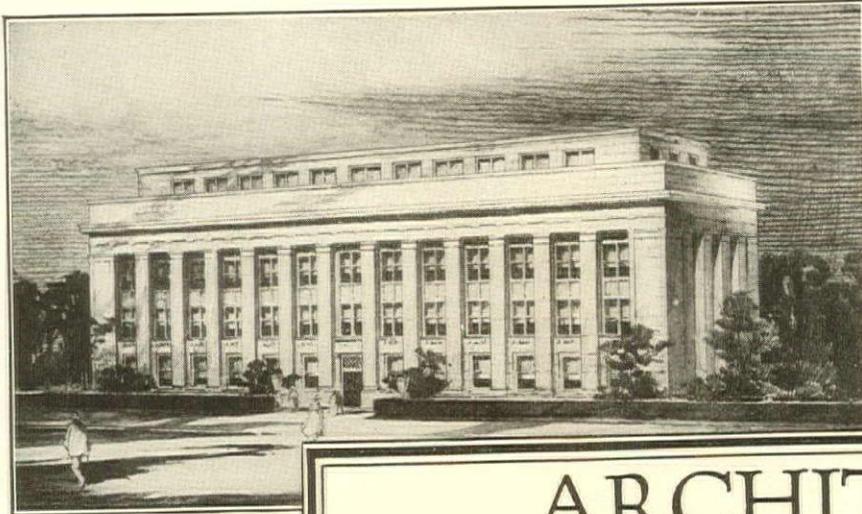
These features tend to minimize the upkeep and operating costs of any building.

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One of the group of buildings comprising the Indiana War Memorial. S-W finishes used throughout. Architects: Walker & Weeks, Cleveland.

How this Guide resembles an Architect's plan

An architect's plan might be, to the unthinking, merely some lines on paper, and nothing more. To the intelligent mind, however, the plan represents years of education and experience.

To the unthinking mind, the Architect's Painting Guide might, likewise, seem but a list of products. Every architect knows, nevertheless, that it represents the crystallized experience of many years.

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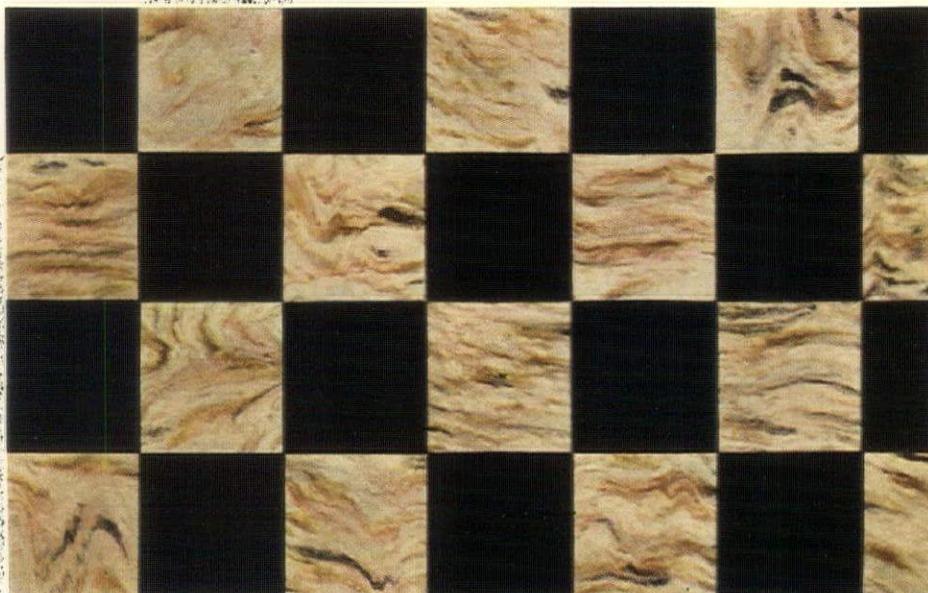
SURFACE	TO PAINT <small>Use product named below</small>	TO ENAMEL <small>Use product named below</small>	TO STAIN <small>Use product named below</small>	TO VARNISH <small>Use product named below</small>
BRICK WALLS (ext).....	S-W Concrete Wall Finish	Old Dutch Enamel, Gloss		
CONCRETE WALLS....	S-W Concrete Wall Finish	Old Dutch Enamel, Gloss		
CEMENT FLOORS.....	S-W Concrete Floor Paint	S-W Concrete Floor Paint		
EXTERIOR WOOD SURFACES.....	SWP (Sherwin-Williams Prepared Paint)	Old Dutch Enamel, Gloss	S-W Preservative Shingle Stain S-W Acid or Oil Stain	Rexpar Varnish
EXTERIOR METAL SURFACES.....	Kromik Structural Steel Primer Metalastic (for finishing coats)	Old Dutch Enamel, Gloss		
FACTORY WALLS (Interior).....	S-W Eg-Shel Mill White S-W Fume Resisting White	Old Dutch Enamel or Enameloid		
FLOORS (Interior Wood)...	S-W Inside Floor Paint (the enamel-like finish)	S-W Inside Floor Paint (the enamel-like finish)	Oil Stain or Floorlac Varnish Stain	Mar-Not Floor Varnish
GALVANIZED IRON SURFACES.....	S-W Galvanized Iron Primer (Finish with any paint)	S-W Galvanized Iron Primer and Old Dutch Enamel		
INTERIOR WALLS AND CEILINGS.....	Flat-Tone Wall Finish S-W Eg-Shel Mill White	Old Dutch Enamel or Enameloid		
INTERIOR WOOD TRIM.....	SWP (Sherwin-Williams Prepared Paint)	Old Dutch Enamel or Enameloid	S-W Acid Stain S-W Handcraft Stain S-W Oil Stain	Scar-Not Varnish Velvet Finish Varnish (for imitation rubbed effect)
PORCH FLOORS AND DECKS.....	S-W Porch and Deck Paint			
RADIATORS AND PIPES.....	Flat-Tone Finish or S-W Gold Paint S-W Aluminum Paint	For White—S-W Snow White Enamel For colors—Enameloid		
ROOFS—Metal.....	SWP or Metalastic (if Galvanized, prime with S-W Galvanized Iron Primer)			
ROOFS—Wood Shingle...	SWP		S-W Preservative Shingle Stain	
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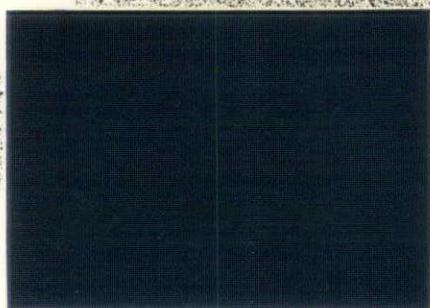
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Armstrong's Linoleum *for every floor in the house*

ARMSTRONG'S MARBLE INLAID No. 79
Blocks are 6 inches square



Casa Romero in Oakland, Calif., has Armstrong's Linoleum floors throughout. The living-room floor is Marble Inlaid No. 74. W. W. Dixon, architect.



PLAIN BLUE LINOLEUM No. 29
Plains made in 7 colorings



INSET TILE INLAID
No. T41



A Floor Decoration Service That May Prove Helpful to You, Too

EVERY FEW DAYS some architect adds us to his decorative staff. He asks our Bureau of Interior Decoration for designs in Armstrong's Linoleum to help him produce a desired effect. He may even ask our decorator to suggest an entire color scheme for a home, a clubhouse, a smart shop.

There are in Armstrong's Linoleum, you know, designs appropriate for practically any type of interior, colorings to harmonize with almost any decorative plan. For instance, there are the two-tone jaspés and plain solid colors, the inset tiles and marble tiles, and, finest of all, the unique new Embossed Handcraft Tiles. When properly installed, a floor of this modern linoleum takes its place in the building as a structural

material, a flooring as permanent as hardwood, or terrazzo, or encaustic tiles.

The next time you have a job that demands floors a little out of the ordinary, floors that ought to contribute their share to the architectural plan or to the color scheme, why not find out what you can do with this decorative linoleum flooring?

Just write to our Bureau of Interior Decoration. Send a blue print, or outline briefly your requirements and what you have in mind. Our decorator will gladly give your inquiry her careful, personal attention, and her suggestions may prove a real service to you. And, of course, there is no charge or obligation. It's yours for the asking.

Look for the
CIRCLE A
trade-mark on
the burlap back



Armstrong Cork Company, Linoleum Division, Lancaster, Pennsylvania



A complete installation of Art Metal elevator doors serve the twelve passenger, and four service elevators in the Saks Company store. Eleven of the twelve elevator openings on the main floor, are pictured.

STARRETT & VAN VLECK
Architects
CAULDWELL-WINGATE
COMPANY, Builders

Art Metal double, two-speed unit for passenger elevators in the Saks Company store.

In the New SAKS COMPANY Store *A Complete Installation of Art Metal Elevator Doors*

BEAUTY as well as utility characterize every detail of this newest of Fifth Avenue's palatial department stores. That this keynote of distinction and serviceability has been faithfully carried out in the design and construction of the elevator doors is obvious from the illustrations pictured above.

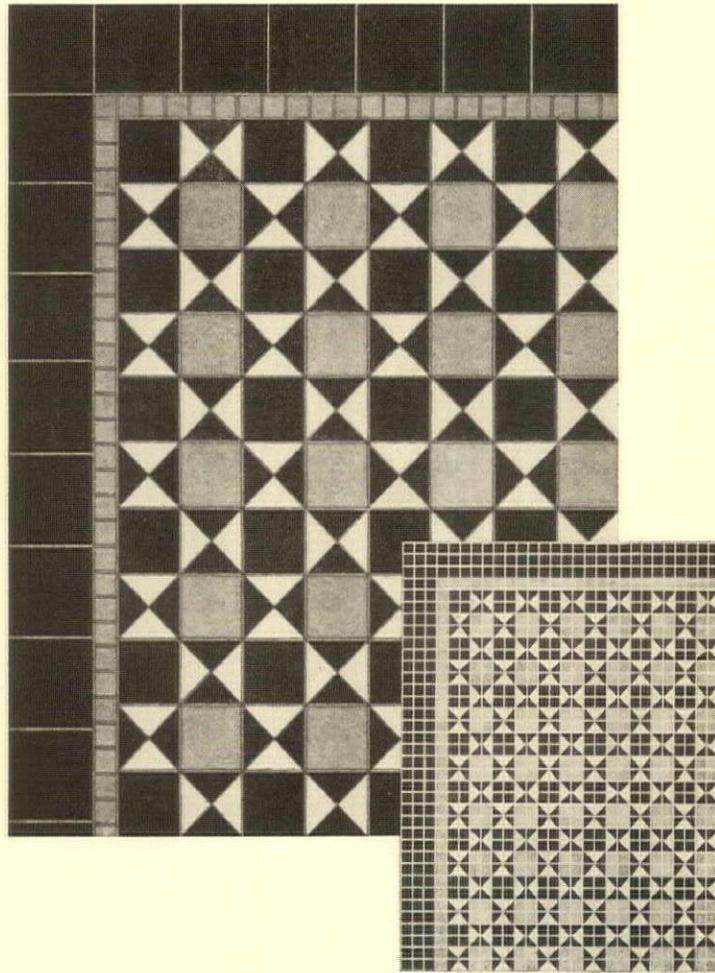
This installation not only adds another well known name to the long list of famous buildings equipped with ART METAL Hollow Metal Doors, but emphasizes again the intelligent co-operation of ART METAL Engineers and Craftsmen with the Architect. We ask that you consider this experience and skill at your service at any time.

The New Hollow Metal Catalog—just published—is available to executives in architectural offices. A request for it on your letterhead will bring you your copy.

Art Metal

Hollow Metal Doors and Trim, Steel and Bronze Equipment for Banks, Libraries, Public Buildings, Steel Office Equipment, Safes and Files
JAMESTOWN, NEW YORK

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SCALE IN ARCHITECTURE

SCALE, as any designer knows, is one of the most difficult aspects of architecture. The design is often marred, the effect ruined by a structure's seeming to be larger or smaller than it really is. Again, a discrepancy in scale between the different parts of a building is often apparent and annoying. These difficulties result frequently because the observer has no "measuring stick" by which he may evaluate the size of the relative parts. Therefore, as an aid in making sensible to the observer the scale of a building, material units of known sizes are invaluable. In this connection TILES, by means of their joint and texture, offer an effective method of writing indelibly into a design a sure means for measuring the size of the structure. Thus the designer, while introducing into his building the varied wealth of COLOR and PATTERN afforded by ceramic TILES, finds in this same resourceful medium the solution of this ever-present and troublesome problem of SCALE.

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ASSOCIATION TILES

<p>American Encaustic Tiling Co., Zanesville, O. Grzesby Faience & Tile Co., Perth Amboy, N. J. National Tile Co., Anderson, Ind. The C. Pardee Works, Perth Amboy, N. J.</p>	<p>Alhambra Tile Co., Newport, Ky. Beaver Falls Art Tile Co., Beaver Falls, Pa. Matawan Tile Co., Matawan, N. J. Old Bridge E. B. & Tile Co., Old Bridge, N. J. U. S. Encaustic Tile Works, Indianapolis, Ind.</p>	<p>Cambridge Tile Mfg. Co., Covington, Ky. Mosaic Tile Co., Zanesville, O. Perth Amboy Tile Co., Perth Amboy, N. J. Wheeling Tile Co., Wheeling, W. Va.</p>
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In the living room of Mr. A. R. Griswold's roof bungalow apartment, at 16 Park Avenue, New York. Floor of GOLD SEAL INLAID in warm browns and tans (Belflor Pattern No. 2047-3).

CLEVER idea—choosing a rather formal tile floor for this “homey” living room! Everyone admires how the rich colorings of the tiles combine with, and set off, the furnishings: the Oriental rugs, the maple Colonial furniture, the splash of quaint patchwork on the chair-back and the rambling pattern on the hangings.

Why *not* start with the floors? Many architects and interior decorators make the floor the keynote for the whole decorative plan—

in living rooms, dining rooms, sleeping rooms and service quarters. This means, of course, that they must have at command a great variety of designs and color combinations.

Small wonder, then, that America's leading home-builders are turning more and more frequently to Nairn *Gold Seal Inlaids*. Ask to see full size patterns and “quality samples.”

CONGOLEUM-NAIRN INC.

Philadelphia	New York	Boston	Chicago
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NAIRN GOLD SEAL INLAIDS

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A yarn every architect will enjoy



How my wife and I built our home for \$4.90

By STEPHEN LEACOCK
reprinted in the Bruce house organ for August
by permission Cosmopolitan Magazine

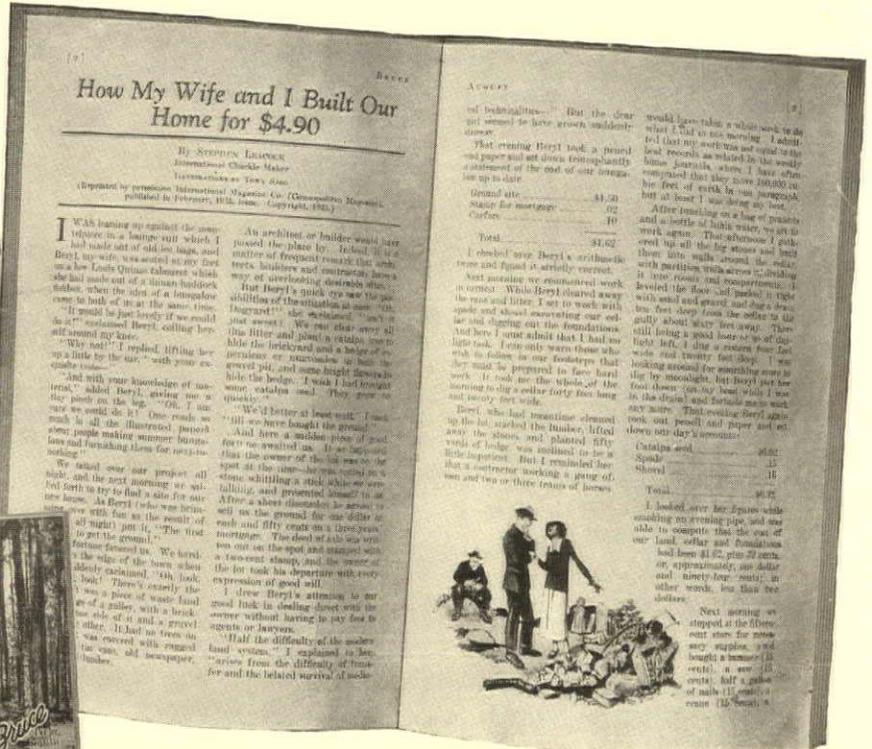
Here's the way the story begins:

"I was leaning up against the mantel-piece in a lounge suit which I had made out of old ice bags, and Beryl, my wife, was seated at my feet on a low Louis Quinze tabouret which she had made out of a finnan-haddock fishbox, when the idea of a bungalow came to both of us at the same time.

"It would be just lovely if we could do it!" exclaimed Beryl, coiling herself around my knee.

"Why not?" I replied, lifting her up a little by the ear, "with your exquisite taste—"

"And with your knowledge of material," added Beryl, giving me a tiny



pinch on the leg. "Oh, I am sure we could do it! One reads so much in all the illustrated papers about people making summer bungalows and furnishing them for next-to-nothing."

It's an amusing tale, written by one of America's foremost humorists.

Drop a line to Bruce, get a copy of the recent August issue and finish the story. You'll enjoy it.

The Bruce House Organ is not a comic publication, although each issue contains something to lighten a dull day. It is full of valuable and not usually found facts on subjects

of interest to architects.

Look over these subjects

Characteristics of Woods—Early Hardwood Flooring—Memory versus Judgment—Causes of Cupped or Shrunken Floors—When Special Flooring Lengths are Unnecessary—Waxed and Varnished Finish. These are but a few of many appearing in each number.

Free to you

Send us your name—we will be glad to put any interested architect on our mailing list. No obligation of any kind.

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Bruce oak flooring, and Bruce "Cedar Line" aromatic Tennessee cedar lining for clothes closets, are sold nationally through lumber dealers everywhere.



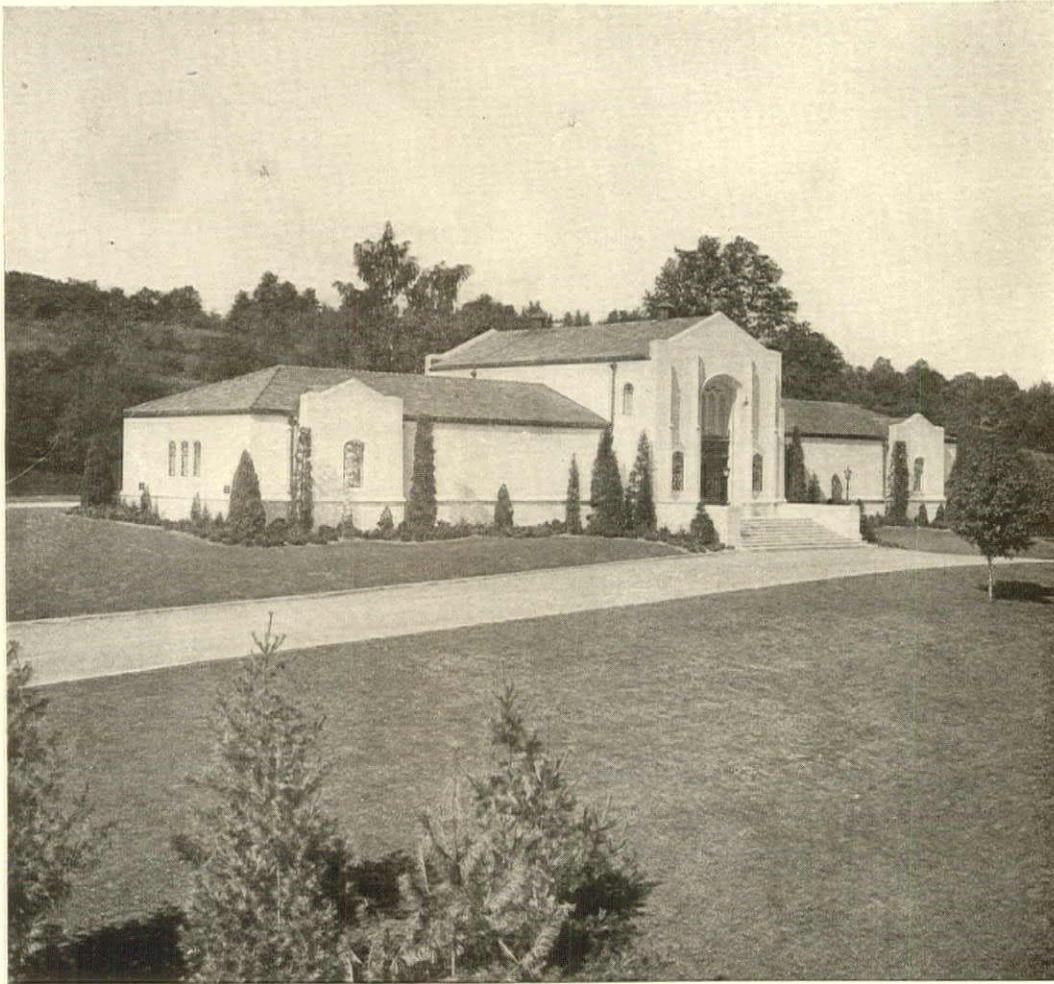
THIS book tells you about the convenience, economy and attractiveness of Bruce oak flooring. The ease with which it may be kept clean and bright; the enduring qualities; the increased value added to any home; appropriate use of various grades and widths, with practical suggestions for different rooms; distinctive effects which may be obtained from color finishes. 24 pages of interesting facts, fully illustrated. Write today for your free copy.

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Sidney Lovell, Architect, Chicago

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Because of its beauty and durable qualities Pink Georgia Marble was selected by Kensico for their new mausoleum.

Many stones were considered for this vault; but Pink Georgia Marble was chosen as the most suitable.

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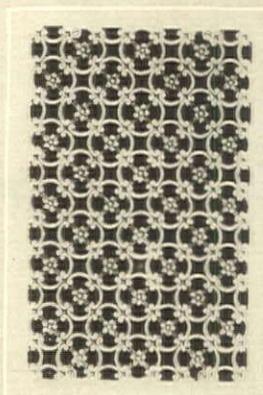
In Distant Lands



First National Bank of Boston, Buenos Aires, South America

CHAMBERS & THOMAS, Buenos Aires, *Architects*
 YORK & SAWYER, New York, *Consulting Architects*
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and Registers are used exclusively in this handsome Buenos Aires Bank, the equipment needed constituting one of the largest orders ever exported.

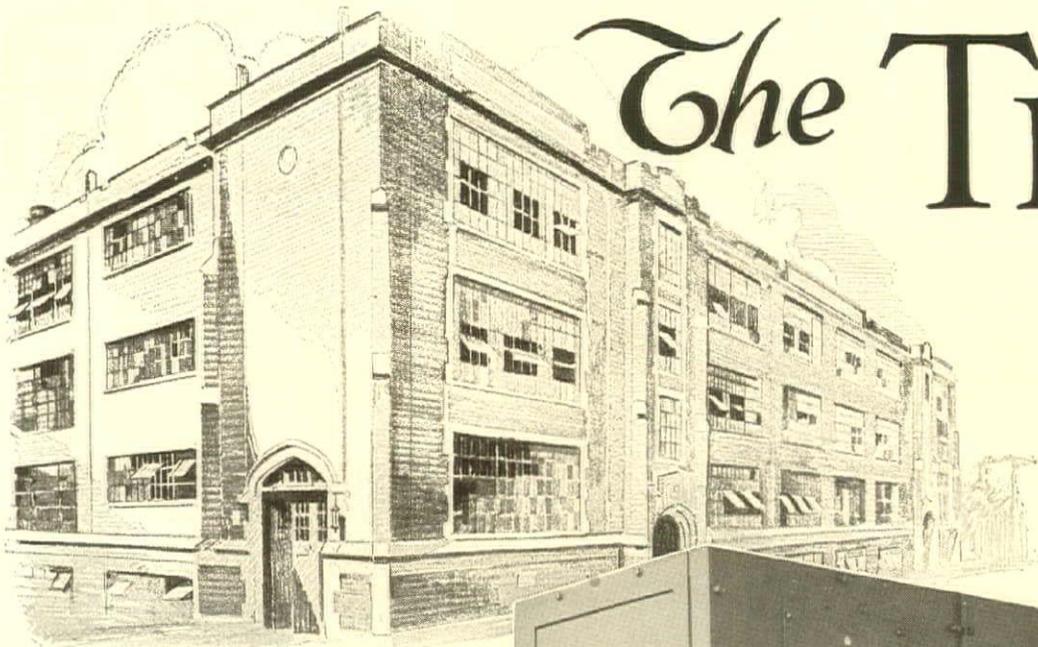
Ferrocraft Bronze Metal Registers and Grilles are cast in Special Design No. 95.

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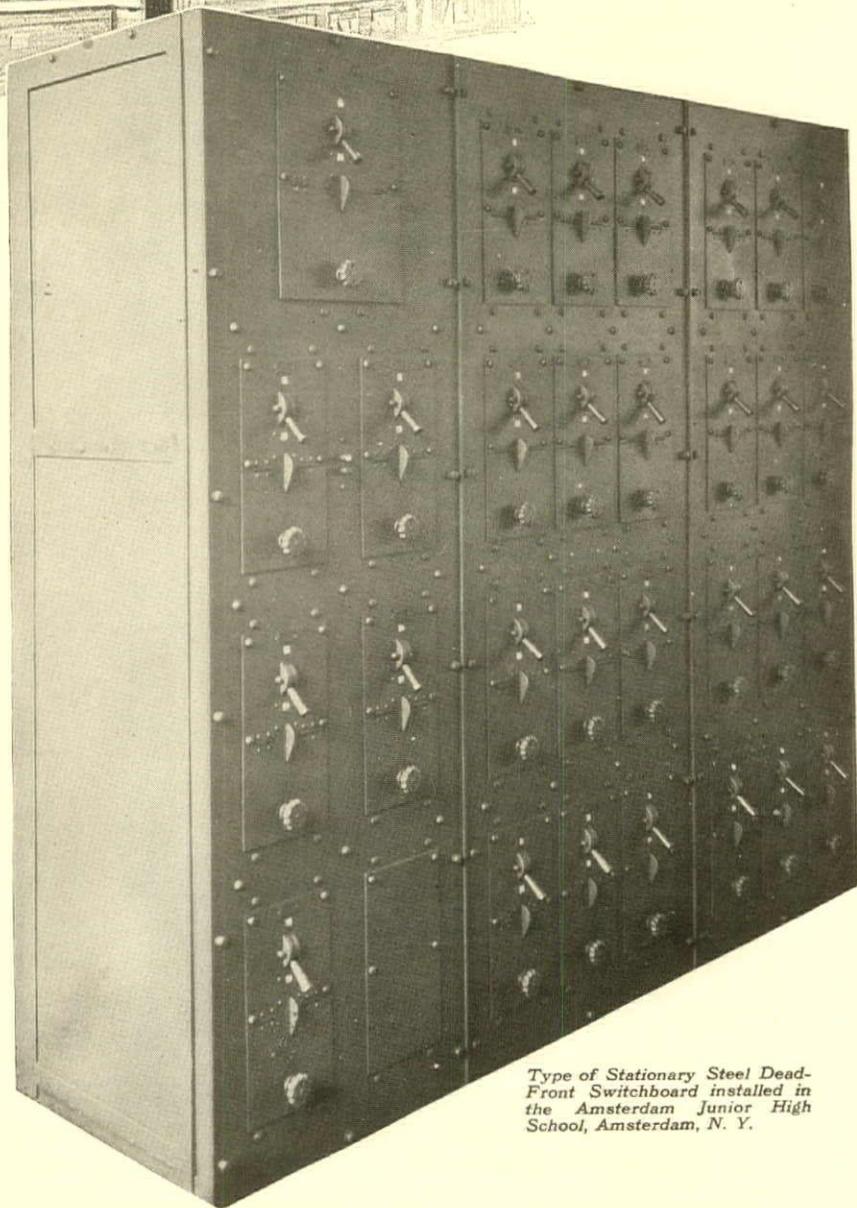


The Trend

*Amsterdam Junior High School,
Amsterdam, N. Y.—Howard F.
Daley, Amsterdam, Architect;
Langdon & Hughes Electric Co.,
Utica, Electrical Contractors.*



General Electric supplies complete electrical equipment for all types of structures. In many notable buildings there are G-E Wiring Systems for the distribution of electric power and light, and apparatus for their control and protection—G-E Motors and Control for operating elevators, fans, pumps, compressors, G-E Centrifugal Blowers, etc. For your every electrical requirement G-E building specialists will gladly recommend suitable apparatus. Ask your nearest G-E office for this service.



Type of Stationary Steel Dead-Front Switchboard installed in the Amsterdam Junior High School, Amsterdam, N. Y.

GENERAL

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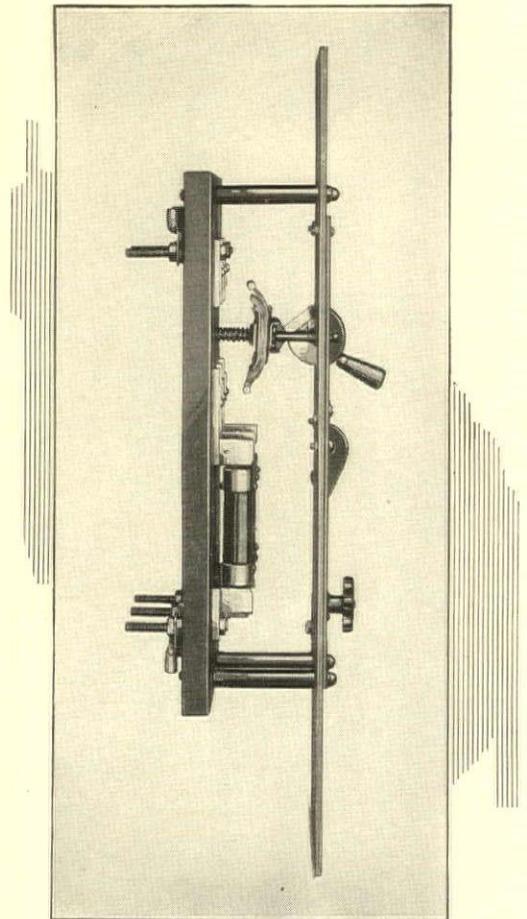
Semi-skilled employees can operate the switches or change fuses without any danger of accident.

As each panel is a unit, additions to the switchboard may be made at any time by merely bolting on the desired number of panel units. This is more than sufficient to give free range to the space requirements of the architect. Each panel unit consists of an assembly of brush contact lever switches of the required ratings. With the safety enclosed switchboard the brush contact switch finds its ideal application.

Note at right the simplified construction of the brush contact switches used on Stationary Steel Dead-Front Switchboards. Non-retardable, quick break switches of ample capacity prevent overheating. A particularly safe feature is the interlock between the switch handle and the fuse compartment door, whereby the door cannot be opened when the switch is closed, nor can the switch be closed when the door is open.

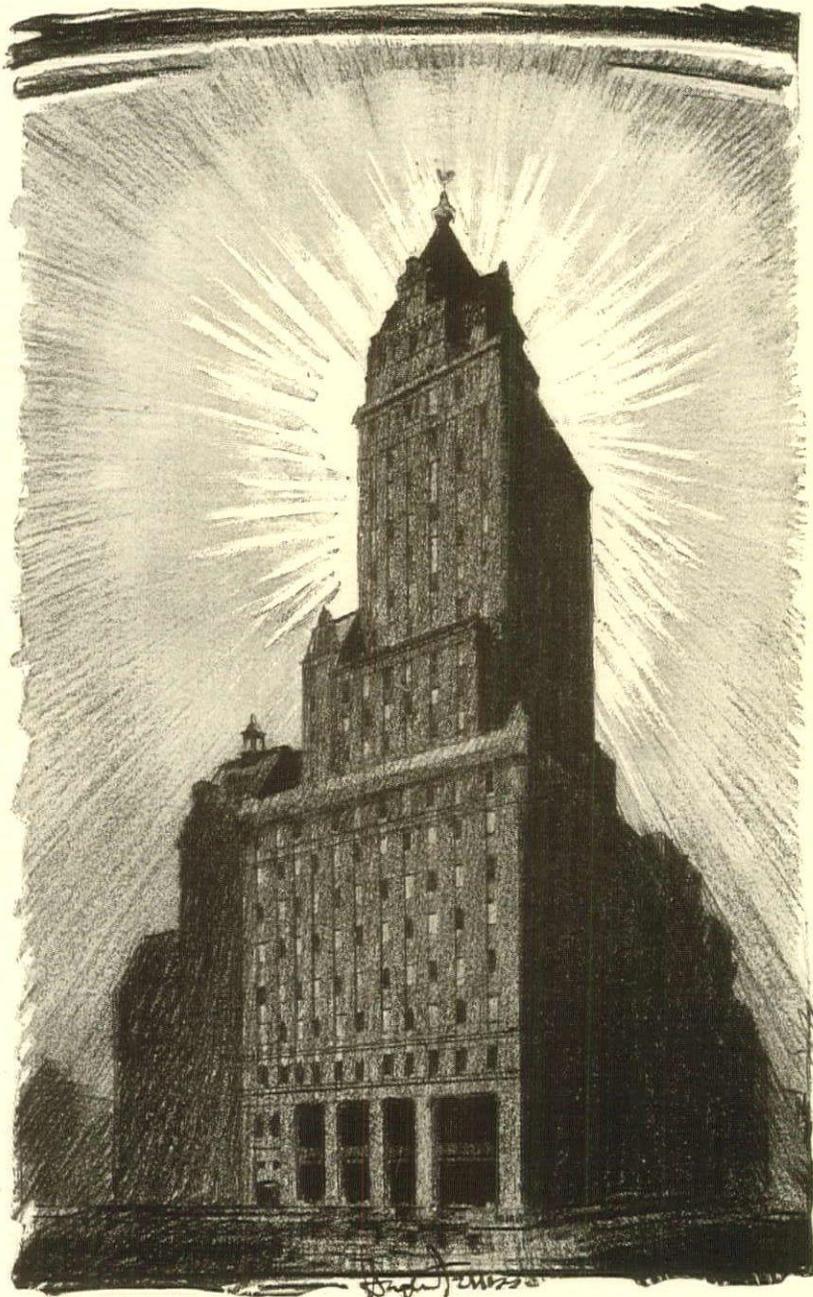
Architects will find that the Stationary Steel Dead-Front Switchboard has been so constructed that the pleasing design and appearance are carried out in every detail. For detailed dimensions and other data, address your nearest G-E office. Valuable information is contained in descriptive sheet 67111, which will be promptly sent you on request.

*For reference, file this advertisement
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New York City

WARREN & WETMORE
Architects

Architecture—Today and Tomorrow

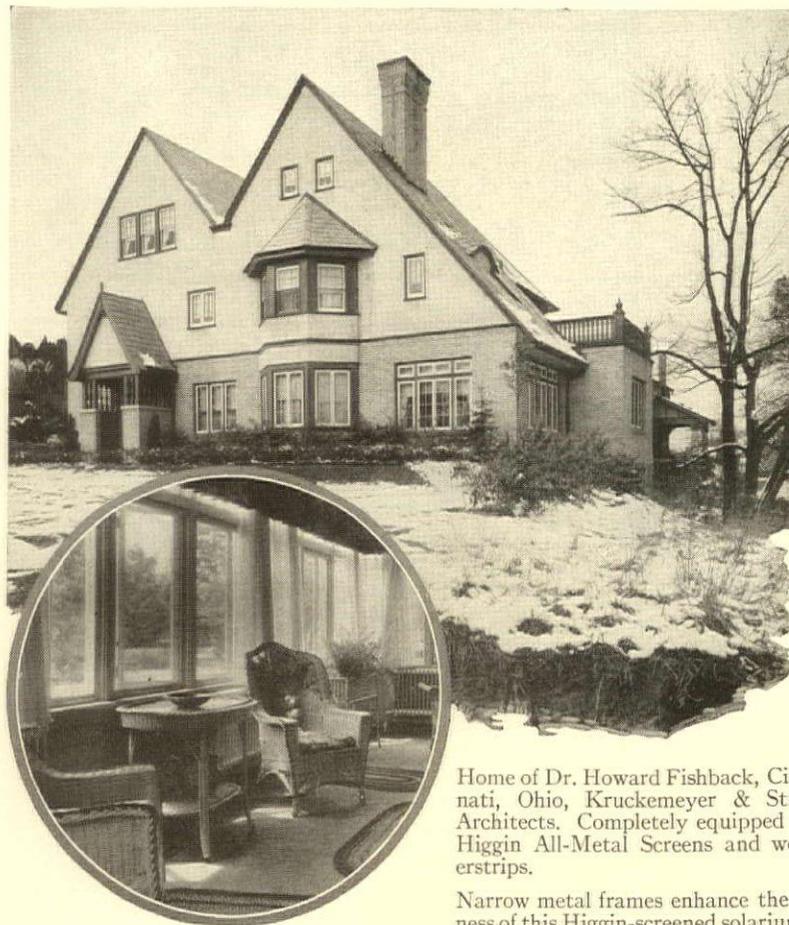
THE great buildings of today, designed in masses which rear rugged, mounting profiles into the sky, foretell even greater and more massive structures for the next half century. Always a close co-ordination of architecture and engineering, of design and construction, the architecture of the future will find architect and engineer working ever more closely together.

Certainly modern invention—modern engineering skill and organization, will prove more than equal to the demands of the architecture of the future.

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Home of Dr. Howard Fishback, Cincinnati, Ohio, Kruckemeyer & Strong, Architects. Completely equipped with Higgin All-Metal Screens and weatherstrips.

Narrow metal frames enhance the airiness of this Higgin-screened solarium.

A livable home—summer and winter

HOW much the livableness of home depends on proper screening and weatherstripping of doors and windows!

On summer days they must open wide to the breeze—in winter they must shut tight against the cold.

Beauty, too, must be considered. Screens and strips must be unnoticeable, and not spoil the architectural detail. Economy and satisfactory service demand durable materials and construction, and that means *All-metal*.

In successfully combining beauty, utility and durability in screening and weatherstripping, the Higgin organization has become particularly proficient through years of experience and specialization. Difficult windows such as inswinging and outswinging casements, and odd-shaped windows that require special equipment are easily screened and stripped the Higgin way. Many superior details of Higgin all-metal equipment are patented and exclusive with Higgin, and Higgin craftsmanship is the finest obtainable.

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Write for blueprints showing detailing of HIGGIN equipment in various types of window construction.

The HIGGIN Manufacturing Co. :: Newport, Ky. :: Toronto, Can.



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Screens and Weatherstrips

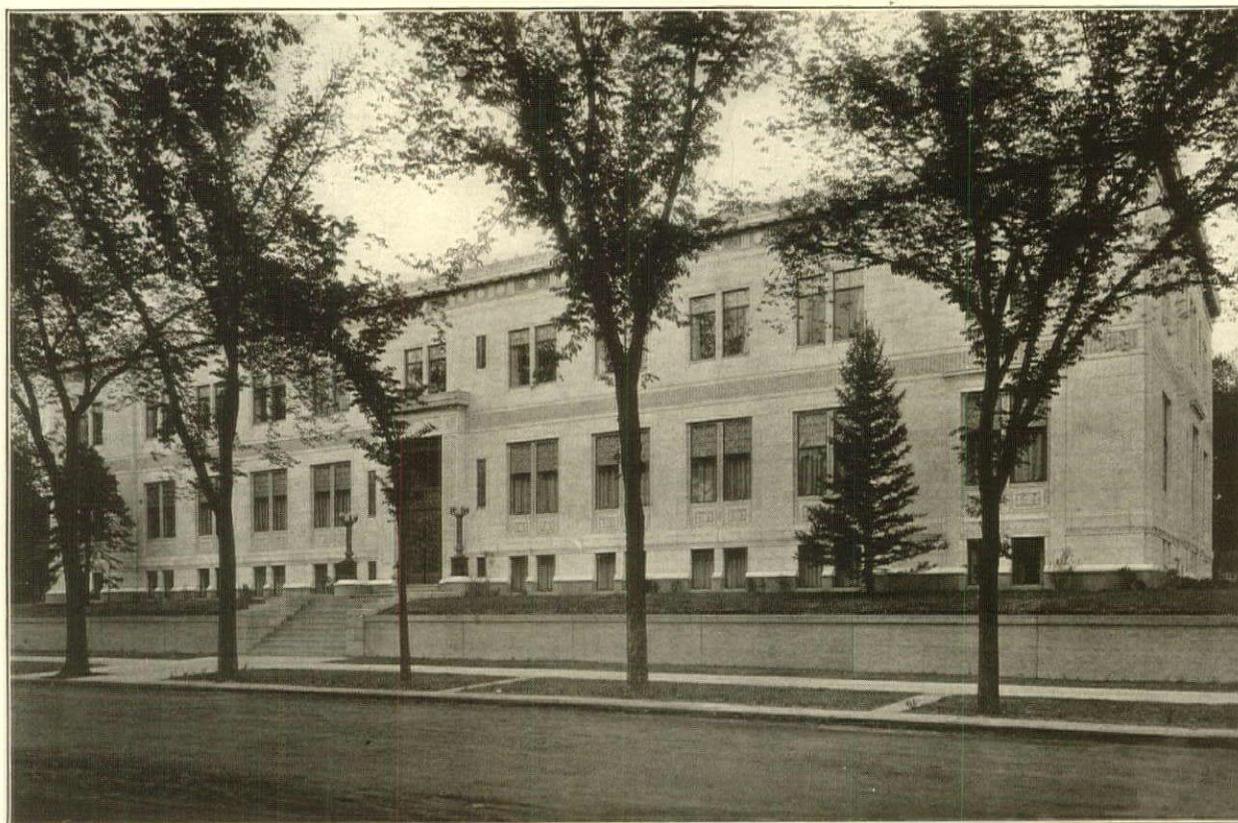
Look in your telephone or city directory for the address of your local Higgin service office, or write to the home office.

Service offices in all principal cities in the United States and Canada

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INTERNATIONAL CASEMENTS



Capitol Life Insurance Company
Denver, Colorado

Harry James Manning
Architect

THE new home of the Capitol Life Insurance Company, recently completed in Denver, is a notable example of commercial architecture in that it attains dignity and beauty without loss of practical utility.

The windows are custom-made, International Steel Casements.

Also manufacturers of the International Austral Window

INTERNATIONAL CASEMENT CO. INC.

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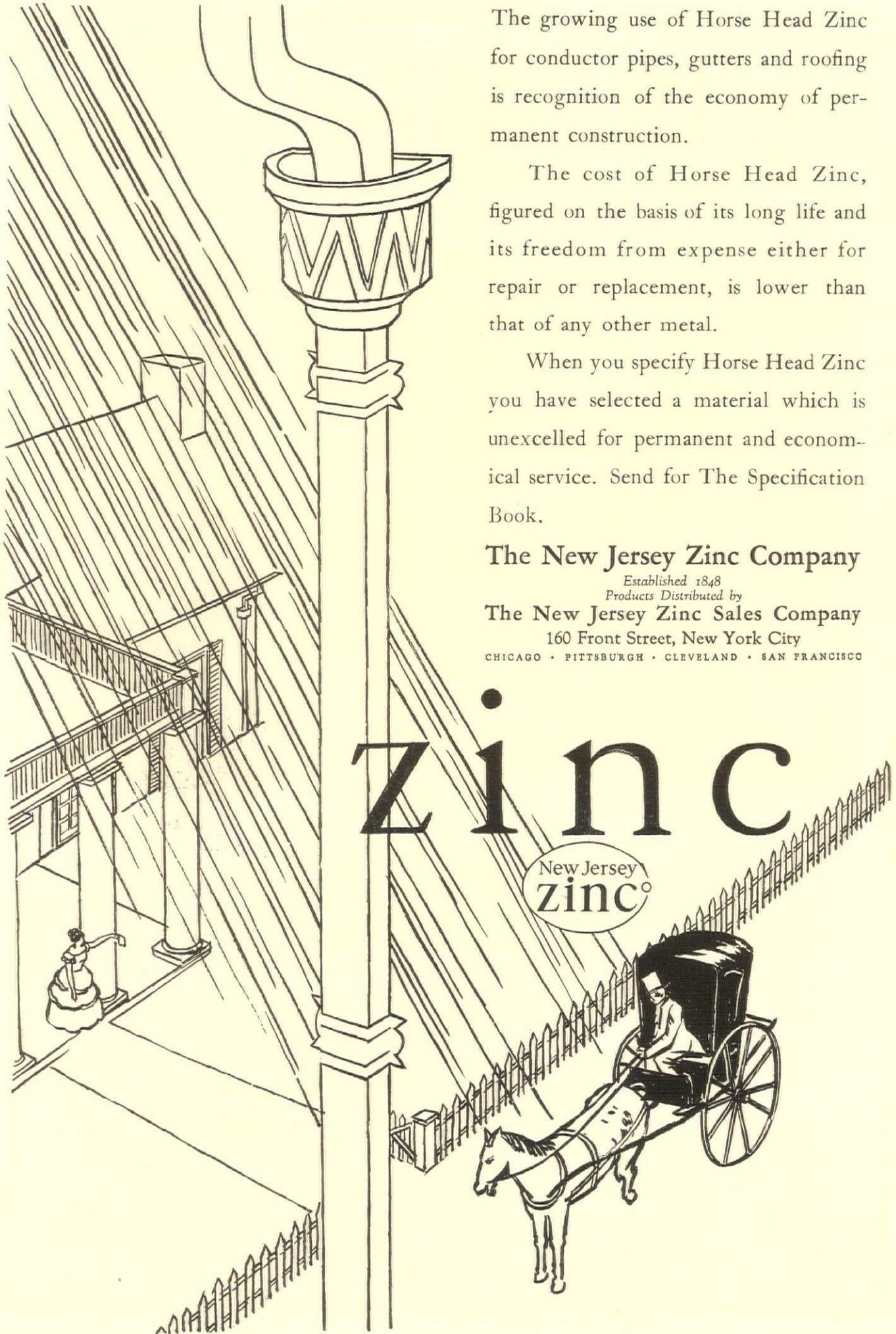
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When you specify Horse Head Zinc you have selected a material which is unexcelled for permanent and economical service. Send for The Specification Book.

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The Allerton Club, Chicago, Illinois—Murgatroyd & Ogden, Architects

THE Allerton Club is worthy of the careful study of the designer who is interested in beautiful brickwork. The building fairly bristles with interesting details, which have been skillfully worked into an exceptionally pleasing composition. Space does not permit even a catalog of these striking details, but they are readily apparent to the trained eye.

One of the outstanding features of this building is the fact that the architects have depended almost entirely on face brick for their effects.

You will find many splendid examples of the modern use of face brick in "Architectural Detail in Brickwork," a portfolio of many halftone plates, showing various treatments of the brick wall surface, ready for filing. It will be sent postpaid to any architect making request on his office stationery.

"English Precedent for Modern Brickwork," a 100-page book, beautifully illustrated with halftones and measured drawings of Tudor and Georgian types and American adaptations, sent postpaid for two dollars.

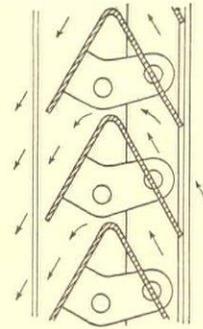
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BING & BING, INC., CONTRACTORS.



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LET US SEND YOU A COPY OF OUR NEW CATALOGUE.

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One of America's Finest Theaters

The magnificent new Paramount Theater, Times Square, New York, designed by C. W. and Geo. L. Rapp, Architects, contains everything modern in theater equipment—including an FA Major All-Master System, of course.



MORE and more it is becoming a standard practice among leading architects to include an FA All-Master Major System in the specifications of fine theaters. Installations now serving in America's most modern theaters dot the map from coast to coast.

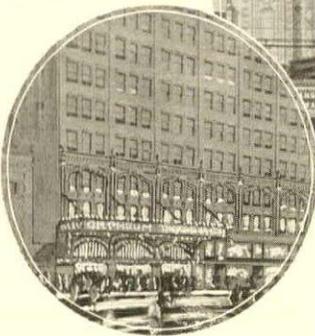
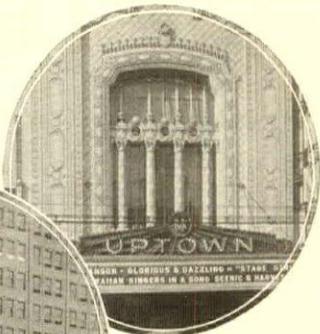
In the FA All-Master Major System the most flexible and economical control of theater lighting possible is offered. One, ten, twenty, thirty—or as many lighting scenes as desired can be pre-selected on the "FA Major" and at the proper cue any scene can be automatically changed by one All-Master Switch.

FA Major All-Master Systems are all of the same high grade construction. Unit assemblage provides a size for every need. Not only are "FA Majors" suited to larger theaters, but to the moderate auditorium's requirements as well.

Complete estimates and details on all theater and auditorium jobs are furnished without cost or obligation. Our engineers—the men who consulted on the Paramount, The Uptown, the Orpheum and many other fine theaters—await your call.

FROM COAST TO COAST

The Uptown Theater, Chicago, designed by C. W. and Geo. L. Rapp for Balaban and Katz, has one of the largest FA Major All-Master Systems in the world.



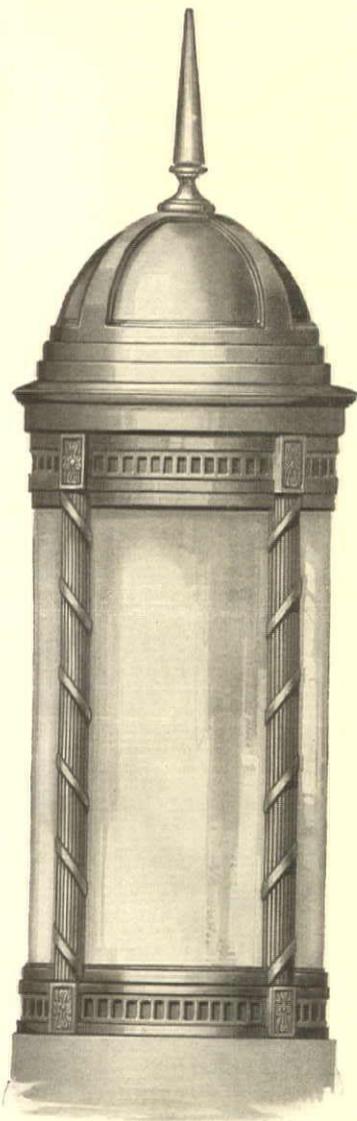
New Orpheum Theater, Los Angeles, designed by G. A. Lansburgh, Architect, for the Orpheum Circuit equipped with FA Major All - Master System, as are all good theaters.

Frank Adam
ELECTRIC COMPANY
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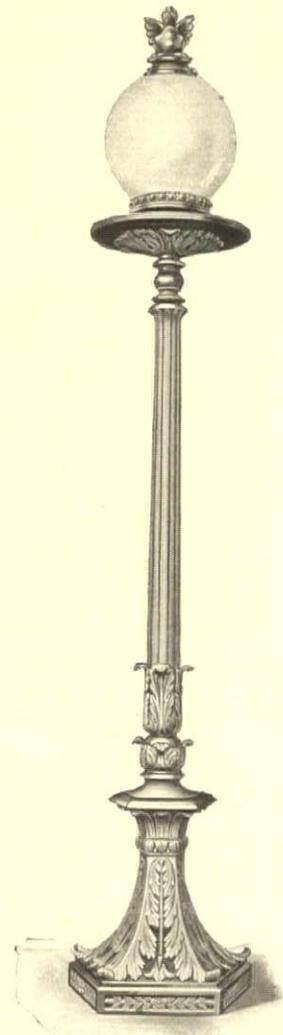
No. 410
 Scale, 1" = 1' 0"
 5' 2 1/2" high over all
 Body, round; outside diameter of glass,
 1' 6"
 Base, round; 1' 7 1/2" over-all diameter

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THE prevailing thought when designing exterior lighting fixtures is beauty of design. Yet the importance of correct illumination should never be overlooked, regardless of design.

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With over 400 patterns of every type the Smyser-Royer line offers a solution to every exterior lighting fixture problem. There is a wonderful range of designs in our new catalogue "J," which will be sent on request.



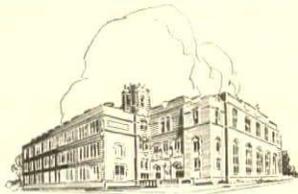
No. 401
 Scale, 3/4" = 1' 0"
 5' 6 1/2" high to bottom of globe
 Figure on top of globe, 6" high
 Base, 5 sided, 17 1/4" greatest width

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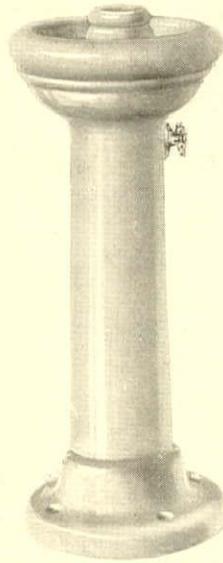


Summit High School
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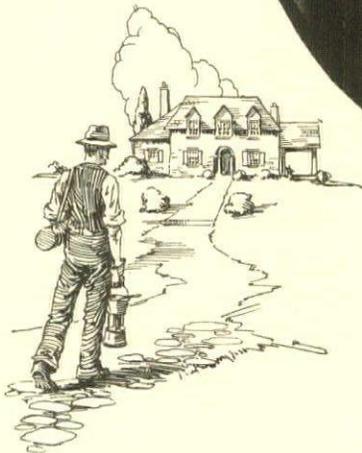
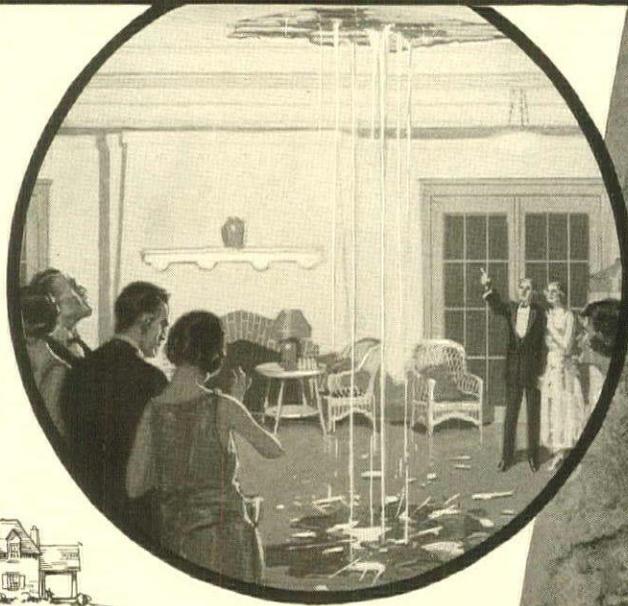
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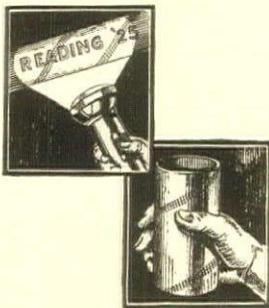
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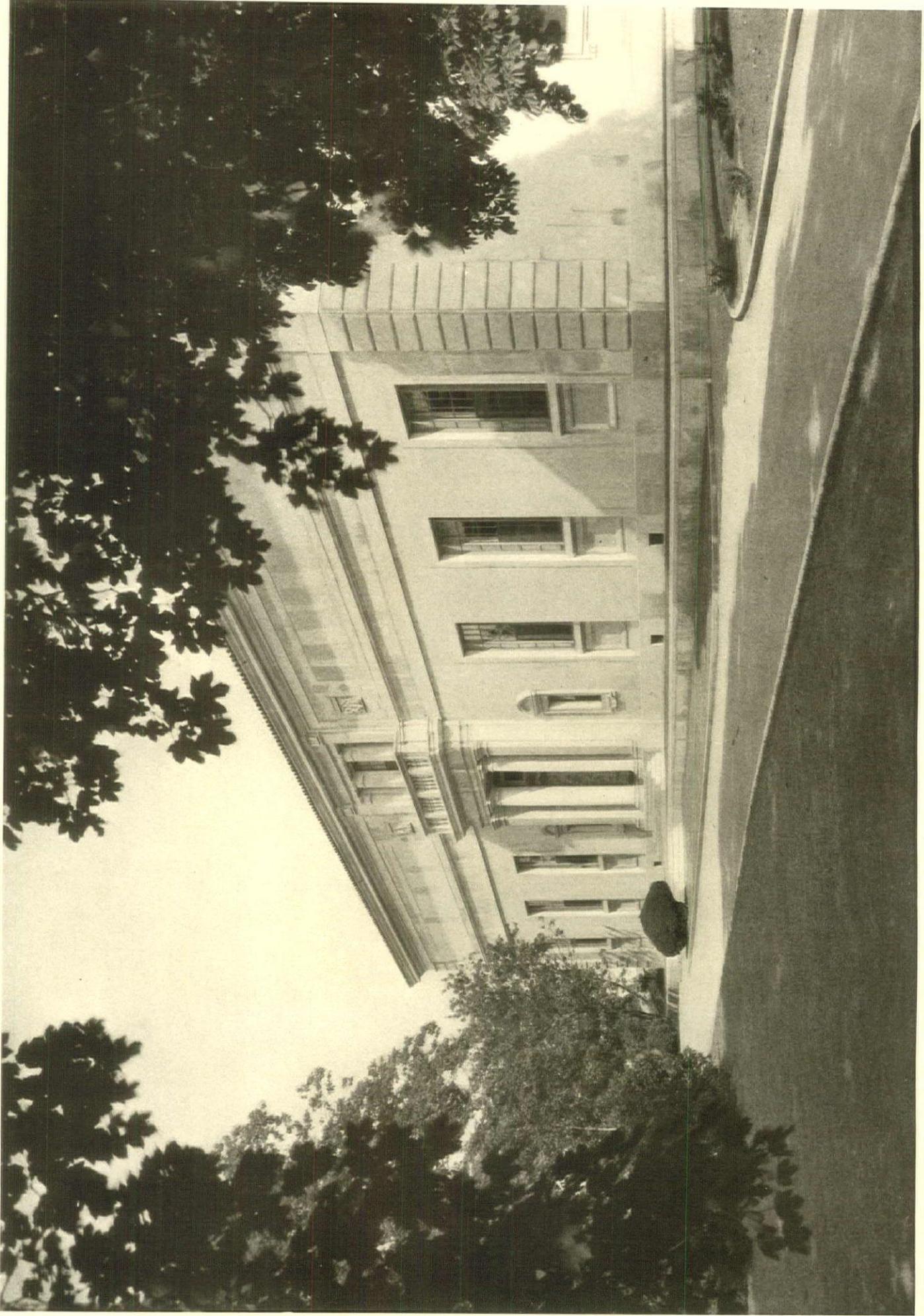
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THE FRONT OF THE GALLERY, THE BARNES FOUNDATION, MERION, PA.

Paul P. Cret, Architect.

The Buildings of the Barnes Foundation at Merion, Pa.

Paul P. Cret, Architect

THE Barnes Foundation is an educational institution in which is conducted research in art, more particularly modern art and its derivation from earlier art. As this research is made by study of actual painting and sculpture—as distinguished from study made from photographic reproductions of the actual examples—the buildings for the work of the Foundation consist of a museum or art gallery to house

its collections, together with an administration building, service building, etc. These collections consist of numerous works by Renoir, Cezanne, Picasso, Matisse, and examples of the painting of every one of the “modern” school, as well as a very fine collection of negro sculpture from the ninth to the seventeenth centuries, with examples from the Sudan, the Ivory Coast, the Congo, and Gabon, as this art has had a large share in moulding the develop-

ment of modern painting in France. But, unlike many buildings designed to house collections of paintings, the Barnes Foundation gallery is a windowed building—unlike the “blind” façades with long unpenetrated walls which indicate the hanging of pictures illuminated by top light. This gallery, therefore, does not give the usual aspect of an art gallery.

A study of the principal museums either in this country or abroad, and of papers published by museum directors in which their views on the ideals of museum construction are presented, brings out a wide range of conflicting opinions much more than it leads to a definite solution of the problem. There is, indeed, not a single subject on which the experts agree. Even on those points which, it seems, could be settled

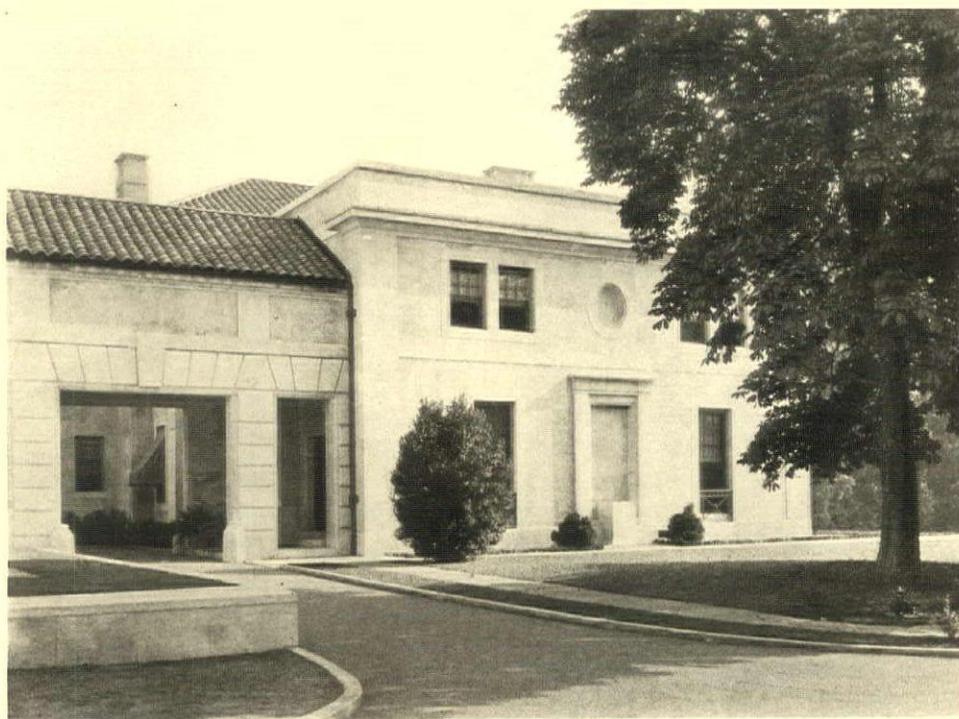
by experiment, one finds the most opposite views held and supported by plausible arguments. It is the case, for instance, for that most important question, the lighting of picture galleries, as well as for the intercommunication between the different rooms of a gallery, without mentioning those subjects on which personal tastes may well disagree, such as the proper amount of architectural decoration in the rooms, the

color-scheme of the exhibition walls, etc. These contradictory views must be interpreted as an indication that, after all, the museum problem admits of more than one solution.

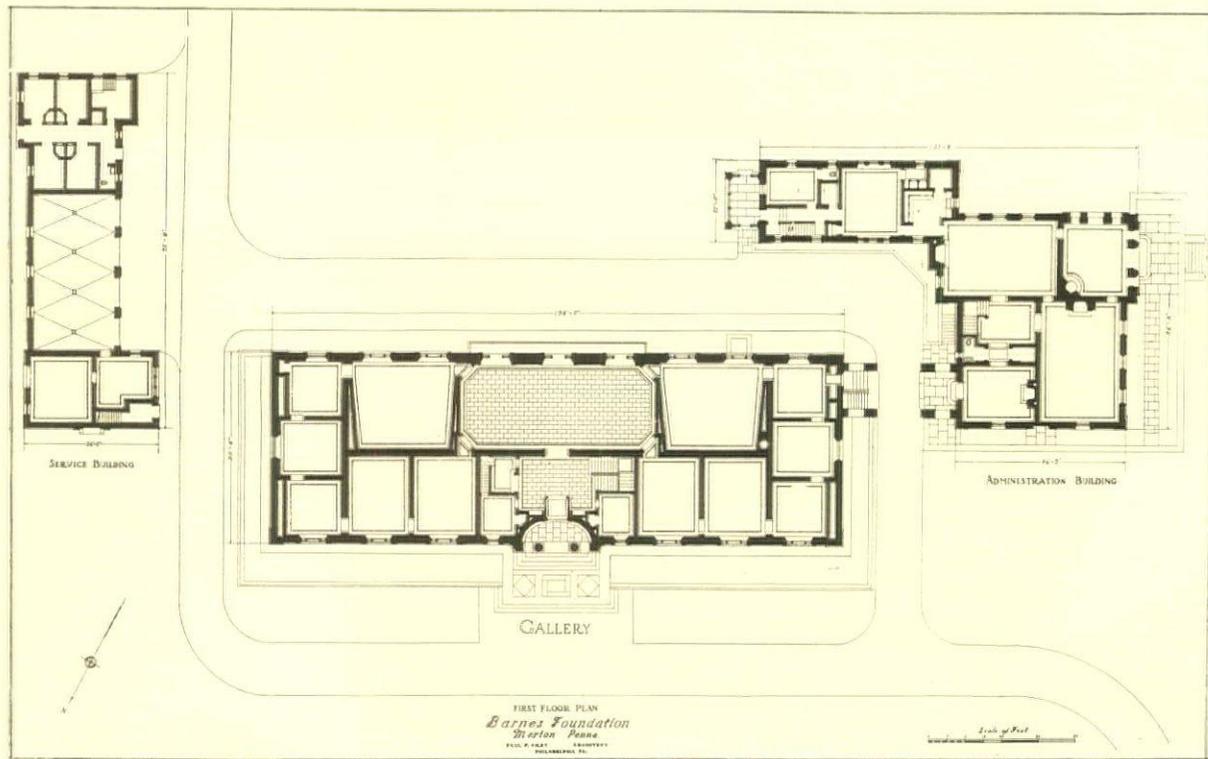
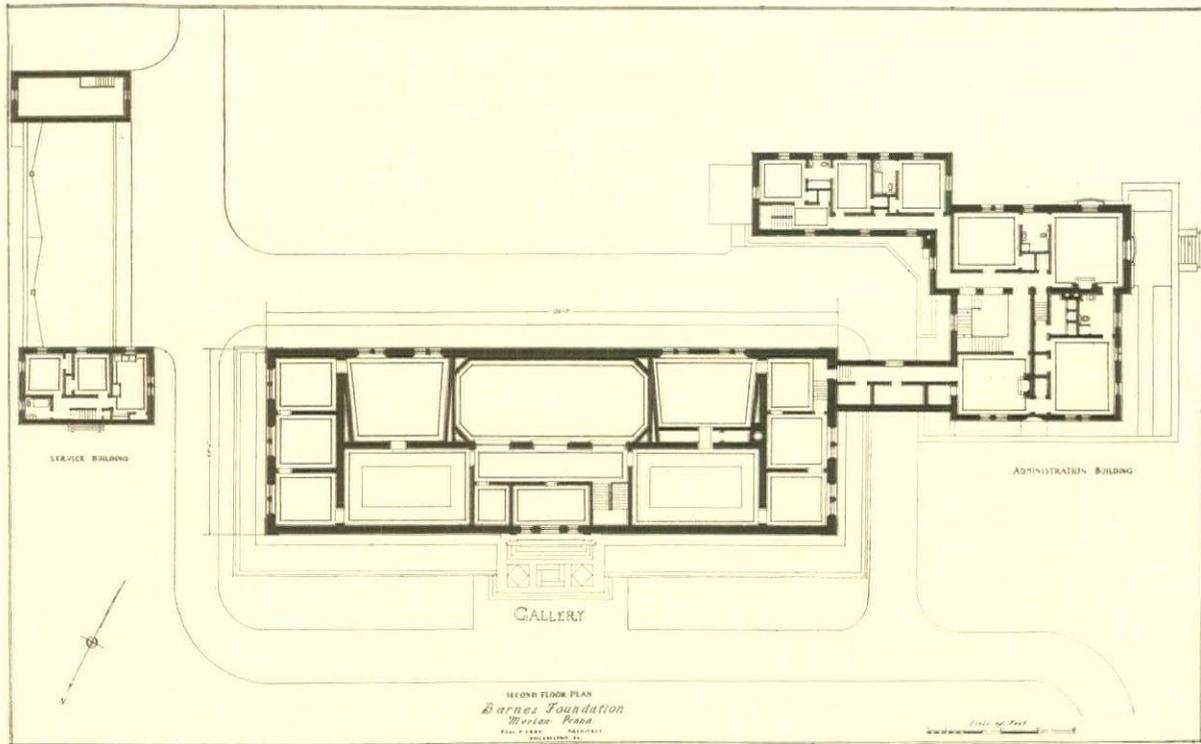
The very radical statements of the devotees of any particular scheme are so flatly contradicted by other authorities of equally good standing, that the ground is pretty well cleared for the planning on which ever lines are more particular-

ly adapted to the needs of a given problem. We do not mean to suggest that nothing is to be gained by a careful study of national or foreign museums. Some points can be considered as definitely settled by general consent. However, it is mostly on questions of secondary importance that this agreement is to be found.

If we are looking for a learned opinion on fundamental questions, such as the general scheme of interior arrangement from the point of view of the museum visitor, it is typical, for instance, that the extended inquiry of the commission sent abroad by the Boston Museum of Fine Arts should conclude from a visit to practically all the museums of importance, that the most pleasant to visit are the old Italian palaces, which were built for residence purposes and not for



The porte cochère and the administration building.



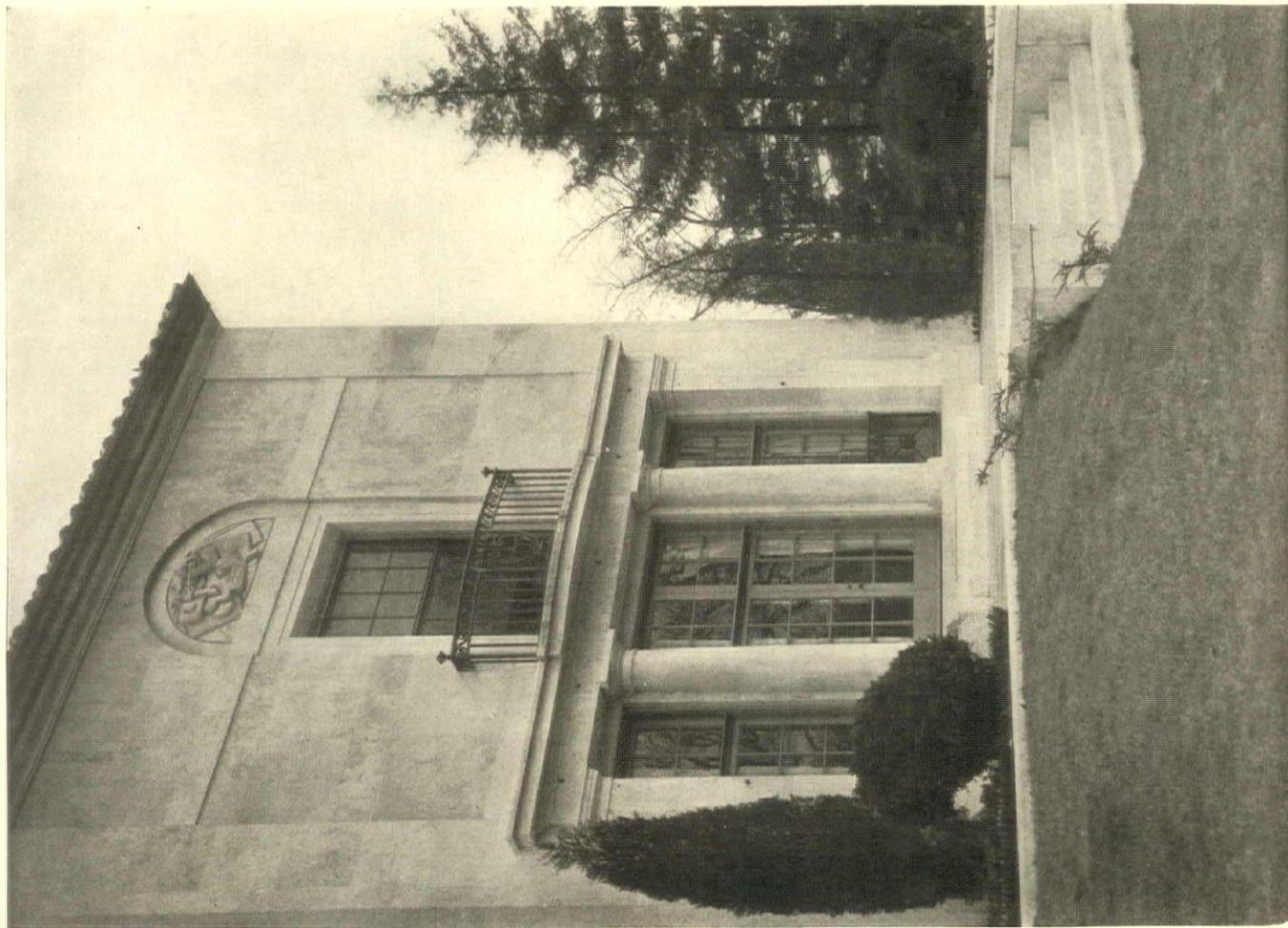
their present use. A building of limited size, with a simple plan, comprising rooms with a sort of intimacy, may escape from that character that has earned for art galleries the definition of "cemeteries of works of art."

The theory of limiting the size of such a building is one that is gaining favor more and more among art lovers. It consists in assuming that such a number of rooms as can be visited without undue exertion are arranged and decorated in the best possible way. The collections are installed in these rooms. Then, as the years go by, and new acquisitions are made, a selection is constantly made, and the standard of excellence of the objects exhibited is raised, the best speci-

mens being shown in the original suite of rooms, while the minor examples are put into storage rooms, where they are still available to the students of art or interested persons.

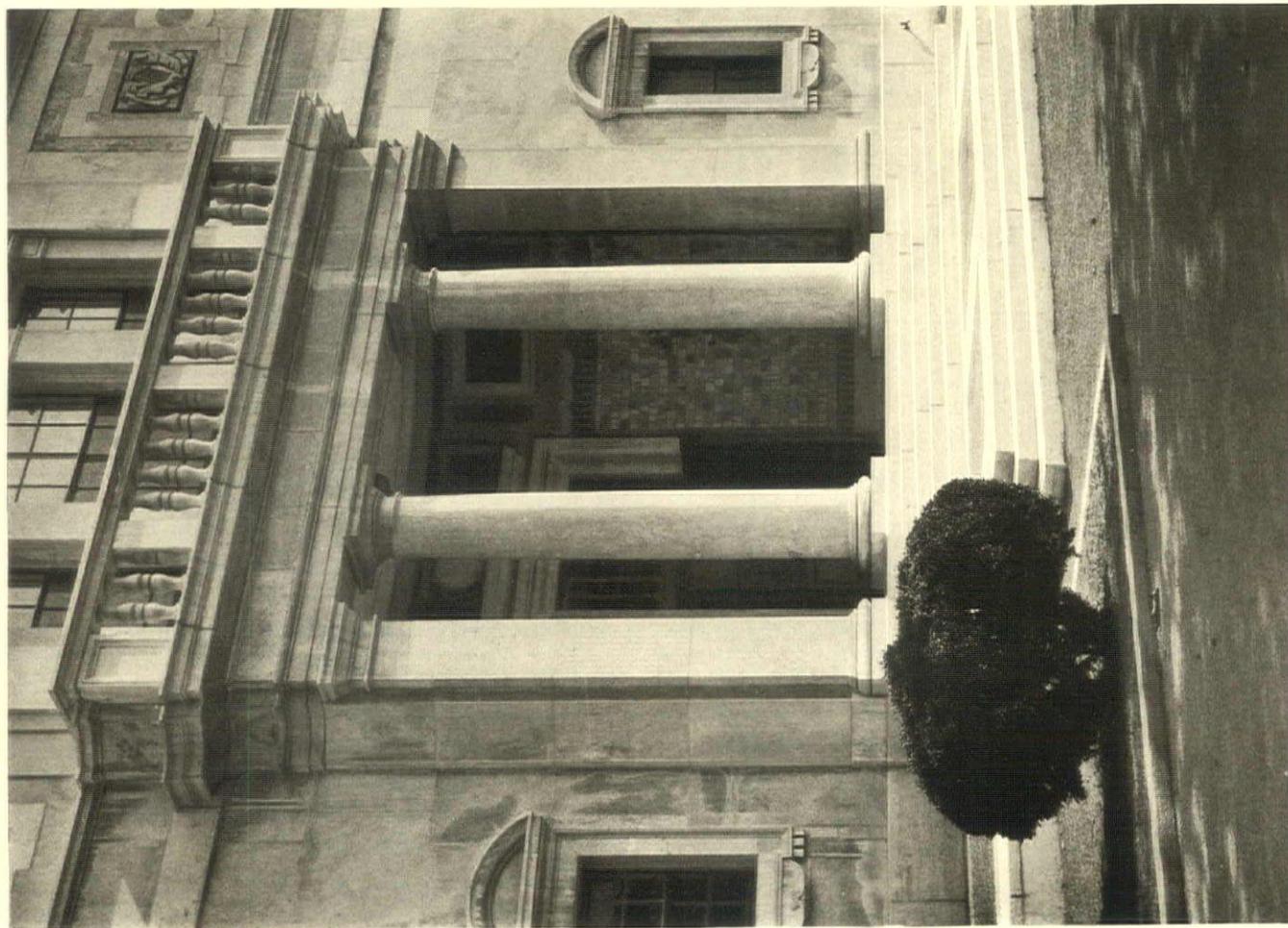
One advantage of this scheme is that it does not require constant enlargement of the building; another is that a gallery of small size, sheltering only material of high value, is always receiving better attention and fame than a more extensive collection, in which the necessarily limited number of good things is drowned in a flood of mediocre material.

In its general aspect the exterior of the buildings follows the style of the Italian Renaissance, and is of a pleasing color; it is made of stone of two kinds, both, appropriately



Paul P. Cret, Architect.

DETAIL, ADMINISTRATION BUILDING.



ENTRANCE PORTICO TO GALLERY.

THE BARNES FOUNDATION, MERION, PA.



Administration building.

enough, imported from France, like the art contained in the building. The trim stone is "Pouillenay Brun," of a warm rosy color and granulated texture—a stone with distinct crystalline formation; the ashlar is of "Coutarnoux," a limestone, much warmer in tone than our Indiana limestone, almost yellow, in fact. Both stones are marked with irregular veinings of deep rust color; they are here used with a planed finish. The roofs of the administration and service buildings and the parapet of the gallery are tiled with unglazed tiles.

At various places there are built in sculptural decorations by Jacques Lipshitz, also of the modern school in France, and the ironwork and other details give here and there a recall of the negro sculpture housed within. The semicircular loggia at the entrance is lined with "Enfield" tile modelled after the negro sculpture of the collections inside, bright in color, with Pompeian reds, deep purple-blacks, picked out with glazes and enamels in red, green, yellow, black, and other primitive colors, against a background of pastel tan.

In addition to this entrance, where are the coat-rooms and stairs, there is a minor entrance under the portecochère connecting the gallery with the administration building. There are no corridors inside, circulation being through the exhibition rooms.

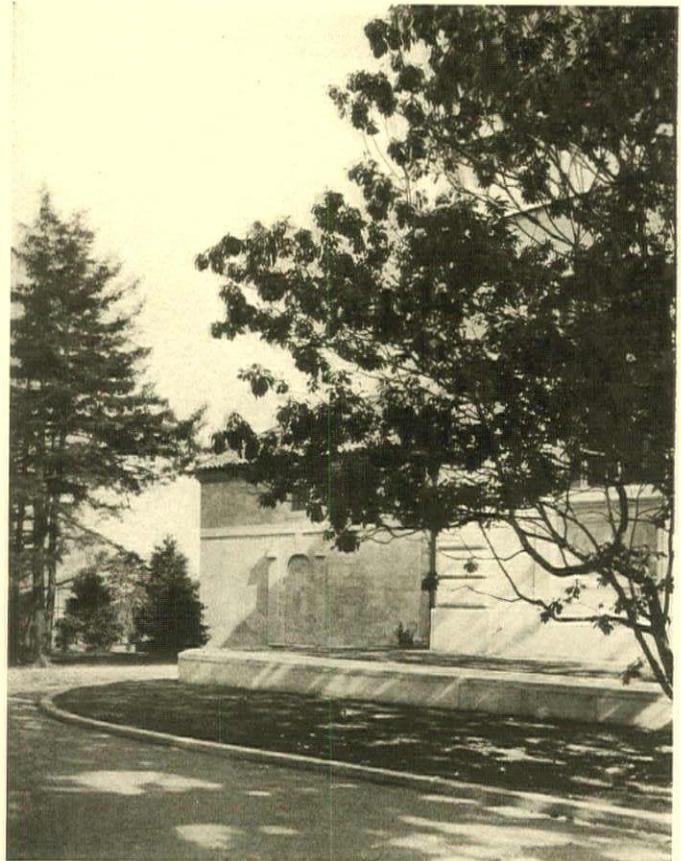
The exhibition rooms are interesting primarily, from what has been said before, from the effort to abandon the top-lighted room. Top-lighted rooms have in their favor that they provide a maximum of hanging space; but, like a good many efficient methods, they fail on some more subtle and no less important ground. For instance, there is no doubt that the aspect of such rooms is always gloomy; that on account of the height that they require to place their ceiling light in the most favorable condition, the height of wall

left above the single row of paintings makes the room look empty and dwarfs the painting, usually of a moderate size. Most of the experts agree, also, that direct light, coming from the side and high up, similar to the lighting of a painter's studio, is much better than light from the top, as it approximates conditions under which the paintings were executed by the artist. Another reason why doing away as much as possible with the top-lighted rooms is desirable, is that the skylights of the roof give constant trouble on account of leaks, snow in winter, and concentration of summer heat in the room.

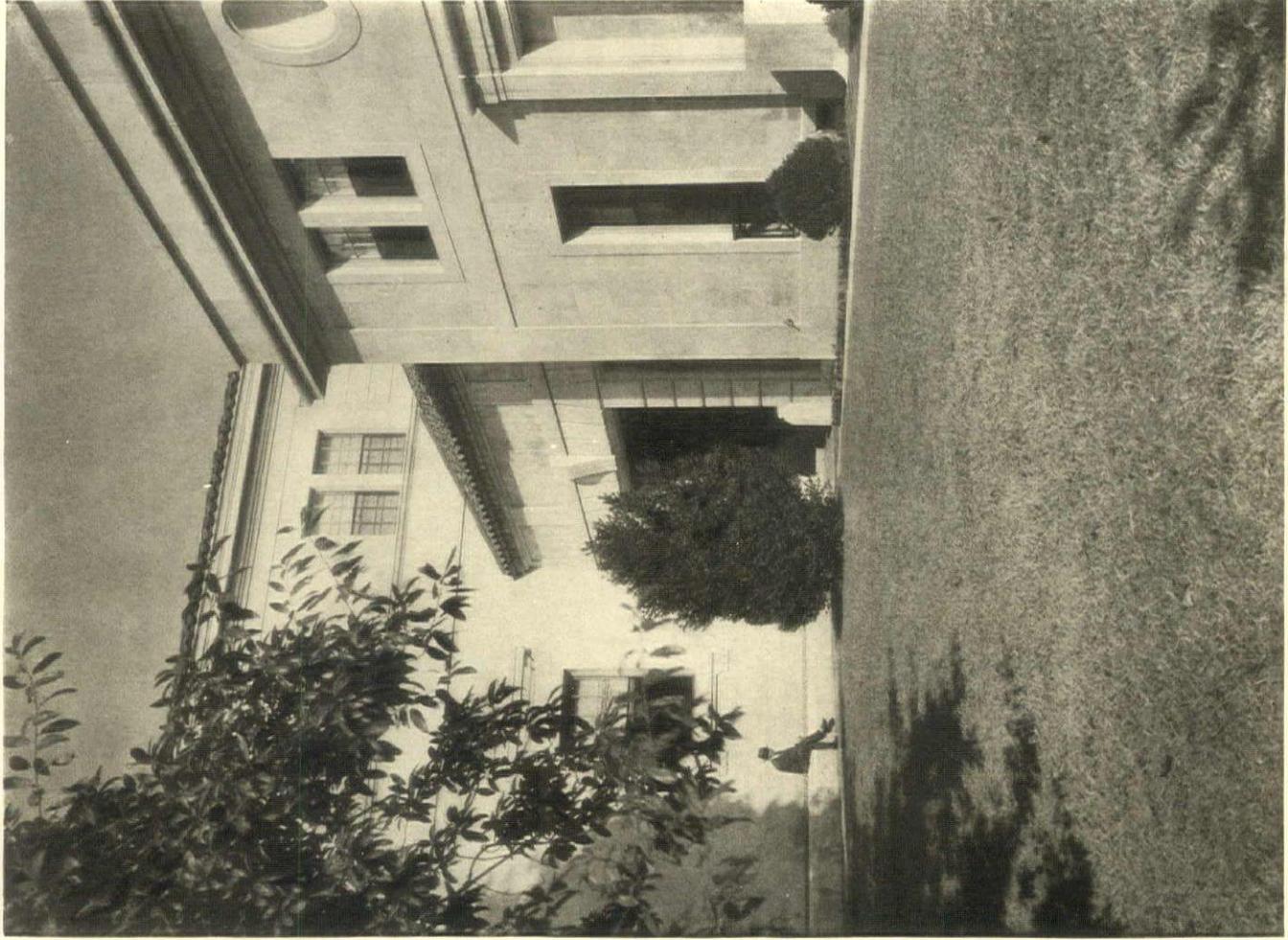
These rooms are therefore sidelighted, with two exceptions only, the sills of the windows being a little over six feet from the floor; the result has been exceedingly successful both as to the cheerfulness of the room itself and its psychological effect on the visitor, and as to the lighting of the paintings, for it has been found possible to hang paintings even on the window walls, below the sill of the window, the light diffused by the plaster ceiling being sufficient for this purpose. Sheer curtains are let down where windows face the sun, and these have been found satisfactory in keeping out the direct light of the sun but letting in enough diffused light to light the exhibits adequately.

The rooms have a treated burlap of warm putty color on the walls, covering the planking which serves for nailing the picture supports: above is sand-finished plaster, toned with flat oil paint; the trim is of oak. There is very little decoration, the decorative aspect of the rooms being secured mostly by the shape, proportion, and ceiling or vault. There are no interior doors. The heat is of the vapor-vacuum type, the radiators being placed under the windows and everywhere concealed.

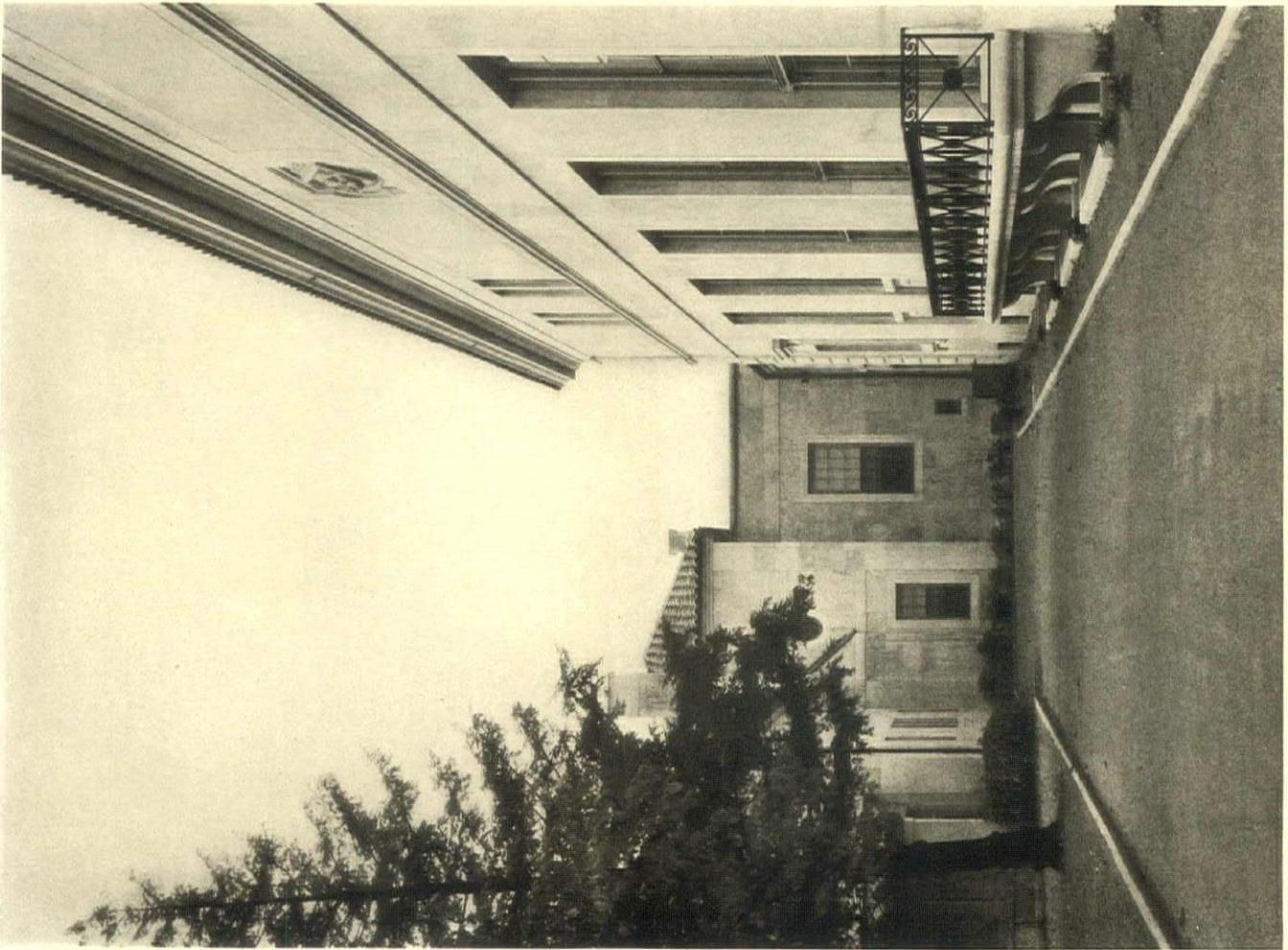
As an experiment in the housing of a painting collection in side-lighted rooms, this building may be considered as a complete success.



Service building.

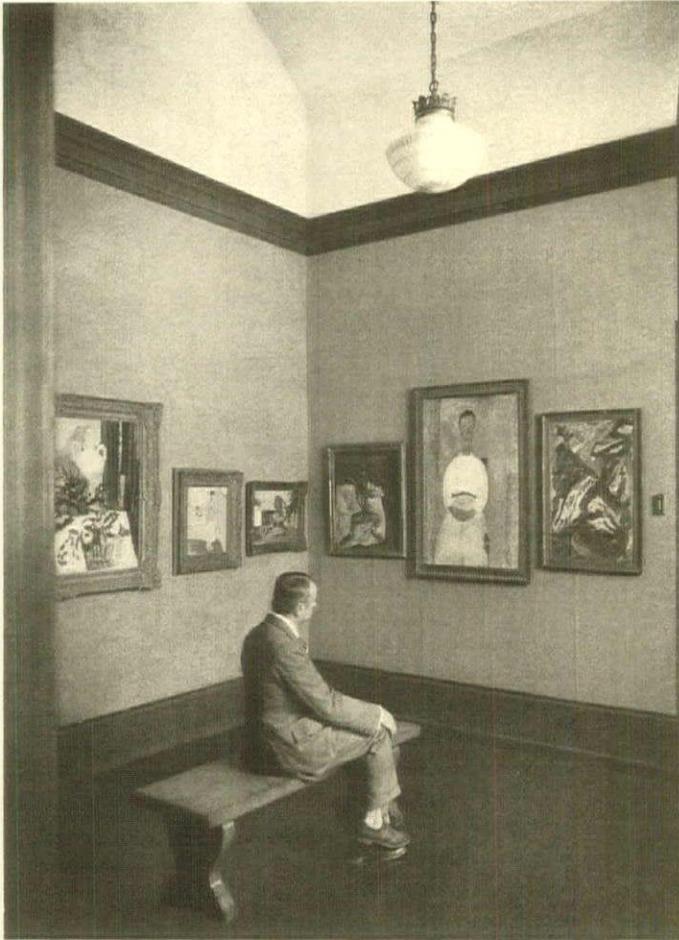


PORTE COCHÈRE, BETWEEN GALLERY AND ADMINISTRATION BUILDING.



THE REAR OF GALLERY.

THE BARNES FOUNDATION, MERION, PA.
Paul P. Cret, Architect.



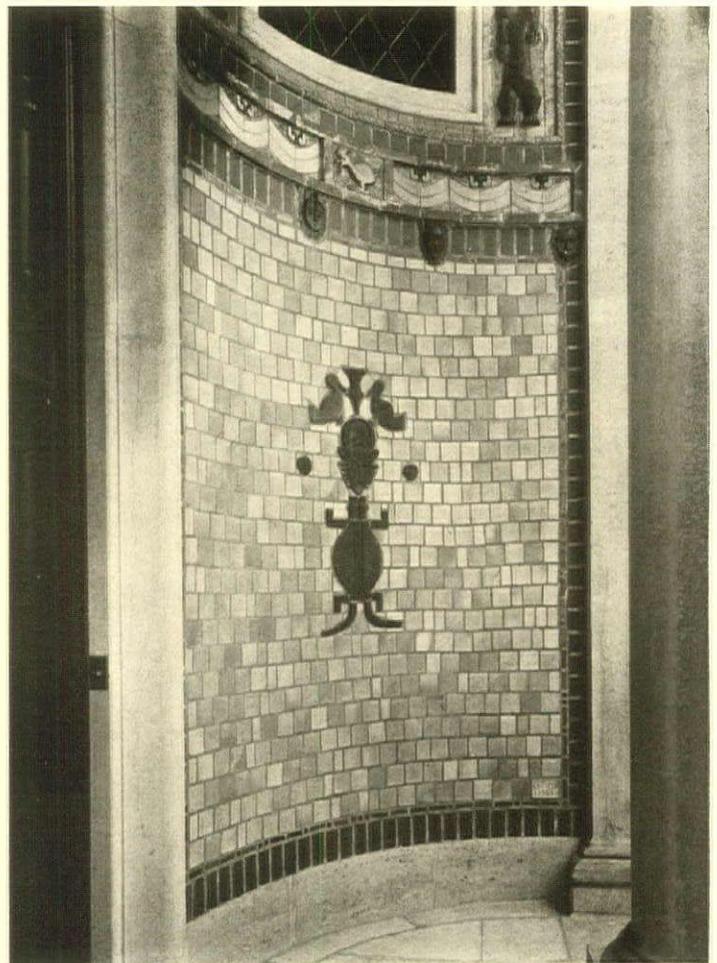
FIRST FLOOR GALLERY, SIDE LIGHTS.



LARGE GALLERY, FIRST FLOOR.



SECOND FLOOR GALLERY, TOP LIGHTS.



TILE WORK IN ENTRANCE PORTICO.

THE BARNES FOUNDATION, MERION, PA.
Paul P. Cret, Architect.

Polychrome Terra-Cotta of To-Day

By Samuel R. T. Very

FORTY years ago in this country there were but two commercial terra-cotta colors, red and natural buff. The same year eleven hundred negroes began the construction of the Ponce Hotel, at St. Augustine, while they chanted in unison their sonorous plantation melodies; this was the beginning of polychrome terra-cotta architecture in this country.

Eighty-five years before that, De Porceleynne Fles, in Holland, survived the atrophy of the faience industry, which in the seventeenth century had boasted twenty-eight potteries of distinction, all of which applied a variety of colors to clay tiles.

In the sixteenth century Trevisano was appointed royal architect to Henry VIII of England, and from then the Italian understanding of the decorative value of red terra-cotta and blue ceramics became the prototypes for similar Tudor ornament, in conjunction with soft red brick.

Twenty years before the death of Henry VIII, the third and greatest in polychromy of the Della Robbias, Giovanni (b. 1469, d. 1527) died, and when his three brothers died the art was lost to Italy and to the world.

Lucca di Simone di Marco della Robbia, grand-uncle of the great Giovanni, was born in Florence in 1400, and as he invented the industry of polychrome terra-cotta in Italy, and died there ten years before the discovery of America, it may be said truthfully that four hundred and three years passed before his influence was felt in America. Giovanni's bas-reliefs are still the best examples of the art extant, although his knowledge of its science, his palette, and his apparatus were elementary.

Fifty-four years ago Mr. John H. Sturgis delivered a masterful and instructive address on the subject "Terra-Cotta and Its Uses," at the Fifth Annual Convention of the American Institute of Architects, in Boston, the first recorded effort of modern times to revive the industry. Since then there has been produced more progress in the chemistry and the mechanics of the polychrome terra-cotta manufac-



Baptismal font in polychrome terra-cotta of the Della Robbia school, showing the freedom of the material as a medium either for sculptural enrichment or for architectural duplication.

ries than in all the intervening ages since "the sons of Noah, journeying westward, dwelt upon the plains of Shinar and said: 'Let us make bricks, and burn them thoroughly.'"

So, here is an industry, potentially superior to-day to its historic successes, lying fallow. Why is it neglected, undeveloped except sporadically, misapplied? One must be cautious in answering such a question; it is so easy to err when one's conclusions are based upon the conflicting evidence upon this interesting subject. This is an age of commercialism; it is very difficult to get facts adversely affecting industrial competitors. Literature in the shape of propaganda must be scrutinized with care to read between the lines; the flavor of some such utterances must be taken with the proverbial grain of salt.

It seems clear in life that the actuating influences of mankind are but two in number, each equally potent. They are the natural laws of balance and of tradition. When applied to architectural polychromy, the latter influence has caused the hiatus in the fashion of coloring buildings, a common practice among the mighty builders of all time, unless one includes the centuries succeeding the classical revival of the latter part of the fifteenth century, and also the later buildings



Polychrome terra-cotta lunette in the Church of S. M. Novella at Florence, with the full palette known to Giovanni della Robbia.

of ancient Rome. The former law will swing the pendulum "back to normalcy"; for it is a fact that coloring buildings is a natural thing to do.

Professor Aitchison, R. A., in a series of delightful lectures upon this subject, before the Royal Academy, in 1903, aptly showed that every natural element has color and is made more beautiful per se; hence, he said: "It seems absurd to object to man's work being colored, too." But we are slaves to environment, and what Tom does generally determines what Dick and Harry shall do. It is easier to copy than to invent. Without good examples around one, exactly fitting the case of a current problem, the modern architect finds difficulty in persuading his client to blaze the trail anew.

It seems established that polychromy in architecture was an accepted practice among all of those great peoples of the ancient past who created what we call "architectural style." Professor Aitchison said: "The Egyptians, the Persians, the Assyrians, the Greeks, the Etruscans, the Chinese, the Japanese, the Mexicans, the Peruvians, the Arabs, the Moors, and Turks, all enriched their buildings with color; nay, I believe the Gauls, Germans, Scandinavians, the Goths, Huns, and Vandals did the same; and all that group of Western nations we call mediæval made their buildings striking at least by the aid of color." It is doubtful if any of these peoples attained the beauty in the art of polychromy available to-day; it is certain that they could not do so in terra-cotta. Mr. L. V. Solon has recently shown that the

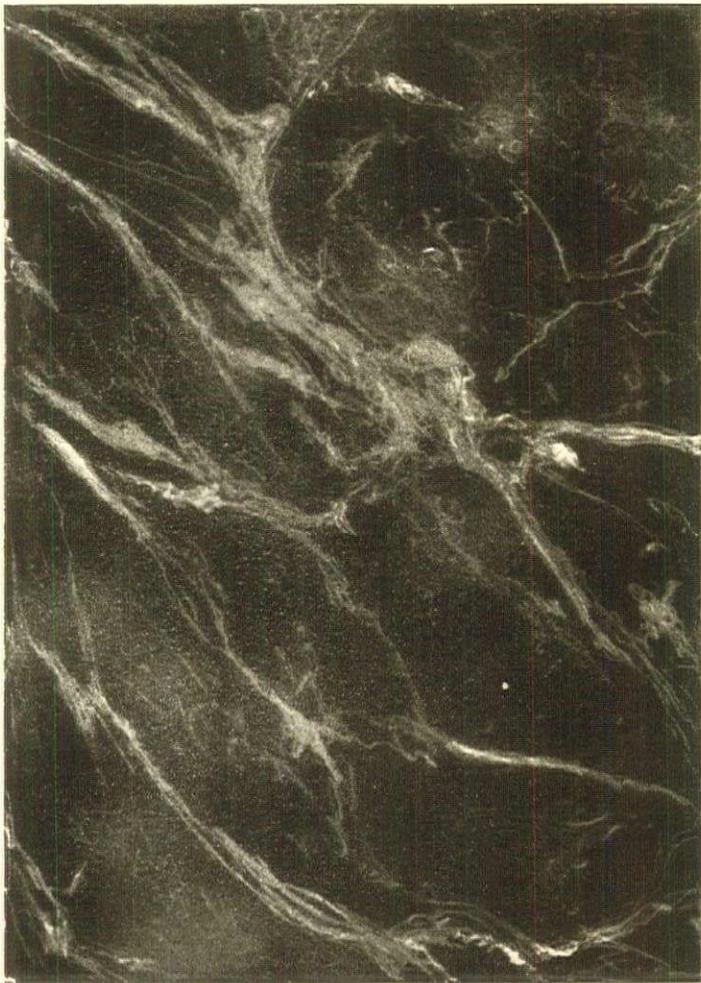


Free-standing fountain figure group in a wide range of modern polychrome terra-cotta colors, at Hotel Grunewald, New Orleans. P. Ghiloni, sculptor.

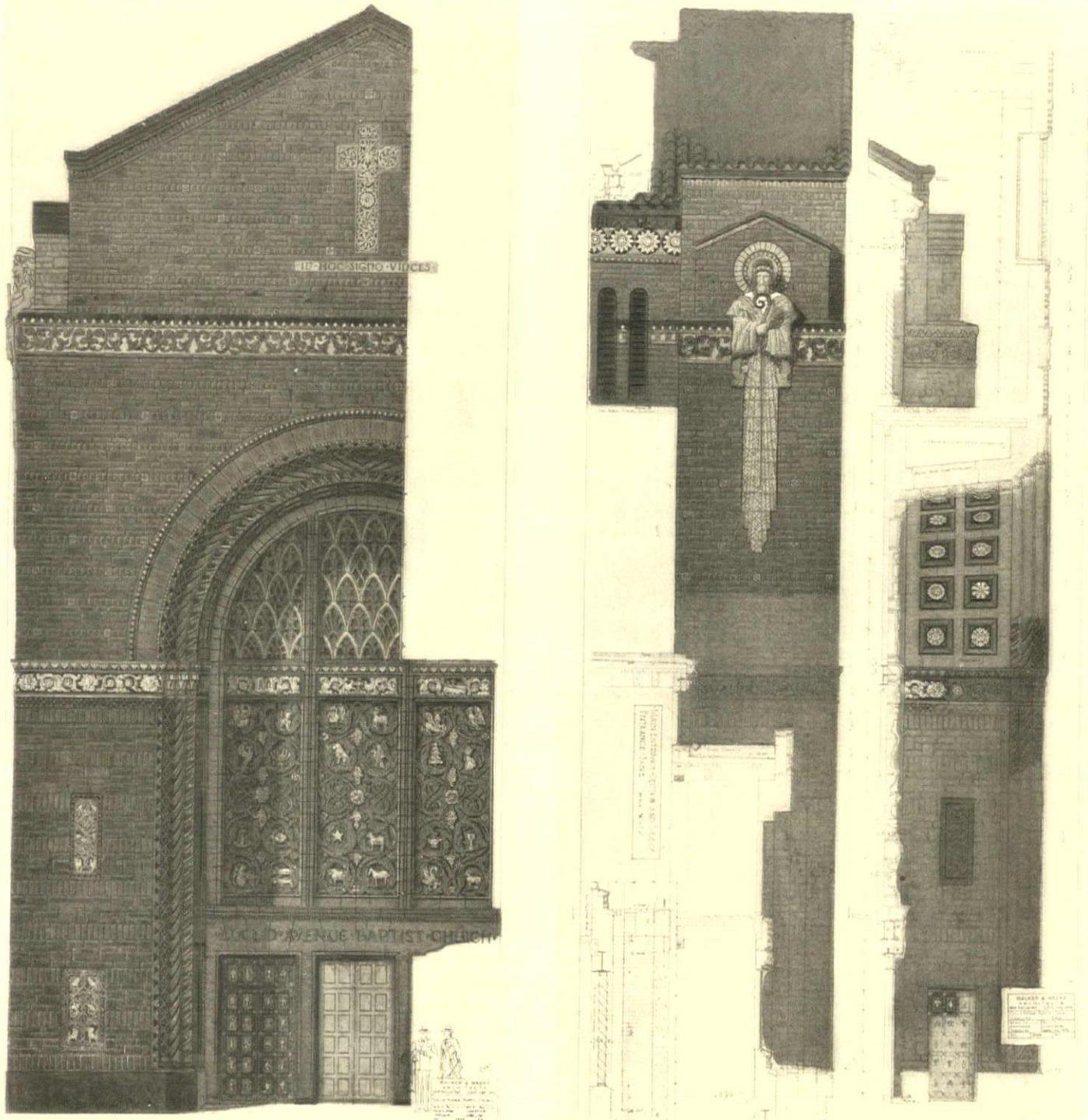
handicap of ignorance was no deterrent to a vigorous attempt by the Spanish Mexicans of the seventeenth century to advance the rightful use of durable terra-cotta colors as a pleasing method of elaborating architectural design: but, as he writes, "the technical resources of the potter of that day were very limited, amounting to nothing more than those practised in the peasant industries of Europe." They, nevertheless, had a virile sense of color, as did the continental rug-weavers of that day, and they would have aided the work of the modern terra-cotta manufacturer, owing to their original, serious, and masterful attempts to decorate unstructural elements of design with fresh and vigorous mosaics, bands, stripes, and diapers of ceramics and pieces of colored tile, had they known the methods of to-day.

To our modern Occidental minds such elementary attempts as theirs to beautify a building by the application of crude raw colors are unwarranted in art and wastefully expensive, but to-day such crudeness is unnecessary; who can deny that the "Parkhurst" Church, Madison Square, New York City, had charm in color? It was the first important building to use terra-cotta colors for almost four centuries. It so startled the modern architect, yearning for that durable color medium of decoration, that the industry took on an impetus which has revolutionized it. So far as I can learn, its advance has been greater in America than in any other country.

The Greeks of the Periclean age applied color skilfully from a fairly varied palette to the structural and decorated elements of all of their buildings. The many colors have been patiently restored and faithfully described by different archæologists. They have established that practically all of the primary colors, if not all (some except green), in different shades and tints, as well as black, white, cream, flesh tint, purple, and browns of several sorts, were used with scientific skill in their chromatic importance, if not, as Professor Aitchison implied, in a manner which we of to-day would consider as pleasing as they did. The ancient Greeks would terra-cotta profusely, and indeed their kilns were close to many temples; but fired glazes were probably unknown to them. Their colors were, therefore, fugitive, mere traces remaining to-day. The palette of the Italian



Direct photograph of a specimen of terra-cotta painted and glazed as a sample preparatory to the execution of commercial pilaster capitals above Verde antique shafts. This marble could not be carved; hence polychrome terra-cotta was a proper and unique material for this purpose.



Euclid Avenue Baptist Church, Cleveland, Ohio, a 100 per cent polychrome terra-cotta design by Walker & Weeks, Architects, now being erected. This, so far as known to the author, is the most elaborate attempt ever made in the use of polychrome terra-cotta in architecture. The colors comprise practically the full modern palette, including high and low temperature colors.

polychrome terra-cotta architecture of the sixteenth century has come down to us without noticeable deterioration in intensity or texture, owing to their protective glazes, but the color-range was slight compared with that of the archaic ages, down to the fifth century, or that of to-day; the former would not have withstood great heat; the latter can withstand a sufficient heat to fuse their glazes.

In the year 1885 in the United States there were but two fired terra-cotta colors; to-day there are more than those required by the commercial demand. The first ambitious attempt to build in polychrome terra-cotta an entire architectural façade was the McAlinden hardware store building, at Perth Amboy, N. J., the bold prototype by Thomas Fox, architect, of the countless impressive struc-

tures throughout the country, such as the Madison Square Presbyterian Church (the Parkhurst Church), designed by McKim, Mead & White, architects; the Pan-American Union in Washington, by Albert Kelsey & Paul Cret, architects, and the Woolworth Building, by Cass Gilbert, architect. Until within a few months, there were decided limitations in the palette, and until within a few weeks the low-temperature reds, oranges, yellows, and metals were not available for out-of-door use, for they were not as hard as the countless shades and tints of every other common color, available after their permanent glazing in the higher-temperature kilns. Therefore, they were less durable. To-day, these low-temperature colors are not only available, but every one of them is being used out of doors. Only time

will tell, however, whether they are as durable as the rest. While it is probably true that there are few colors or color derivatives which cannot be approximately matched in terra-cotta to-day, barring the limitations which glaze and texture produce in other mediums for decorative expression, the industry has not yet received its merited commercial demand; hence there is not yet the entire freedom in the mixing of pigments which obtains, for example, in the palette of the mural painter, or the "life" of a mosaic decoration, nor is the research yet warranted to vitrify them all. But to all intents and purposes of commercial architecture at any rate, it is fair to say that any color design appropriate to polychrome terra-cotta can be matched exactly by the best of our modern factories. Indeed, the condition of the art is such that it would justify our best sculptors to design for that medium of beautiful color expression.

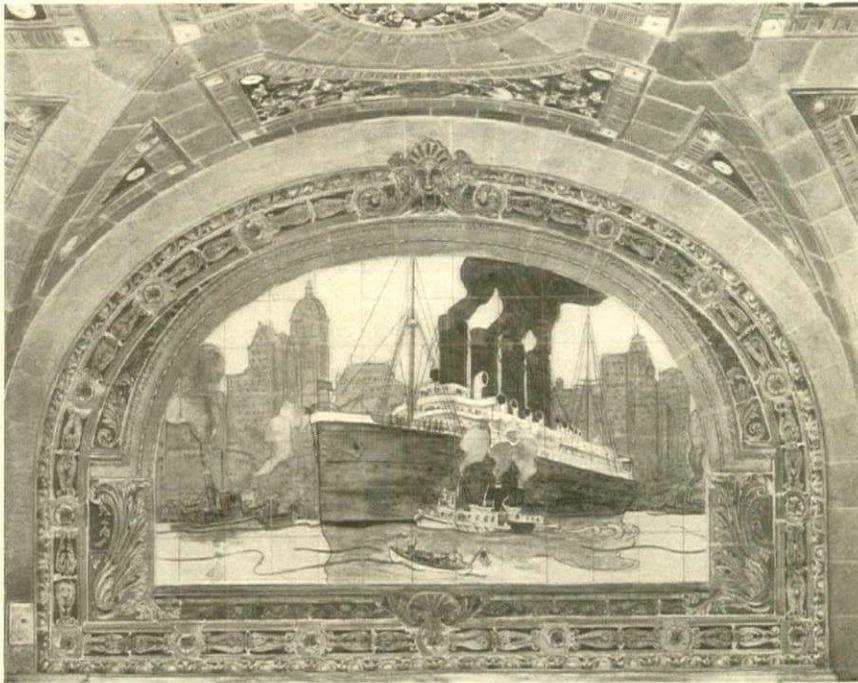
Terra-cotta, or burned earth, is a clay, which shrinks to twelve-thirteenths of its original dimensions when fired at the tremendous heat needed to vitrify it. The heat required to glaze the high-temperature colors is greater than low-temperature colors can yet withstand, and no enamel has been produced which can protect them from it. Hence it is necessary to double-fire those pieces of polychrome terra-cotta which have a full range of color. As suitable kilns for that purpose are expensive and few, and as the de-

mand has been small until recently, I think it is true that there are but two kilns in the country to-day capable of firing low-temperature colors applied to pieces of terra-cotta as large as those prepared for the higher temperatures. There

is no reason except the lack of demand which prevents the erection and operation of similar kilns in all the best modern factories throughout the country, and there is no doubt that the demand will be manifested shortly, especially when sculptors, who object to small-piece jointing, become aware of the existence of the large kilns referred to and their actual present accomplishment.

Here, then, is at hand an industry, advanced as an art, a science, and a commerce to a degree greater than at any previous period of architectural polychromy, unique in its ap-

propriate application, capable of higher development in colored sculptural architecture, distrusted, even ostracized, one might say, through the unwitting ignorance of two professions and one business—the ignorance of architects and mural sculptors concerning its actual present status and its potential possibilities, and the ignorance of the terra-cotta industry of the true demands of those professions. The illustrations of this article, being in black and white, cannot appropriately show the facility, adaptability, or advancement commercially of the industry; but it is hoped that they may help to stimulate investigation.



Portion of the grille of the McAlpin Hotel, New York City, executed in a full palette of modern polychrome terra-cotta colors applied principally without relief. F. M. Andrews & Co., Architects. Fred Dana Marsh, Artist and Designer.





Another Year

ARCHITECTURE is intended to be a magazine of service, and our constant endeavor is to make it that in the highest sense possible. Strive as we may, we unhappily find now and then that some of the things we hope will be of particular service seem to lack, to some of our readers, the qualities we fondly expected.

But editing a magazine is not an arbitrary one-man's job. Not this kind of a magazine, at least. We are constantly dependent upon our readers for help, and needless to say to many of them we owe a debt of thanks for a number of the good things that have come to our pages during the past year.

If we could come and sit in your office and get the feel of being personally acquainted, we'd soon be able to convince you that we are far from the know-it-all editor sort. We are but the medium of exchange for *your* ideas.

We make mistakes, just like the rest of you, and when we do we are sorry and say things to ourselves that you probably wouldn't like to say.

The added years make us want to paste an old saw in our hats. Knowledge is proud that it knows so much, wisdom is humble that it knows no more, or words to that effect; we haven't our Bartlett handy.

With a circulation as large as ours, covering every state in the land, and going to many foreign countries, we are inclined to discount our own omniscience and give the other fellow the benefit of the doubt.

We try to make ARCHITECTURE for your benefit, giving in each of the twelve numbers something of real value to every one. If we had the space we might make every number just the one that especially met your needs; our problem is to spread the honey over each issue in such a way that at the end of the year you can look back over your files and find in one number, at least, the thing that pays you in practical returns many times over the modest cost of your subscription.

It is impossible to tell you what the menu will be during 1926, but we can say that we have a lot of good things in hand that deal with the intimate every-day needs of the profession, written by men who know what they are talking about.

We are especially anxious to have our readers in the Middle and Far West and South know that we are by no means an Eastern magazine. The Great Lakes are included in our geography, the big rivers of the Mid-West, the sunny country on the Gulf, where real estate is the big gamble, the wonderful Southwest, that is becoming more and more interesting architecturally, the coast from the land of sunshine and flowers to where rolls the Oregon.

No, we are not provincial, architecture is a universal art, and we are receptive to its manifestations wherever it seems worthy of notice. You can give us a helping hand now and then by telling us about some of the things you think we ought to know more about.

Please accept our grateful remembrances of every appreciative word we have received during the old year, yes, and

for the knocks we have no doubt so justly deserved; we are, alas, but human, and to be that is to err, be it remarked again.

We sit here writing this, pounding it out on our convenient little portable, and as we write we can imagine the chimes that will ring the old year out, welcome the new, and we are conscious that old Daddy Time has set us back another one, and that life is mighty uncertain as the years gather about us. May we wish you—not as a mere matter of sentiment, but as the serious thought of one realizing the difficulties, perplexities, and discouragements we all must meet—a year of greater wisdom, of good health, of the prosperity that all the wise predictors about the future of architecture are putting on record.

In Our Business Relationships

THERE is something reassuring in the evident appreciative attitude of great business toward the mere human relations that, after all, mean the success or failure of all business. If the more obvious mood of the day appears one of selfishness and indifference to the general welfare, it is perhaps because we do not always see beyond the surface or understand what is in the minds of the leaders of great modern industries.

We too easily overlook the fact that the successful man in large ways is by the very nature of his responsibilities prevented from coming in contact with minor units of an organization. His time and thought are spent in maintaining business at its highest degree of efficiency, not for his own profit alone, but for the welfare of those dependent upon his wisdom and foresight.

The successful man may easily become a very lonely man.

We have been reading a recent address by President Gary of the American Iron and Steel Institute and some of the things he says seem to us especially appropriate as thoughts for the New Year.

"As men grow older they become more thoughtful of the best things in life; they realize more clearly and they appreciate more deeply the kindnesses which have been shown them; they appreciate the friendships which have been established, and they understand better than people of younger years do that in every department of human activities, of more importance than the making of money, the building up of fortunes, is the building up of character and the creating and cementing of friendships. These include business relationships as much as any other."

Winter Building

WHEN winter comes in these modern times, instead of construction stopping it seems to go on quite as actively as in the genial months. From statistics furnished by the George A. Fuller Company, covering a period of twelve years, the average loss of time a year on account of bad weather was only fourteen days!

In his recent address before the Building Congress, Alexander Trowbridge, president of the Architectural League, said that steam and electricity had made it possible to

carry on work without interruption all through the cold months.

Our neighbor to the north builds in a temperature far below zero.

"Canada has perhaps gone further than we have in winter construction, and in one case a whole building was erected when the temperature was 27 degrees below zero—one of the so-called mushroom types of reinforced concrete, in which the columns are carried up simultaneously with the floor. Tarpaulins were used in such a manner that the whole of an entire floor was surrounded and pieces of framework kept the tarpaulins out a little distance from the concrete. Concrete was poured, and possibly before the initial set tarpaulins were built up above, making a complete pocket in the second-floor area, and when the set of the lower floor had been carried far enough the tarpaulins were taken off and put on another level. They pre-heated the material so when the concrete was poured it had a temperature of 120 degrees.

"The acme of this sort of construction was illustrated at the Lake Placid Club, when in order to carry on the work throughout the winter a wooden inclosure was built outside of the entire building. The same thing was done at Lake Louise in the Canadian Rockies, where the temperature goes as low as 40 and 50 degrees below."

G. Richard Davis, contractor, said that his experience had been that there is no increase in cost connected with winter building, as there are practical ways of doing the work which will facilitate the final result of the construction.

That this means a tremendous advantage to the trades needs no stressing. Wages and work are no longer dependent upon weather, and there is employment possible all the year round.

Building and Labor Costs

HIGH wages that were for a time talked of as being a positive menace to building construction seem to have had practically no influence whatever on the development of the greatest era of building in the history of the country. There is nothing that can stop the tremendous demand for commercial and dwelling structures, and the cost that just after the war made many hesitate has been discounted by the high rents obtainable and the demand for speculative real-estate investments. No use to talk of what we used to be able to do, the thing is to accept present conditions and be prepared to go on with them indefinitely.

Wages in the trades were never so high and, strange to relate, building was never so prosperous or so in demand.

A recent statement regarding the minimum wage scales on the eight-hour basis gives the following earnings, estimated on a national survey:

Bricklayers throughout the country are receiving from \$1 to \$1.75 an hour; carpenters, 80 cents to \$1.50; plasterers, \$1 to \$1.75; building laborers, 40 cents to \$1.25; structural iron workers, \$1 to \$1.50; plumbers, 95 cents to \$1.50; electricians, 73 cents to \$1.50; lathers, 85 cents to \$1.75; sheet metal workers, 75 cents to \$1.43¾; painters, 65 cents to \$1.50; stone masons, \$1 to \$1.50, and hoisting engineers, 75 cents to \$1.75.

What Is Architecture?

RUSKIN'S definition was that "architecture is nothing but ornament added to building." In a recent book, "Architecture," by the late Sir Thomas Graham Jackson, Bart., R. A., Macmillan, appears the following definition:

"Architecture does not consist in beautifying building but, on the contrary, in building beautifully, which is quite another thing. The construction itself must be beautiful, irrespective of all ornament. To the definition of Architecture by Vitruvius, as 'Building guided and directed by Reason,' we only want to add the condition of beauty, and the inclusion of the æsthetic sense within the realm of Reason. As prose rises into poetry by the greater elevation of thought, the finer flow of language, the touch of sympathy, grace, and pathos, so does Building pass into Architecture with the superior grace of the main forms of the fabric, perfect expression of the conditions of the construction, and closer harmony between purpose and achievement. In a word—Architecture is the poetry of construction."

And there you are. You will interpret the architecture you study in your own terms and the amount of poetry you find in it will depend upon your special training and temperament. The latter is largely an unknown quantity with which the so-called psychoanalysts are having a lot of fun.

To the average man in the street a building is a building, nothing more. If it is big enough, costs enough, is high enough, to make him stop a minute and take notice, the architect has achieved something, even though the name of the architect remain forever an unknown quantity.

According to Vitruvius, Architecture is a science involving much "discipline," or mental training.

The "discipline" includes skill in drawing, in geometry, in arithmetic, some knowledge of optics, a wide acquaintance with history, and a diligent study of philosophy; to which he adds music, medicine, legal practice, astrology, and astronomy. Sir Christopher Wren might have qualified, but his was an extraordinary mind and his training quite beyond the possibility of most men.

The curious thing about all art is that some of the great things accomplished have been and always will be by men of very ordinary scholarship and little discipline in the way of general culture.

You may define and prescribe rules for the average man that may be helpful, but all the defining printable won't make the artist. He is as surely born as is the poet.

The American Academy in Rome Competition for Prizes

THE American Academy in Rome has announced its annual competitions for Fellowships in architecture, painting, sculpture, and landscape architecture. These competitions are open to unmarried men not over thirty years of age who are citizens of the United States.

In painting and sculpture there will be no formal competition involving the execution of work on prescribed subjects, but these Fellowships will be awarded by direct selection after a thorough investigation of the artistic ability and personal qualifications of the candidates. Applicants are required to submit examples of their work and such other evidence as will assist the jury in making the awards.

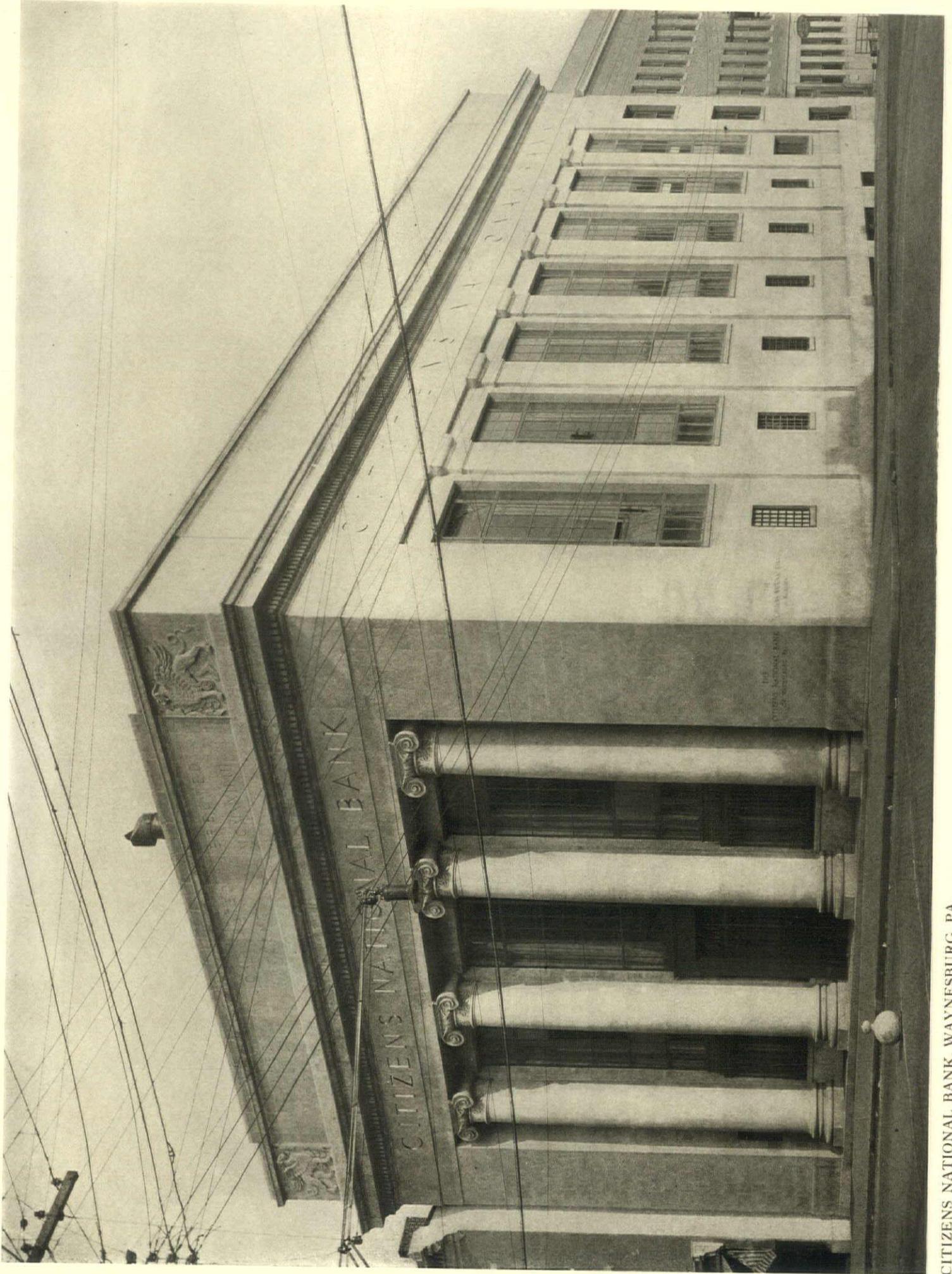
The stipend of each Fellowship is \$1,250 a year for three years, with some additional allowances for material and model hire. Residence and studio are provided free of charge at the Academy. All Fellows have opportunity for extensive travel.

Entries will be received until March 1. For circulars of detailed information and application blanks, address Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

JANUARY, 1926.

ARCHITECTURE

PLATE I.



CITIZENS NATIONAL BANK, WAYNESBURG, PA.

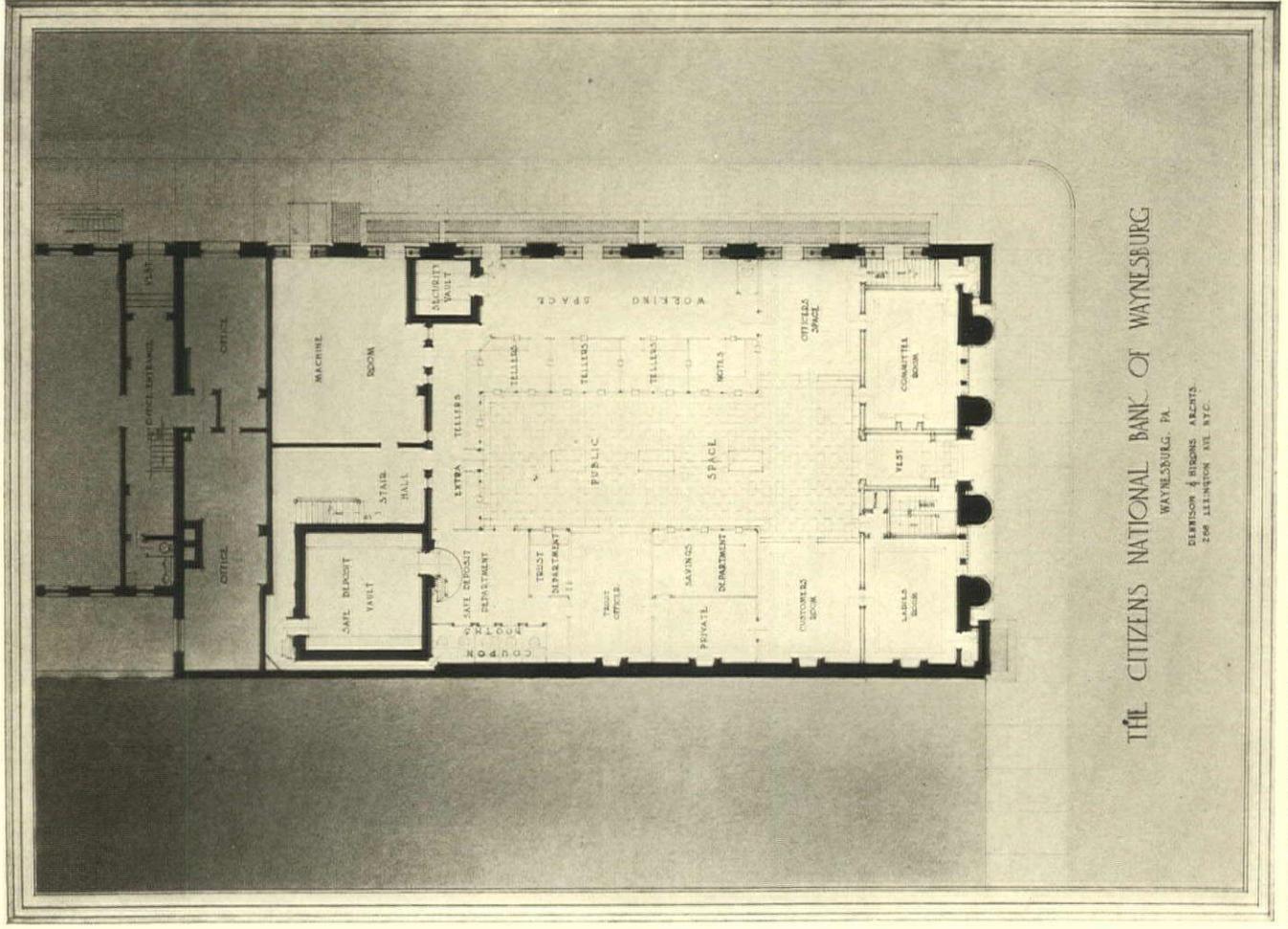
Dennison & Hiron, Architects.



JANUARY, 1926.

ARCHITECTURE

PLATE II.

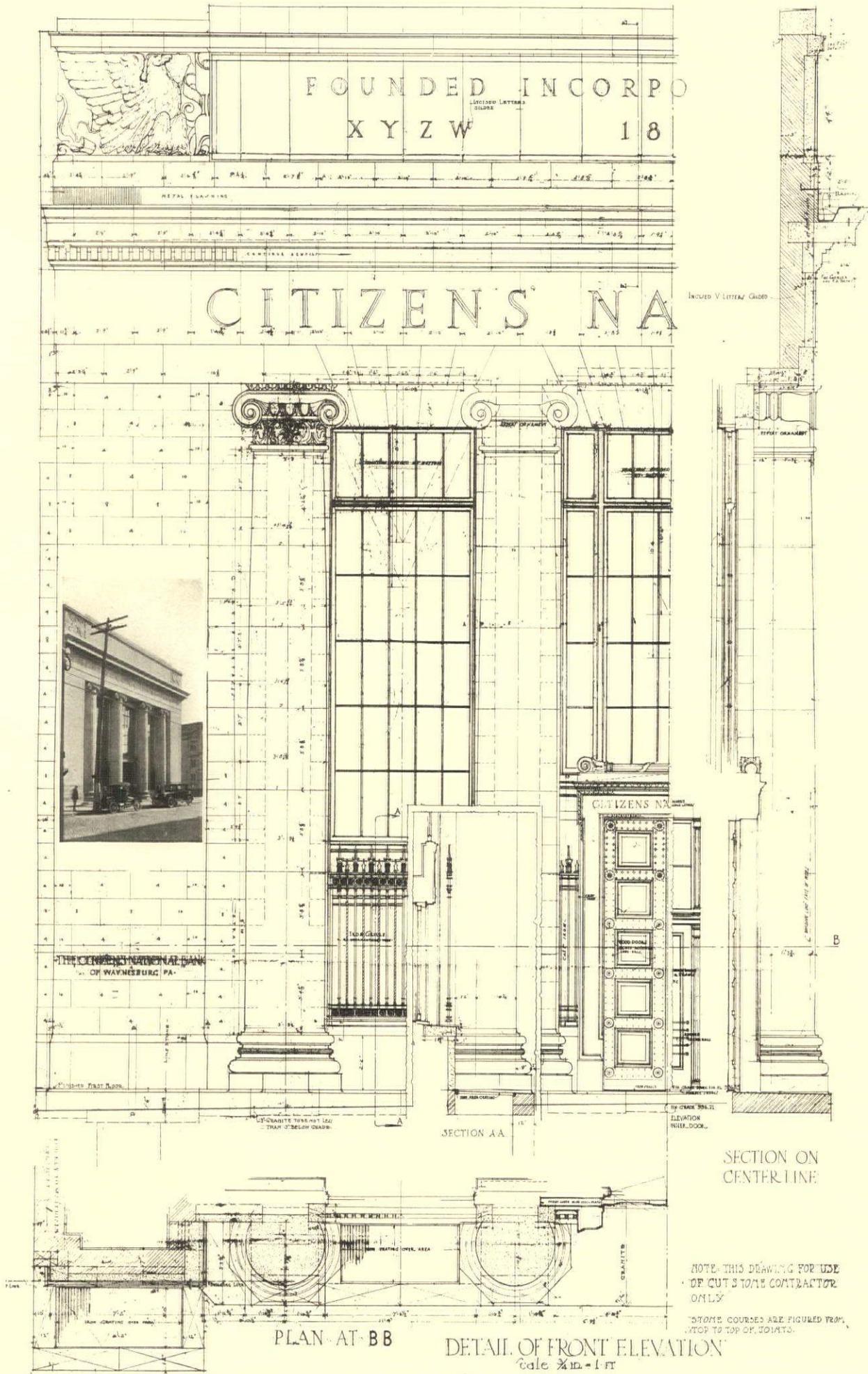


CITIZENS NATIONAL BANK, WAYNESBURG, PA.

INTERIOR DETAIL, MAIN ENTRANCE.

Dennison & Hirons, Architects.





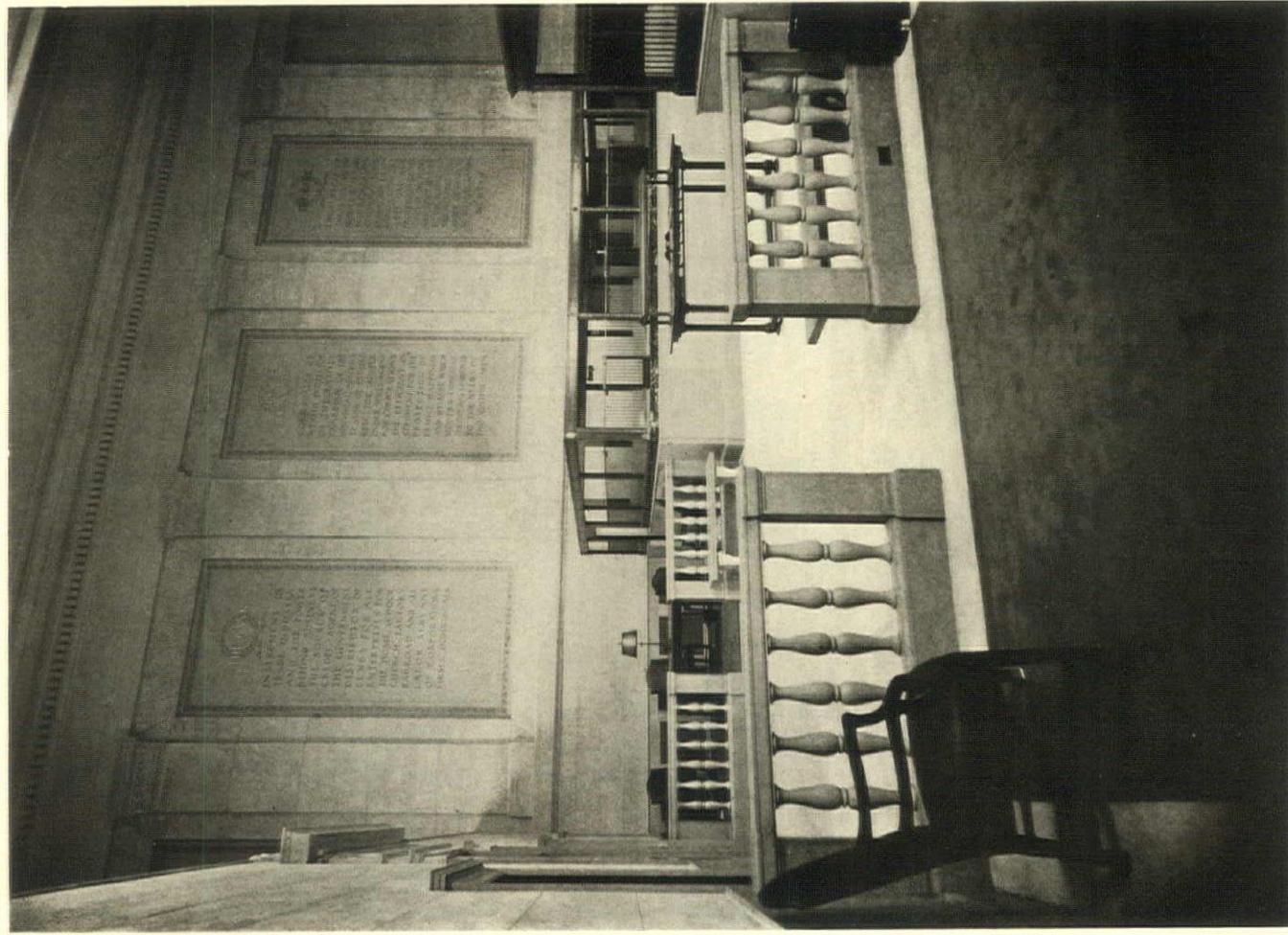
CITIZENS NATIONAL BANK, WAYNESBURG, PA.

Dennison & Hiron, Architects.

JANUARY, 1926.

ARCHITECTURE

PLATE IV.



BANKING-ROOM, CITIZENS NATIONAL BANK, WAYNESBURG, PA.



Dennison & Hiron, Architects.





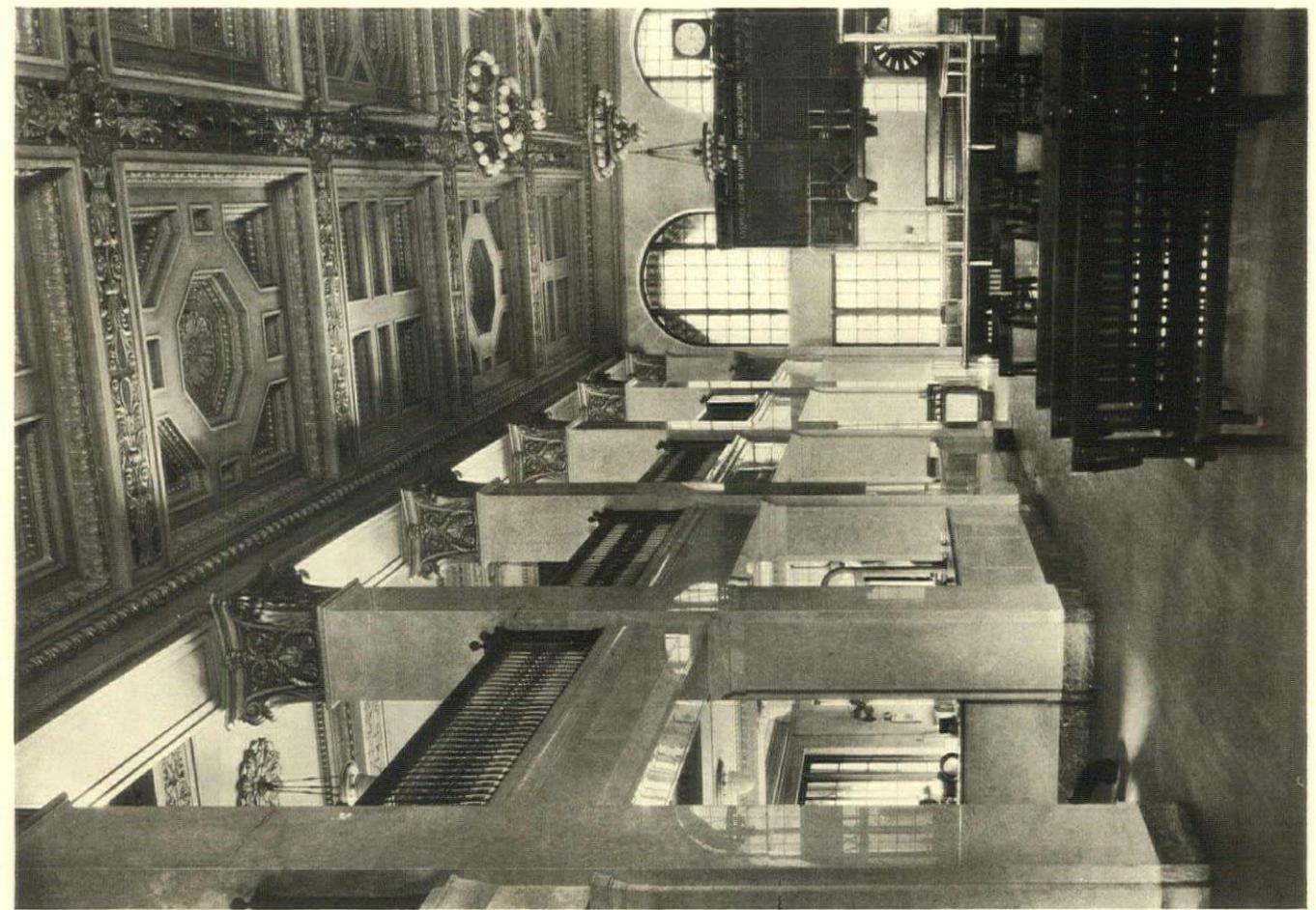
COTTON EXCHANGE, NEW ORLEANS, LA.

Favrot & Livaudais, Architects.





EXCHANGE FLOOR.



EXCHANGE FLOOR.

COTTON EXCHANGE, NEW ORLEANS, LA.

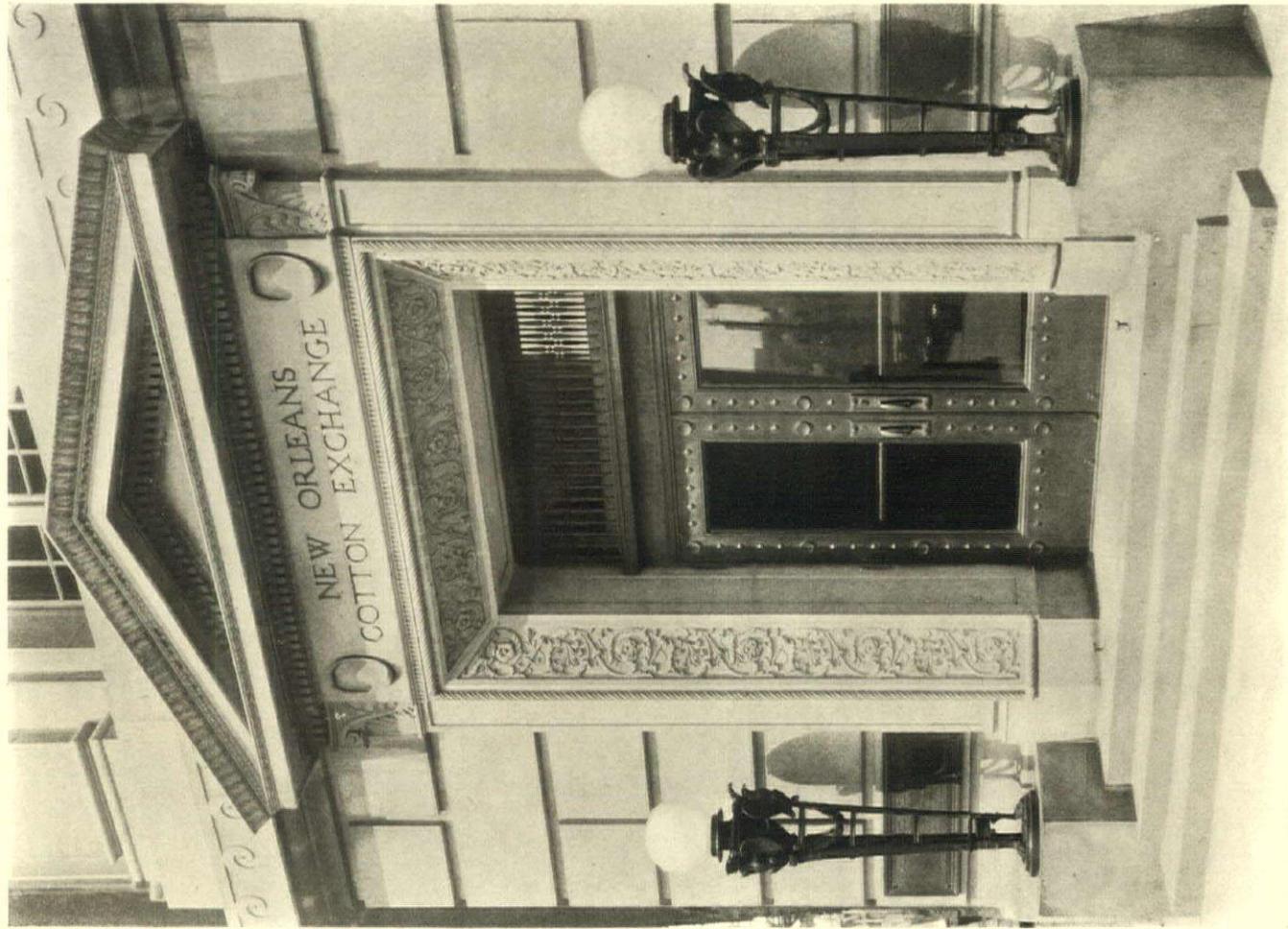
Favrot & Livaudais, Architects.



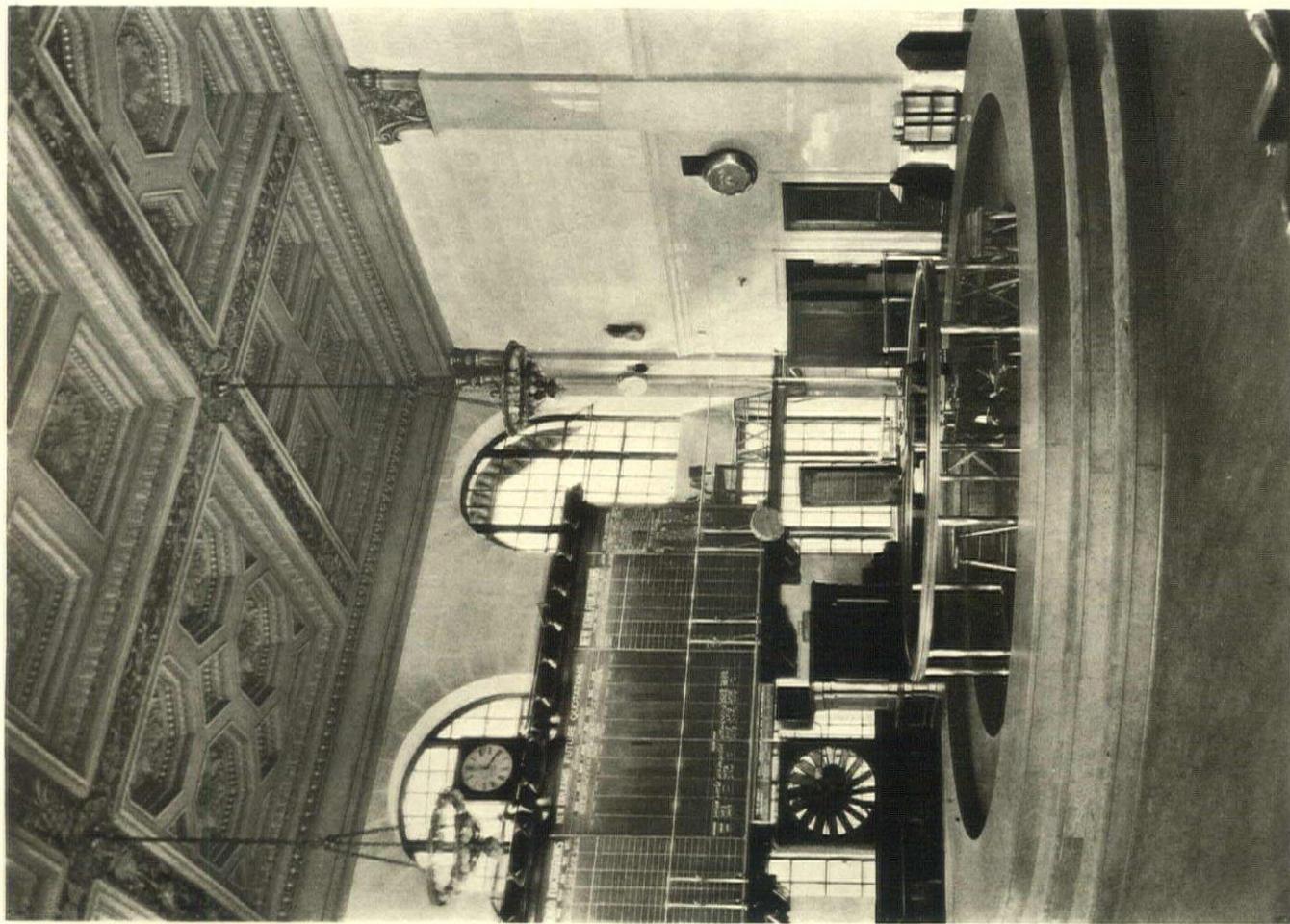
JANUARY, 1926.

ARCHITECTURE

PLATE VII.



MAIN ENTRANCE.

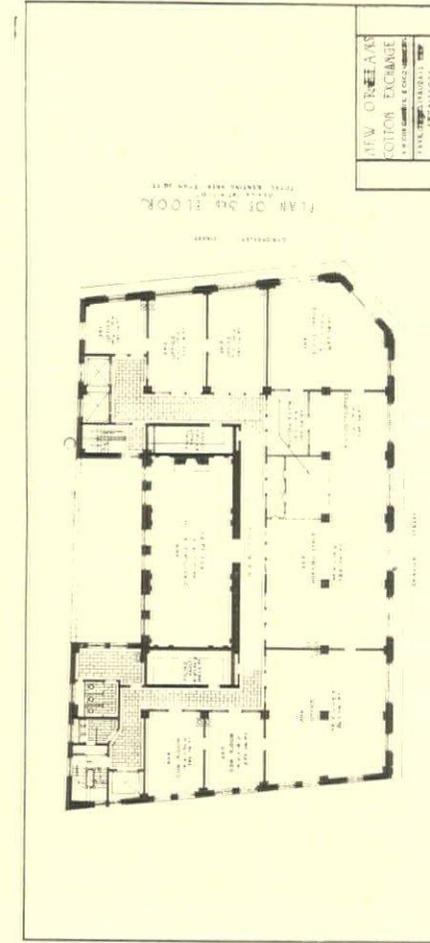
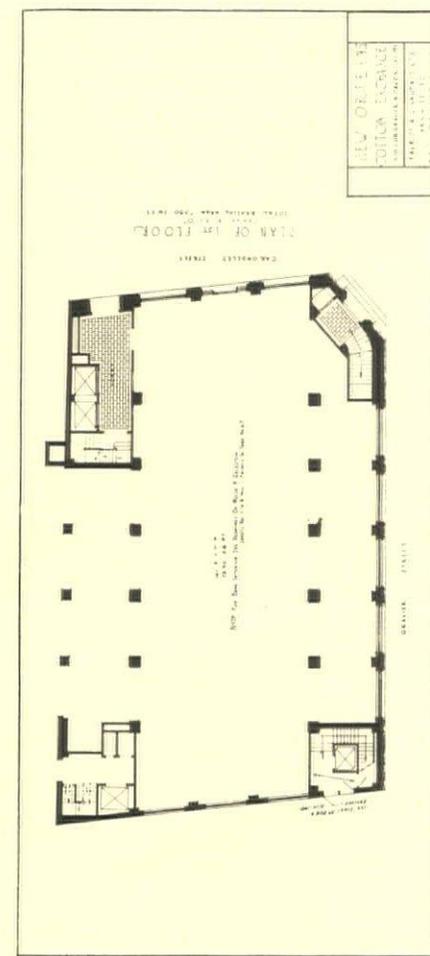
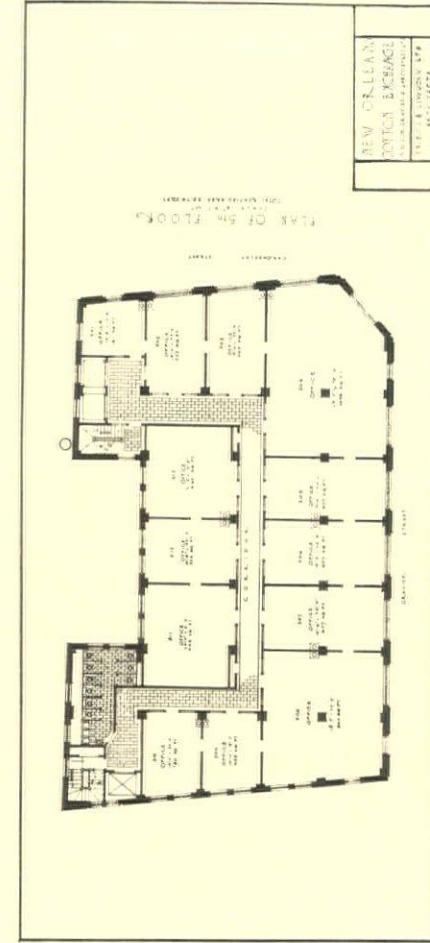
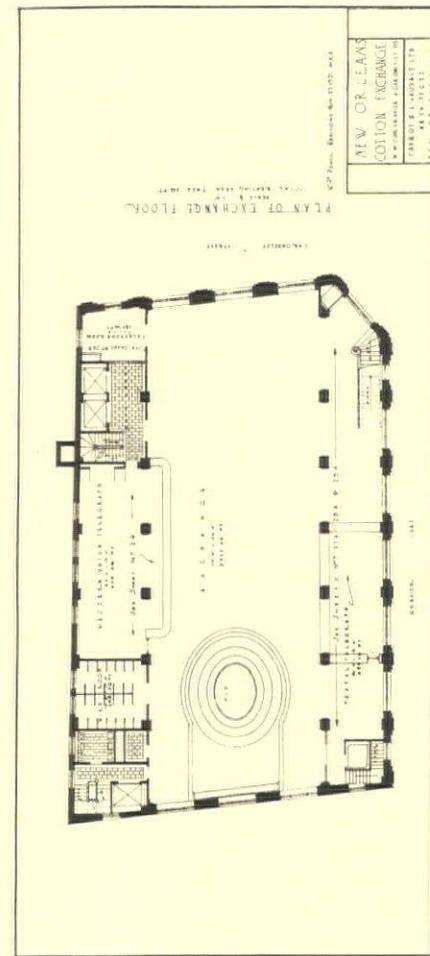
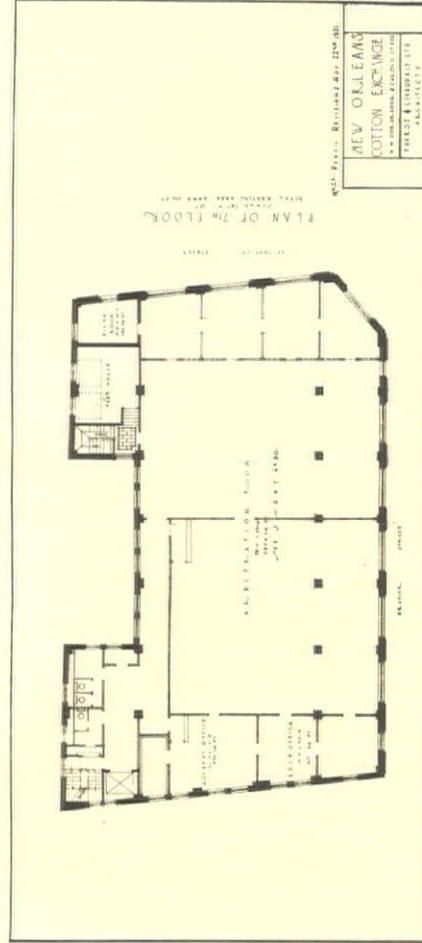
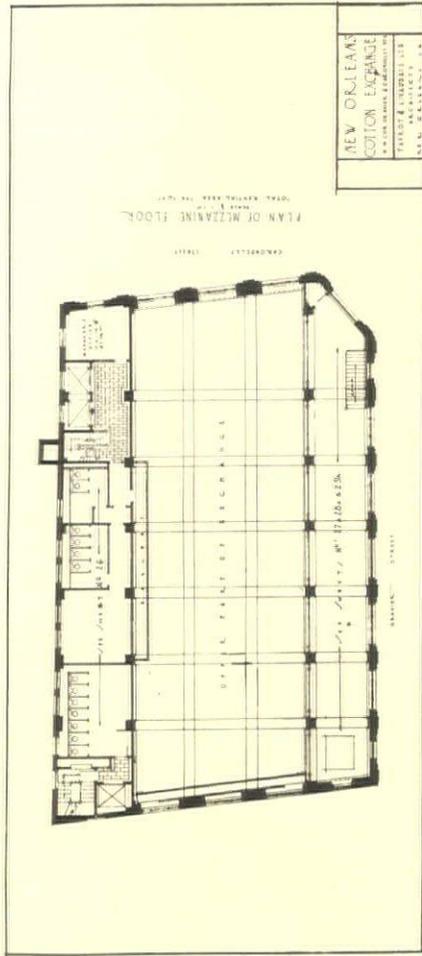


THE PIT.

COTTON EXCHANGE, NEW ORLEANS, L.A.

Favrot & Livaudais, Architects.

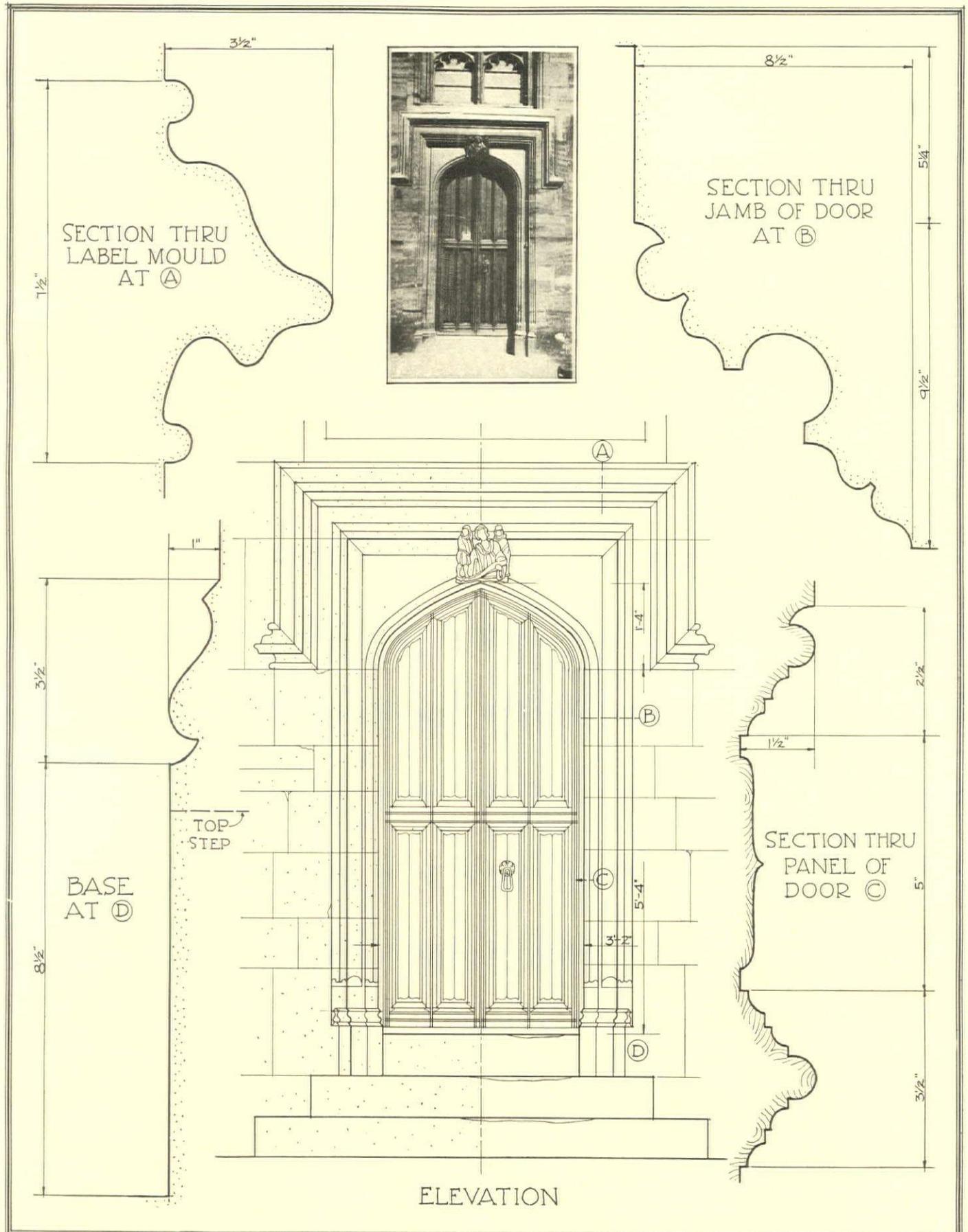




PLANS, COTTON EXCHANGE, NEW ORLEANS, LA.

Favrot & Livaudais, Architects.





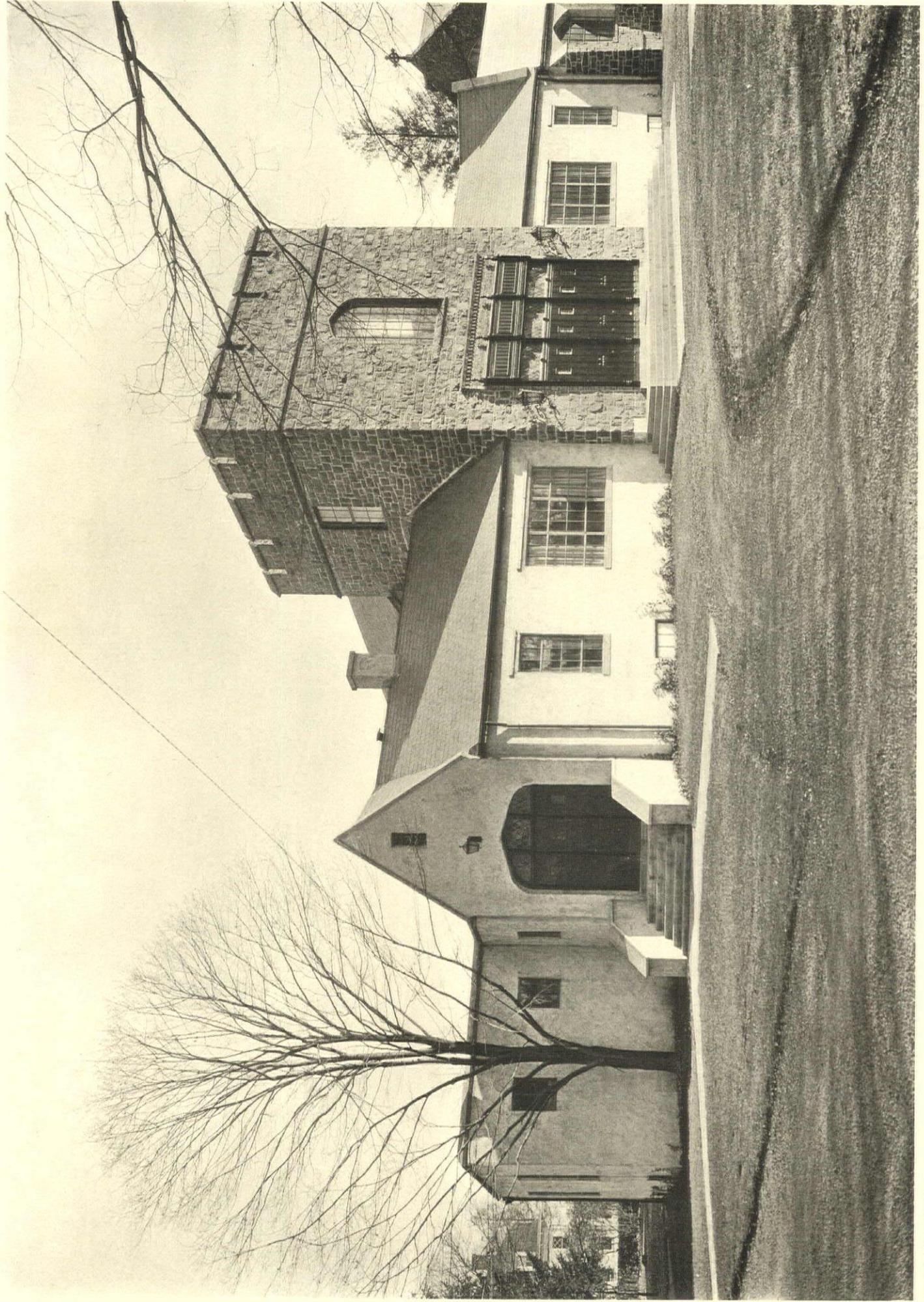
<p>ARCHITECTURAL DETAILS ENGLISH NO SERIES ①</p>	<p>OXFORD DOOR IN GREAT QUADRANGLE CHRIST CHURCH</p>	<p>MEASURED AND DRAWN BY E. PICKERING</p>
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JANUARY, 1926.

ARCHITECTURE

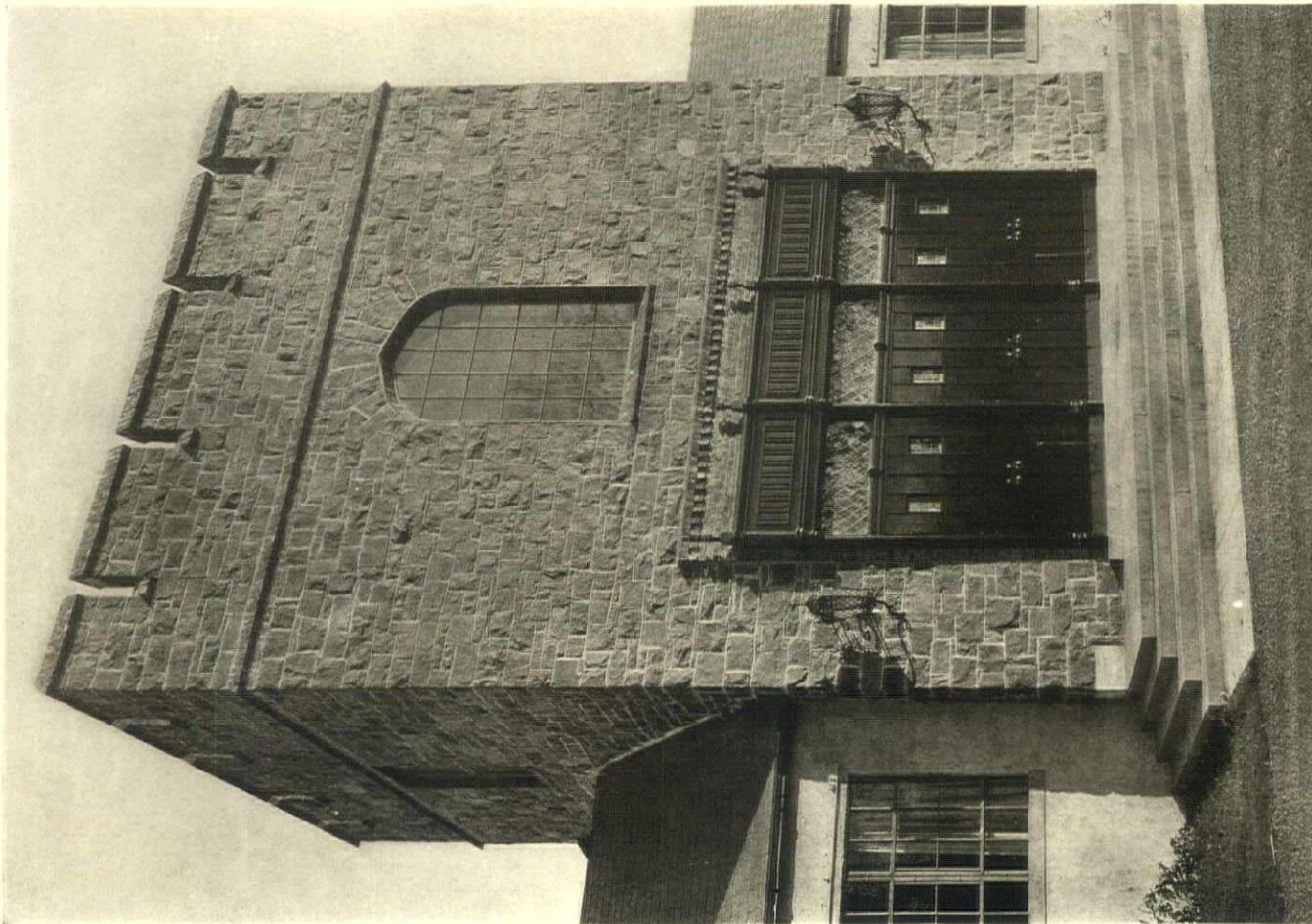
PLATE X.



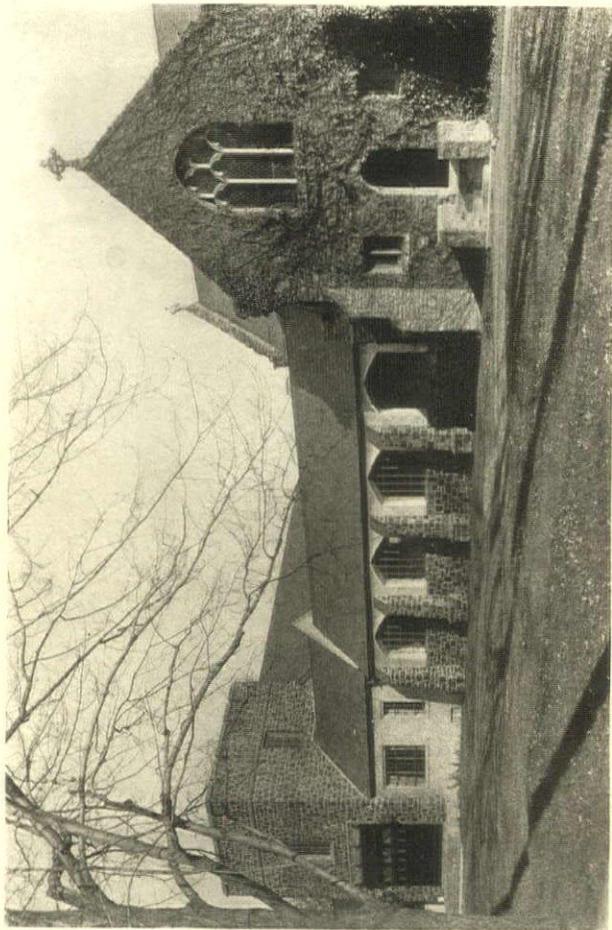
PARISH HOUSE, CHRIST CHURCH, RIDGEWOOD, N. J.

Wesley Sherwood Bessell, Architect.





MAIN ENTRANCE TO AUDITORIUM.



THE CLOISTER, CONNECTING CHURCH AND PARISH HOUSE.



STAGE ENTRANCE AND SERVICE WING.

Wesley Sherwood Bessell, Architect.

PARISH HOUSE, CHRIST CHURCH, RIDGEWOOD, N. J.

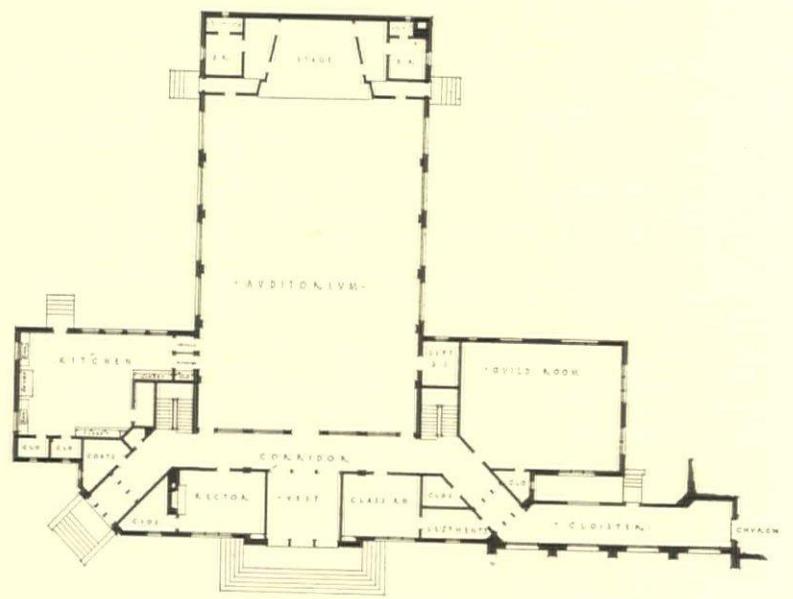




THE AUDITORIUM.



CORRIDOR, MAIN FLOOR.

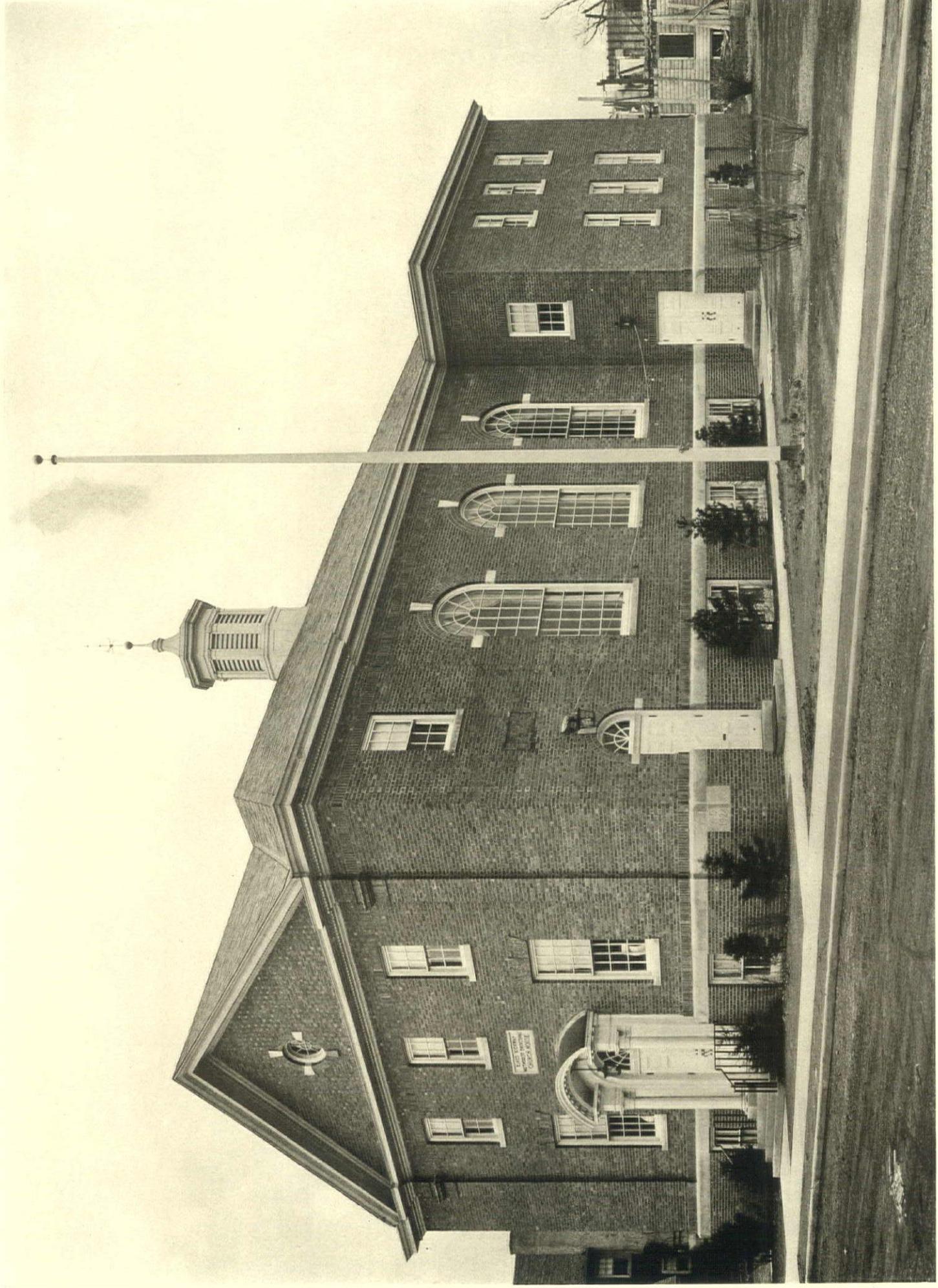


•FIRST FLOOR PLAN•

Wesley Sherwood Bessell, Architect.

PARISH HOUSE, CHRIST CHURCH, RIDGEWOOD, N. J.





CHURCH HOUSE FOR THE KINGS HIGHWAY M. E. CHURCH, BROOKLYN, N. Y.

Meyer & Mathieu, Architects.



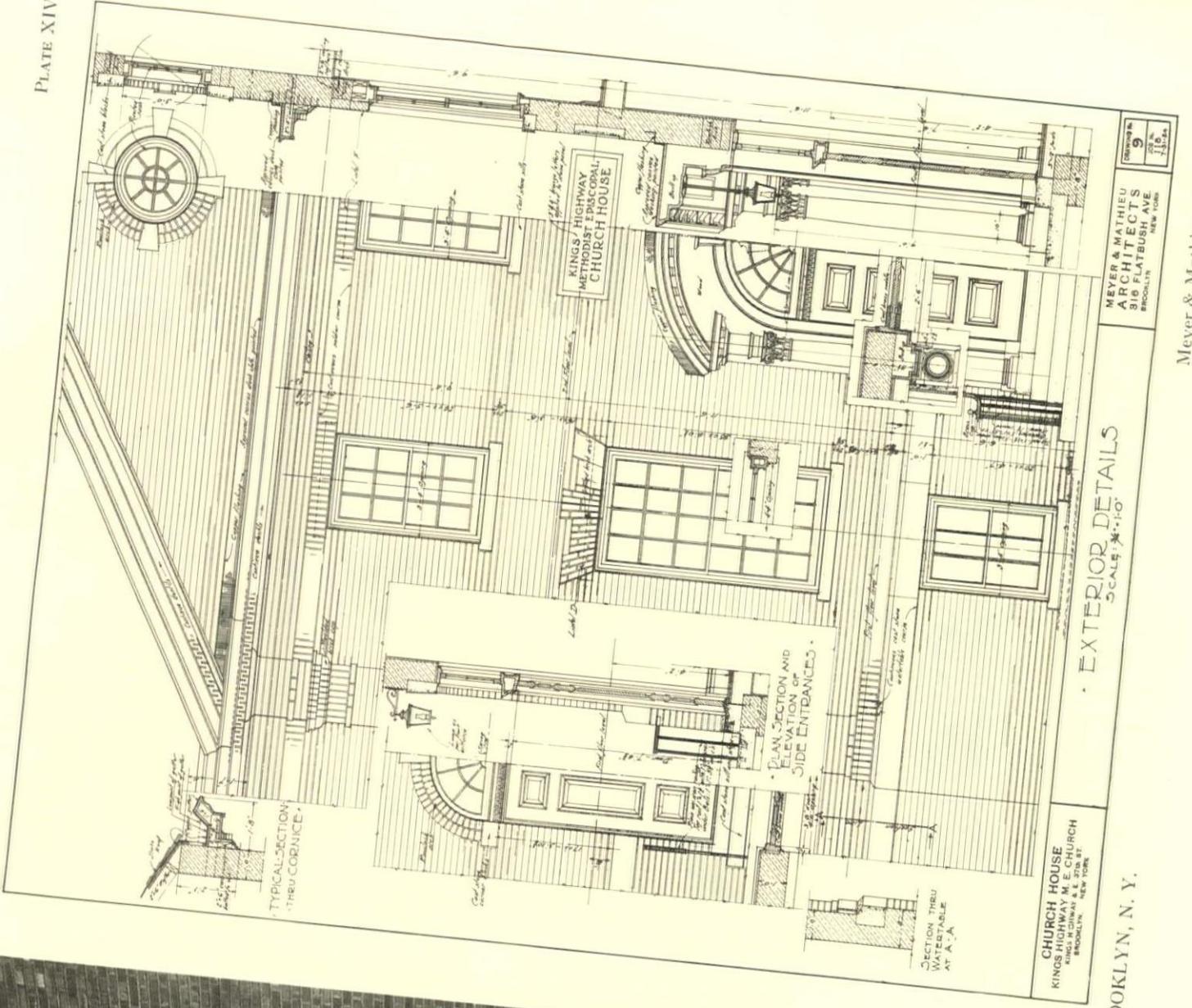
JANUARY, 1926.

ARCHITECTURE

PLATE XIV.

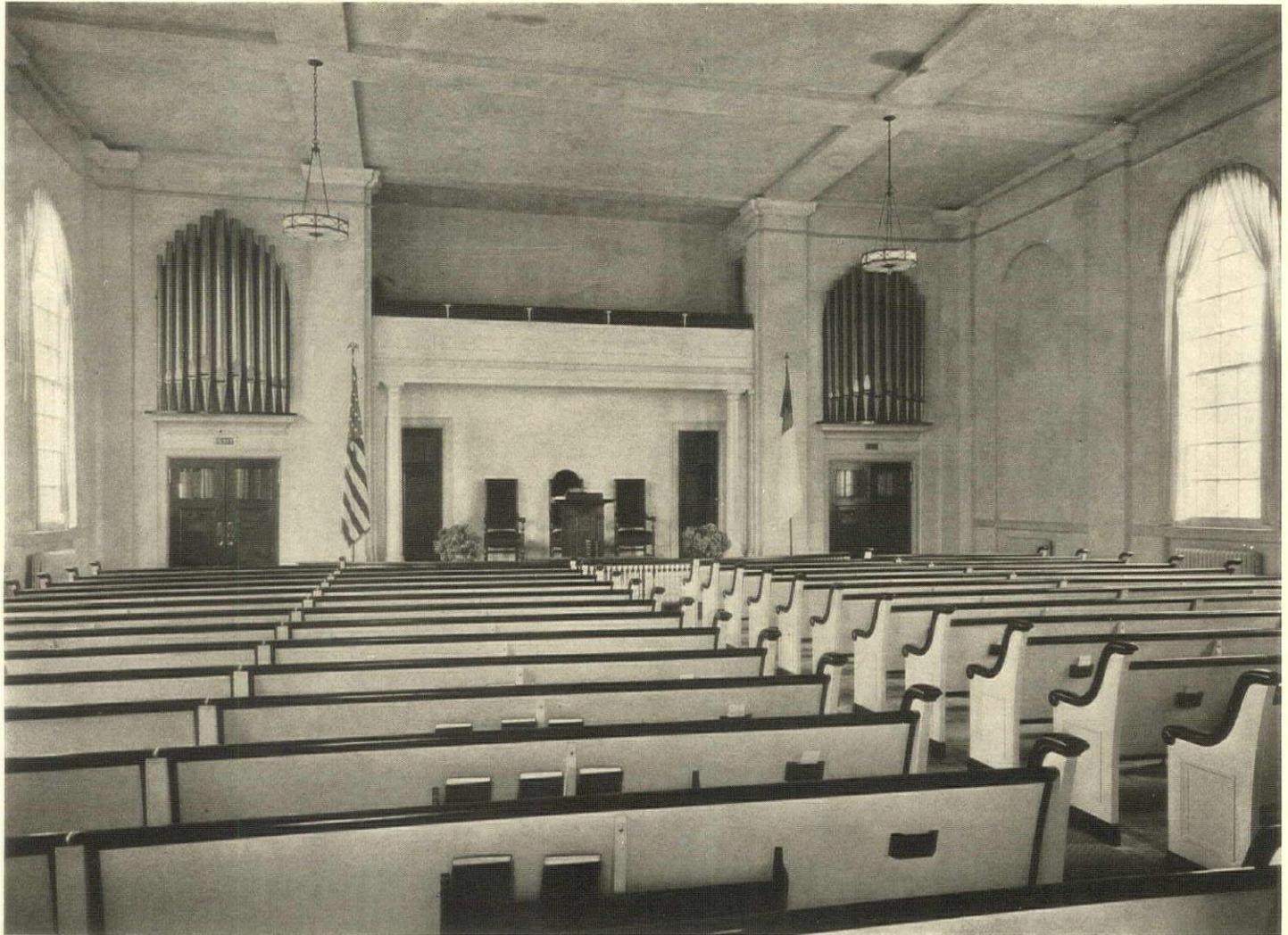


MAIN ENTRANCE, CHURCH HOUSE, KINGS HIGHWAY M. E. CHURCH, BROOKLYN, N. Y.

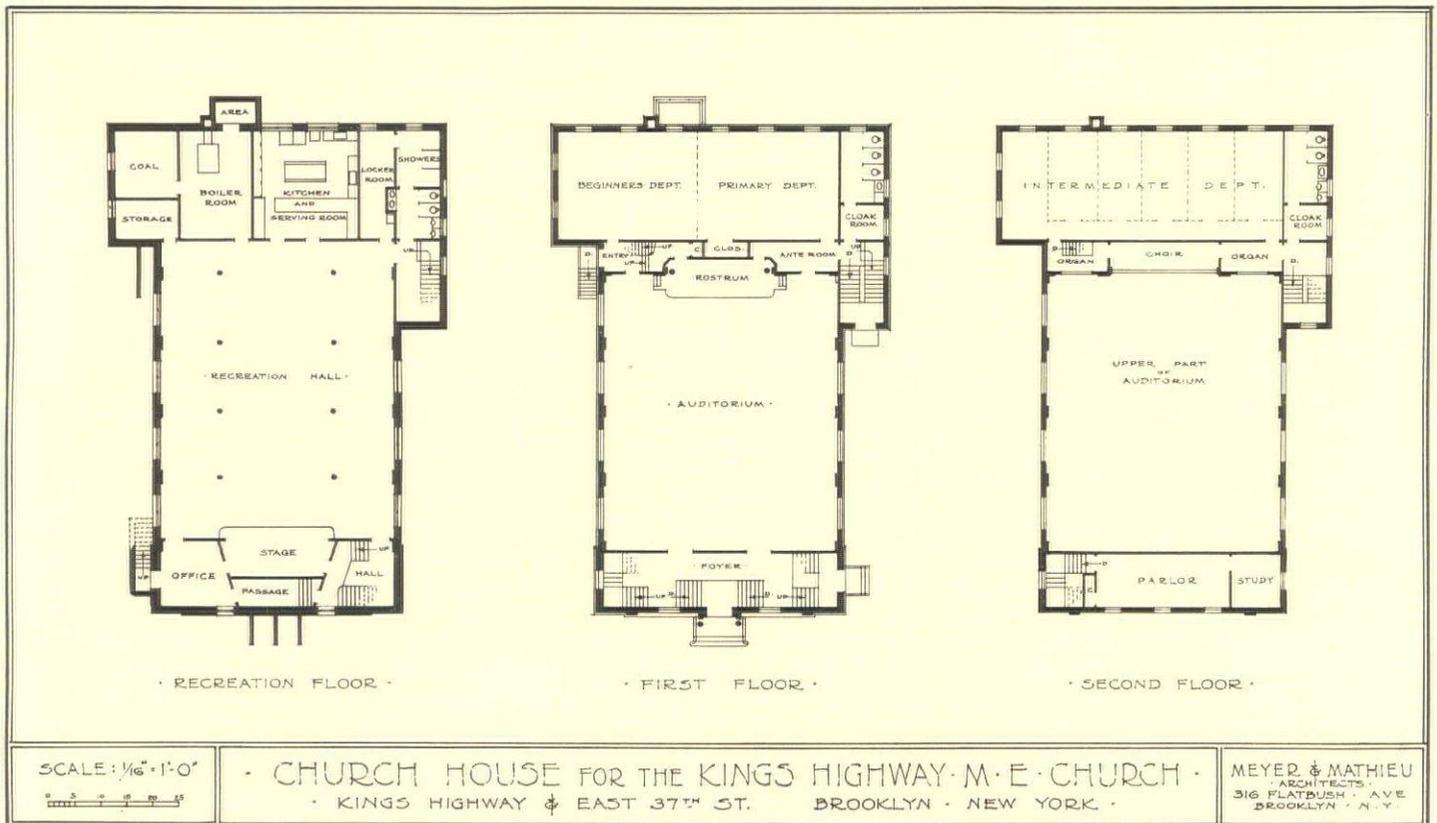


Meyer & Mathieu, Architects.





AUDITORIUM.



PLAN.

CHURCH HOUSE FOR THE KINGS HIGHWAY M. E. CHURCH
 KINGS HIGHWAY & EAST 37TH ST. BROOKLYN · NEW YORK ·

MEYER & MATHIEU
 ARCHITECTS
 316 FLATBUSH AVE
 BROOKLYN · N. Y.

Meyer & Mathieu, Architects

CHURCH HOUSE FOR THE KINGS HIGHWAY M. E. CHURCH, BROOKLYN, N. Y.

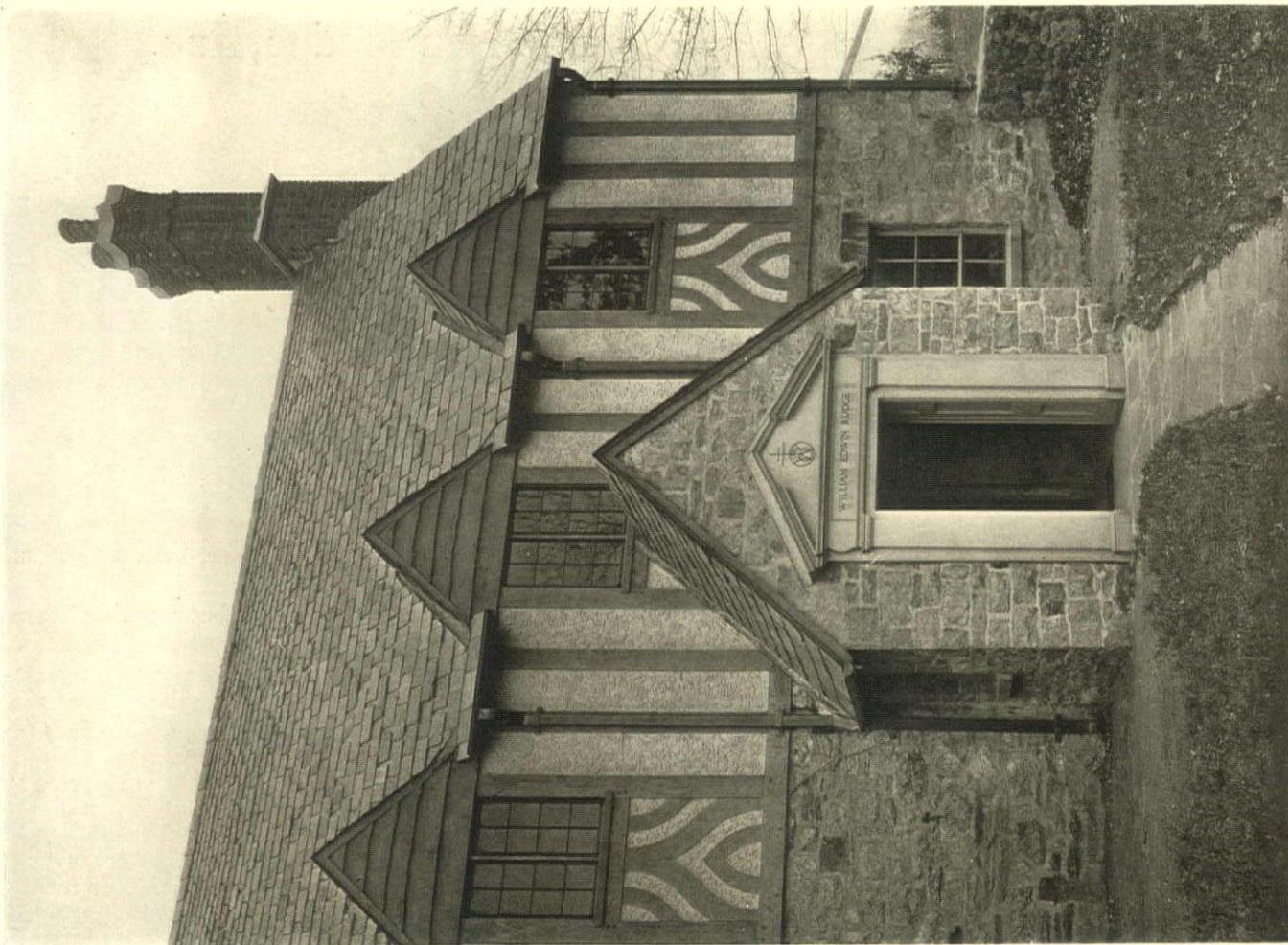




THE PRINTING-HOUSE OF WILLIAM EDWIN RUDGE, INC., MT. VERNON, N. Y.

George M. Bartlett, Architect.

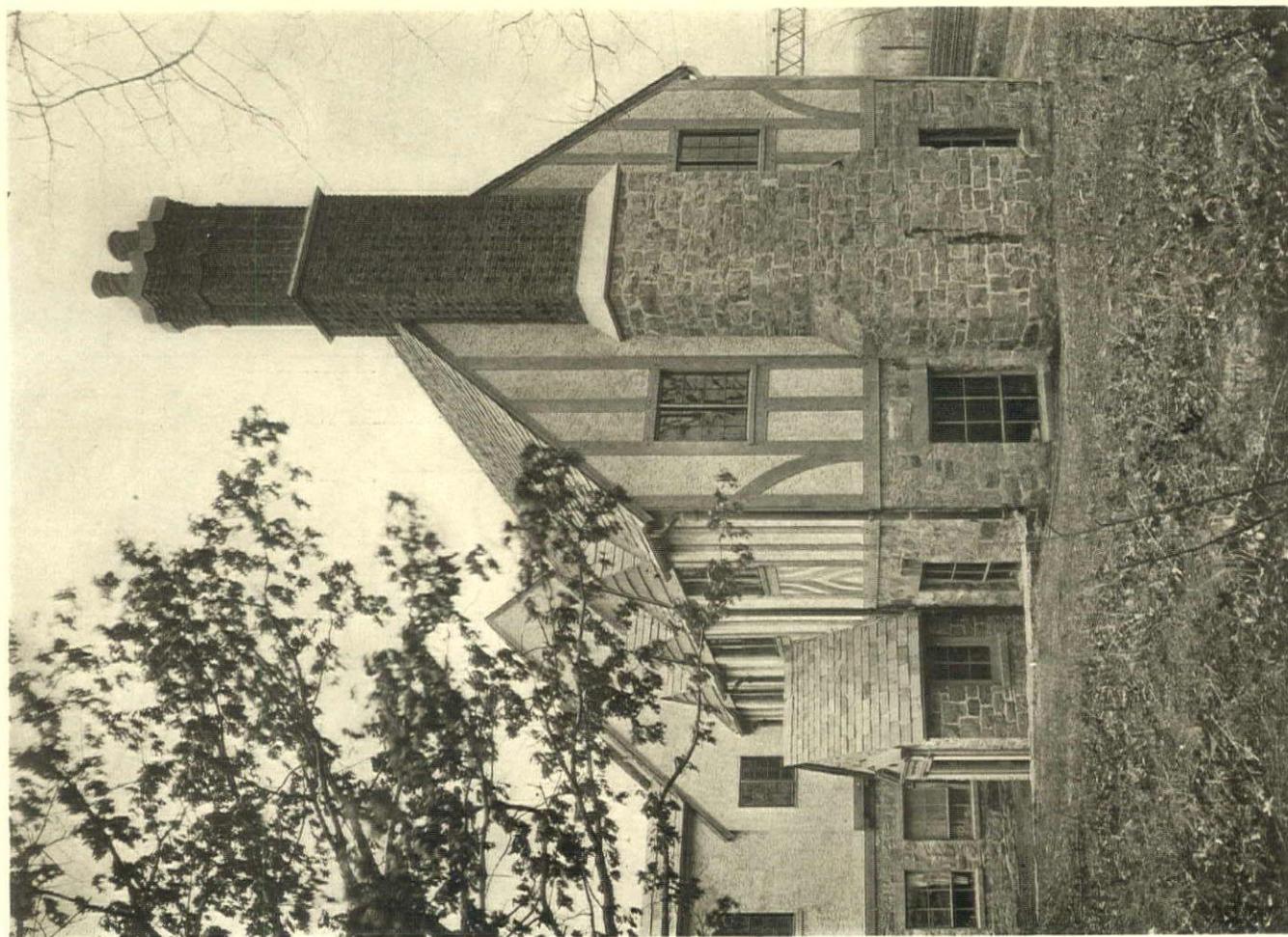




George M. Bartlett, Architect.

ENTRANCE TO OFFICES.

THE PRINTING-HOUSE OF WILLIAM EDWIN RUDGE, INC., MT. VERNON, N. Y.



OFFICE WING.

The Printing-House of William Edwin Rudge, Inc.

George M. Bartlett, Architect

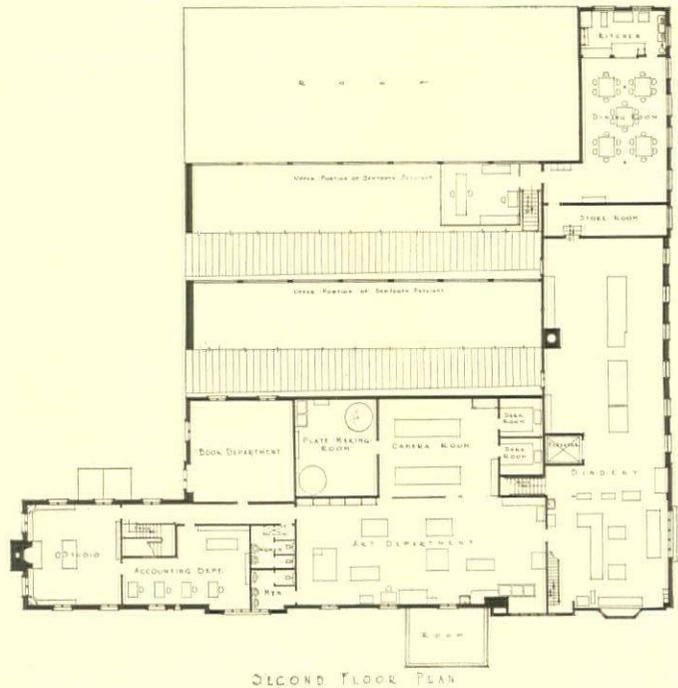
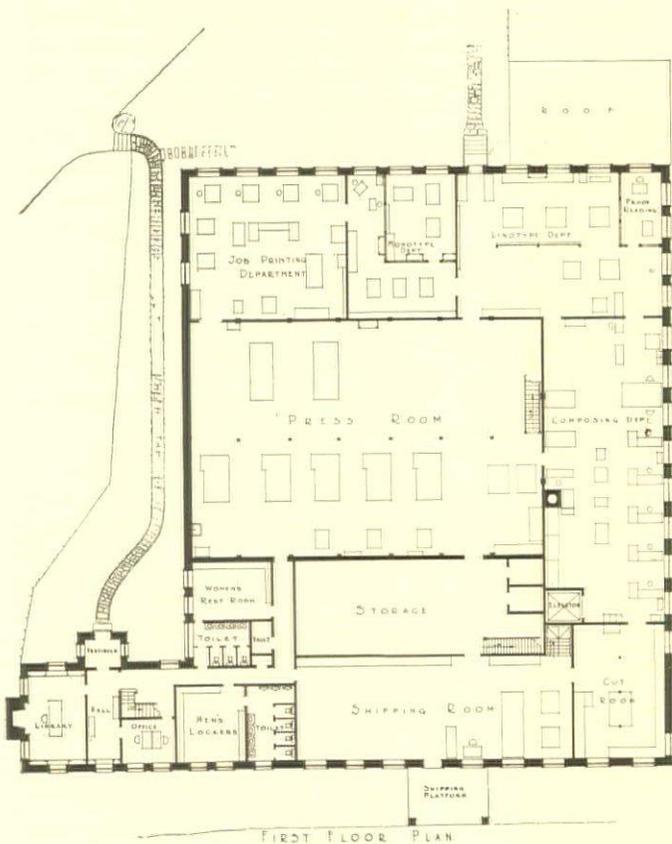
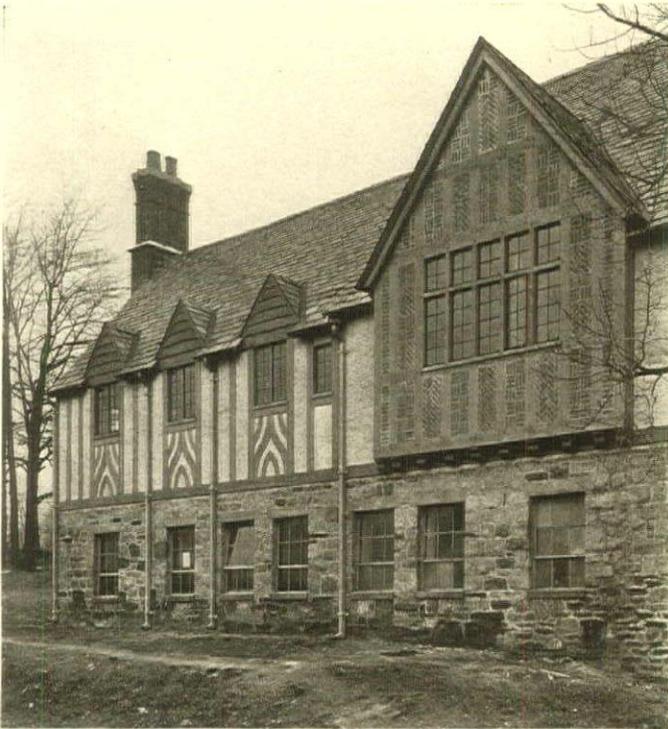
LIKE an old English manor-house set in a garden, with green vistas of a park through the trees, is the printing-house of William Edwin Rudge, Incorporated, at Mount Ver-

non, New York. Here where the wooded Westchester hills slope to the tracks of the New Haven railroad, a printer who is imbued with the spirit of the old masters of his craft has built a workshop which combines utility and beauty and preserves in the midst of the bustle of modern life something of the old unhurried grace of the days when craftsmen loved their work and made the places where they wrought instinct with personality and charm.

Coming toward the printing-house on an autumn day through an avenue of flaming trees, my first glimpse was of a gray stucco end wall with a delightful chimney set between gables, a chimney of richly warm brick, as delicately modelled as a gothic tower, that lifted its perfect lines into the brilliant blue of the autumn sky.

The windows are adequate for light, but are subordinated to the rest of the design. There is no suggestion of the factory with rows of gleaming windows; but these deeply recessed openings with their dignified arches are pleasingly decorative features; and the wall in front, with steps leading up from the street, enhances the effect of seclusion.

The building is long and low and many gabled, of a soft weathered gray which blends with the landscape and is as restful as a tree. The arrangements are practical throughout—nothing has been sacrificed to effect; but technical knowledge and imagination have gone so happily hand in hand to the solution of this problem that the completed structure is a triumph of charm and personality and of fitness for the purpose for which it was designed.



The Alice Foote MacDougall Coffee Shops

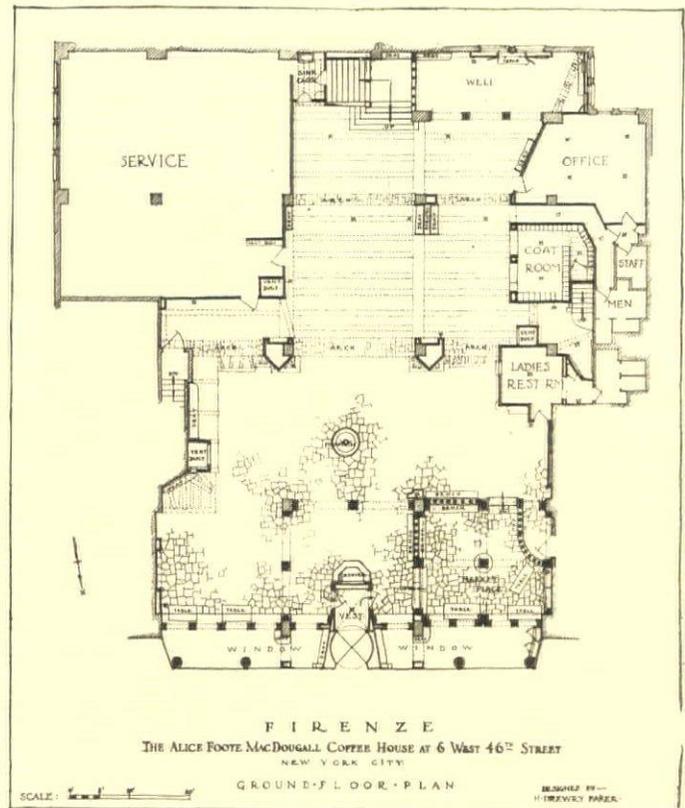
IN building up the Coffee Houses, it was Mrs. MacDougall's idea not only to serve the best coffee obtainable, but to serve it in an atmosphere of such restfulness that people would be more induced to take their coffee in her shops than in any other.

This was very largely influenced by the peacefulness and quiet of the Old World, the beauty of antiquity and the charm of Italian architecture.

When the 43d Street store was enlarged, in addition to the space already occupied, there was available a very narrow store with a mezzanine; and the architect treated this narrow store as an Italian street or court, so that one could step from the interior of the present Coffee House into the court, and from the court to the loggia or mezzanine. The decoration was carried out and especial attention was given to the lighting not only to get the effects of sunlight, but to have the light soft and subdued and as far away as possible from the glorified bathrooms which are specialized in some lunchrooms.

In the building of the 47th Street store there was an opportunity to duplicate a very charming piazzetta, and a complete façade of houses with windows, etc., was carried out to simulate the original piazzetta. In practically every piazzetta, or small plaza, in Italy, a church is a prominent feature at one end, and the show-windows were built up at the back to imitate a cathedral front, and by the use again of special lighting it was possible to give an excellent illusion and a complete rose window.

In the design of the latest store, at 46th Street, the architect utilized the mezzanine to build a replica of the famous Ponte Vecchio in Florence and the east wall is an exact copy of the famous Lungarno. The market place where china,



glassware, coffees, teas, and cocoas are sold is copied from the famous Mercato Nuovo and people who have been abroad flock to the market place automatically to see what wares there are for sale. That people are longing for the charm, beauty, and color of the Old World, which here in America are more or less forgotten, is fully demonstrated by the fact that, starting with one small store in 43d Street, three years ago, containing about twelve hundred square feet, the company has expanded until it now occupies approximately fifty thousand square feet in four different locations, in the heart of the most populous district of New York City.

The public eye is appealed to by the picturesque, even if it is not conscious of the reason. Here there will be a scenic environment reminiscent of a leisurely little journey in Italy. The architect and decorator have succeeded in giving an effect of substantial truth to local color, creating an atmosphere of Old World somnolence and peace, at least in the environment. Perhaps this will have a beneficial effect upon the hurry-up Americans who will enjoy the hospitality of the place.



Main floor, toward west wall. Fountain.



MAIN FLOOR, TOWARD MARKET PLACE.



THE EAST CORNER.



THE WELL.



IN THE MARKET PLACE.

"FIRENZE" COFFEE HOUSE (ALICE FOOTE MacDOUGALL), NEW YORK.
 Designed by H. Drewry Baker. Scenic Artist, Frederick Sansevero.



THE MAIN FLOOR, TOWARD MEZZANINE AND STAIRWAY.

Designed by H. Drewry Baker. Scenic Artist, Frederick Sansevero.

"FIRENZE" COFFEE HOUSE (ALICE FOOTE MacDOUGALL), NEW YORK.

Acoustics—Sound Reflections

Its Position of Importance in Every-Day Life; Acoustics Formerly a Gamble; Attacking the Subject Scientifically; a Definite Scientific Basis Established; Factors Governing Acoustics; Echo; Interference; Reverberation; a Reverberation Problem Worked Out; Wire-Stretching; Other Fallacies

By George C. Hannam, M.E.

Sound Photographs made by Professor Foley, University of Indiana

TO the average engineer, the subject of acoustics does not loom large in the every-day matters of a practical world, but when it is realized that it is an important consideration in the design of practically every court-room, church, music-hall, theatre, auditorium, legislative chamber, bank, and even office building, the importance of a knowledge of the subject will be appreciated. Faulty acoustics might be found to be the real reason for the failures of some of the most capable actors, divines, and politicians, the world has never had a chance to know. Many a speaker and singer has been severely criticised, thereby suffering considerable loss of prestige, when the fault has been entirely due to the faulty acoustical conditions.

There are thousands of auditoriums in the world that are acoustic nightmares. The late Professor Wallace C. Sabine, of Harvard University, said that the reverberation which accompanies lofty and magnificent architecture increased until even the spoken service became intoned as a Gregorian chant, and that it is not going beyond the bounds of reason to say that in those magnificent churches in Europe, which are housed in magnificent cathedrals, the Catholic, the Lutheran, and the Protestant Episcopalian, the form of service is in part determined by the acoustical condition.

ACOUSTICS FORMERLY A GAMBLE

In the past, it has been customary in the vast majority of cases to design theatres, churches, and auditoriums in general, building them at considerable expense to secure strength, desired seating capacity, noble architectural lines, æsthetic illumination, wholesome ventilation, etc., and then gamble as to whether the acoustics in the resulting auditorium would be good or bad.

A DEFINITE SCIENTIFIC BASIS ESTABLISHED

Before 1895 but little definite information was to be obtained by an architect on the subject. He was guided, in large measure, by his own limited experience or by studies made in existing buildings. The late Professor Wallace C. Sabine, of Harvard University, is to a considerable extent responsible for most of our knowledge on this subject to-day. He began his researches in 1895, and in 1900 published in *The Engineering Record* the results of his five years' work. This was the first real contribution on the subject, and due to the scope of the work and the fact that a mathematical basis was established, the former necessity of chance and guesswork was done away with. For eighteen years after the publication of this paper he continued his researches, following the programme of investigations there outlined.

The knowledge gained from these researches and from their practical application, augmented by contributions from other physicists, has made it possible to determine from the plans of an auditorium, with a knowledge of the materials of construction, what the acoustical conditions in the finished building will be, and to make such changes as might be necessary to overcome faults.

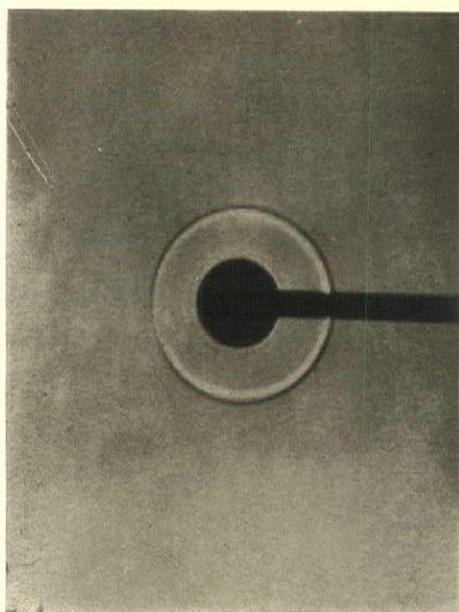
The simplest type of auditorium imaginable is a level plane with a single person as audience. In this case the sound spreads in a hemispherical wave, diminishing in intensity as it increases in size. If instead of one person there is a large audience, the intensity decreases more rapidly, due to the absorption occasioned by the clothing of the people. The upper part of the sound from the speaker in such an auditorium is entirely lost. The first improvement that suggests itself is to elevate the speaker. The next step is to have the ground or floor sloped so that each row of persons will be slightly elevated. Then, a wall should be placed back of the speaker to reflect that part of the sound toward the audience. We now have the design of the old Greek amphitheatres. With the addition of a roof to prevent the loss of the upper part of the sound waves, and the construction of galleries to elevate and bring further front part of the audience, we have the typical form of our modern auditorium.

FACTORS GOVERNING ACOUSTICS

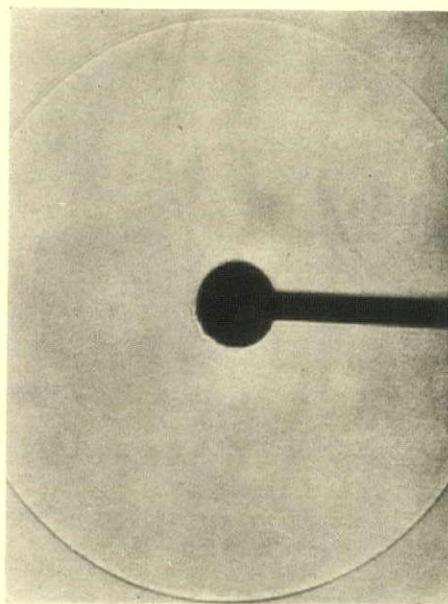
The size and shape of an auditorium determine the distance travelled by the sound between reflections; while the materials used in the construction determine the loss at each reflection, for which reason it is possible for two rooms designed exactly alike to have entirely different acoustics. An illustration of this is the well-known case of Sanders Theatre, in Cambridge, and the auditorium of the Fogg Art Museum of Harvard College. Sanders Theatre is an old building noted for its good acoustical properties. When the Fogg Art Museum was designed, the architect was instructed to make the auditorium a replica of Sanders Theatre. It was taken for granted that similar design assured similar acoustical conditions. When the auditorium was completed every one was greatly surprised to find the acoustics almost impossible. As a result of the development of the subject since that time, the reason for the difference is well known. Sanders Theatre was constructed of comparatively soft materials. All seats were heavily cushioned. The other auditorium was of fire-proof construction. The change produced in the absorbing power of the various surfaces was mainly responsible for the difference in acoustical conditions.

Most people are acquainted with the wonderful acoustical conditions of the Mormon Tabernacle. From an acoustical standpoint the design could not be much worse. However, the building is constructed of wood, which has the highest coefficient of sound absorption of any building material, and it is due entirely to the presence of so much wood that the acoustics are satisfactory. The shape of the ceiling is responsible for the remarkable echo. A replica of this building with the use of hard materials would result in an acoustical horror.

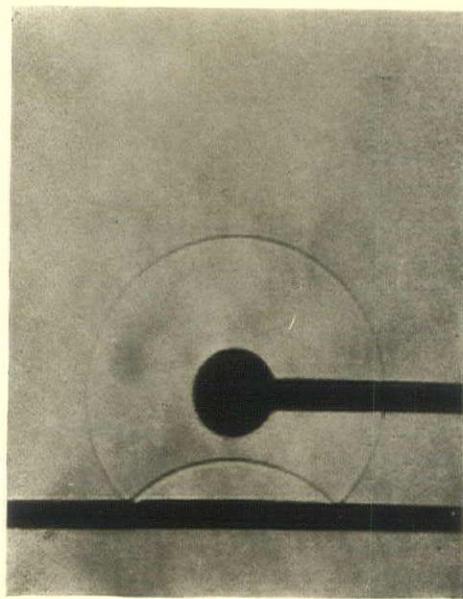
If a sound be produced in an empty room, having exposed surfaces that are absolutely rigid, it will last almost indefinitely—that is, if we disregard the loss due to the viscosity of the air, which in practical cases is negligible. The sound will travel back and forth from one surface to another,



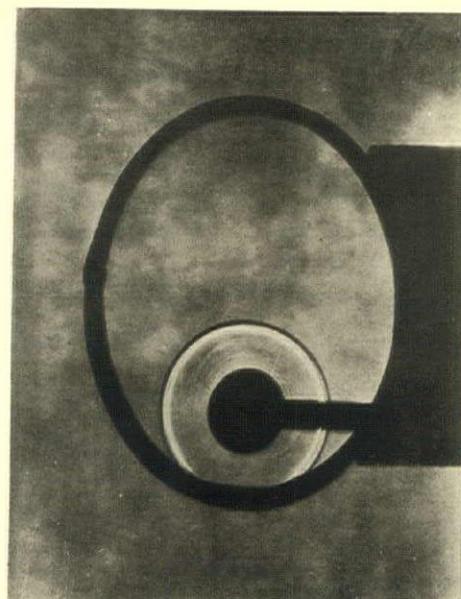
No. 1. Photograph of sound wave. Sound produced by electric spark took place at centre of solid black terminal.



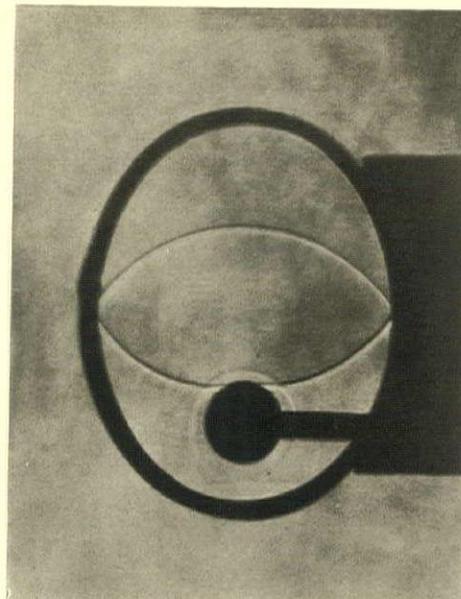
No. 2. Same as No. 1, only a fraction of a second later. Bubbles showing at the terminal are effect of heat generated by the spark.



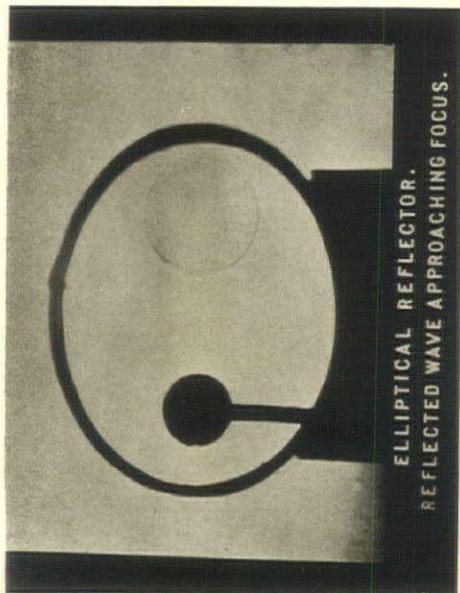
No. 3. Reflection of sound wave from hard dense surface.



No. 4. Sound produced at one of the foci of an ellipse.

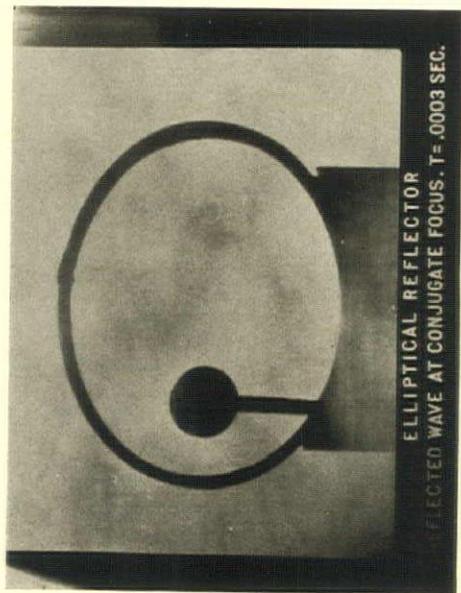


No. 5. Same as No. 4, a short time later.



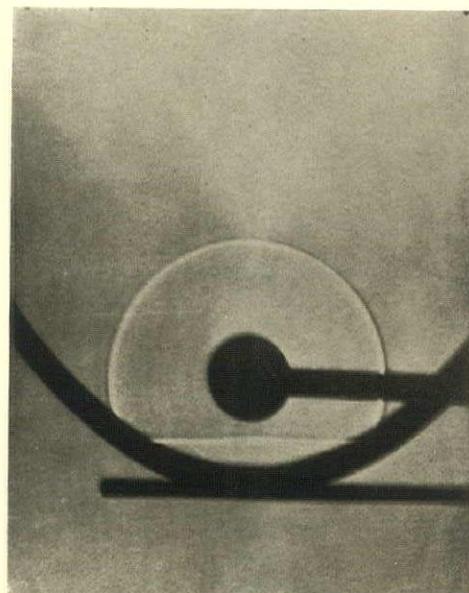
ELLIPTICAL REFLECTOR.
REFLECTED WAVE APPROACHING FOCUS.

No. 6. Same as No. 5, a short time later.



ELLIPTICAL REFLECTOR
REFLECTED WAVE AT CONJUGATE FOCUS. $T = .0003$ SEC.

No. 7. Same as No. 6, a short time later.



No. 8. Reflection from parabolic surface.

SOUND PHOTOGRAPHS
MADE BY
PROFESSOR FOLEY, UNIVERSITY OF INDIANA.

and if the surfaces are absolutely rigid, the original intensity of the sound would be maintained. Of course, no building materials are absolutely rigid. Taking an open window as being totally absorbent, and calling its coefficient 1.00, Professor Sabine in his researches determined the coefficient of sound absorption of most of the materials employed in building construction.

The coefficients of some of the more common materials are given below:

1 square foot each—	
Open window	1.000
Wood sheathing (hard pine)	.061
Plaster on wood lath	.034
Plaster on wire lath	.033
Glass	.027
Plaster on tile	.025
Brick	.025
Concrete	.015
Glazed tile	.01

Prizes Awarded in the Art Contest for Lord & Taylor Centennial Symbol

THREE hundred and seventy-four artists submitted five hundred and twelve designs drawn, painted, and modelled in the International Art Competition for a symbol to express the service rendered by modern retailing as exemplified in the career and history of Lord & Taylor, which is the only department store in New York which has been in business under the same name for one hundred years.

The designs came from every section of this country as well as from England, France, Germany, and Austria. The list contains the names of art students competing with artists of established reputation. The Jury of Awards, of which Mr. Robert W. De Forest is chairman, found a high average of artistic excellence. It considered the competition unusual for the type of talent which it attracted, and it is not to be wondered at that American artists won the major prizes, because of their familiarity with the subject and their closeness to the scene. But the competition has demonstrated that American artists think clearly in terms of beautiful symbols—which is the highest form of art.

Following is a list of the prize-winners, together with the amount of the prizes:

First Prize: \$1,000—Herbert F. Roesse, New York City.
Second Prize: \$500—Edwin A. Georgi, New York City.
Third Prize: \$350—David Seaton Smith, New York City.
Fourth Prize: \$150—Bertrand Zadig, New York City. *Ten Prizes*—\$100 each—to the following: Helen Cresson Collins, San Diego, Cal.; Hugh I. Connet, New York City; Raymond F. Da Boll, Chicago, Ills.; Harvey Hopkins Dunn, Philadelphia, Pa.; V. H. Dufeutrel, Paris, France; Jay Van Everen, New York City; Albert Frank Foye, Brooklyn, N. Y.; Robert Ward Johnson, Paris, France; Marguerite Kumm, Minneapolis, Minn.; Joseph E. Sandford, Brooklyn, N. Y.

This competition was somewhat unique in the annals of commerce, since it was sponsored and organized for a department store by the Art Directors Club, one of the affiliated societies of the Art Centre, New York. The purpose of this joint effort was to bring the art world and the business world closer together; they spoke a common language through this competition, the character of which is attested by the following names of the Jury of Awards: Robert W. De Forest, chairman; William Jean Beaulay, Heyworth

Following are some miscellaneous coefficients which are of interest:

1 square foot each—	
Carpet	.20
Cheese-cloth	.019
Cork 2.5 centimetres thick, loose on floor	.16
Audience per person	4.7
Hair felt 1 inch thick	.53

It is frequently of assistance to compare the reflection of sound waves with the reflection of light waves. A white ceiling will reflect about 95 per cent of the light striking it. The same surface painted a dull black will reflect at the most but 5 per cent of the light. A glazed tile ceiling will reflect 99 per cent of the sound striking it. The same surface covered with one inch of hair felt (the best sound absorber) will reflect only 47 per cent of the sound. Increasing the thickness of the felt will further reduce the percentage of sound reflected.

To be continued.

Campbell, Joseph Hawley Chapin, Royal Cortissoz, John de Vries, Doctor John H. Finley, Jules Guerin, Paul Manship, J. Monroe Hewlett, Samuel W. Reyburn, Walter Whitehead.

Housing-Essay Prizes

Better Homes for Brain-Workers, World-Wide Movement

IN an effort to encourage better housing for intellectual workers, the International Federation of Building and Public Works, with headquarters at 17 Avenue Carnot, Paris, France, announces the organization of an international essay competition, for which Willard Reed Messenger, of New York, has offered \$1,000 in prizes. The first prize will be \$500; the second prize, \$300; the third prize, \$200.

Participants should submit their papers typed in French or English, not exceeding four to five thousand words, which may be accompanied by sketches, not later than January 15th, and prizes will be awarded the following month.

Papers should include the four following divisions, states the official announcement, just issued from Paris:

I. Administrative or legislative measures for facilitating the construction of houses intended for the middle classes, or intellectual workers.

II. Financial policy—loans, amortization, etc.

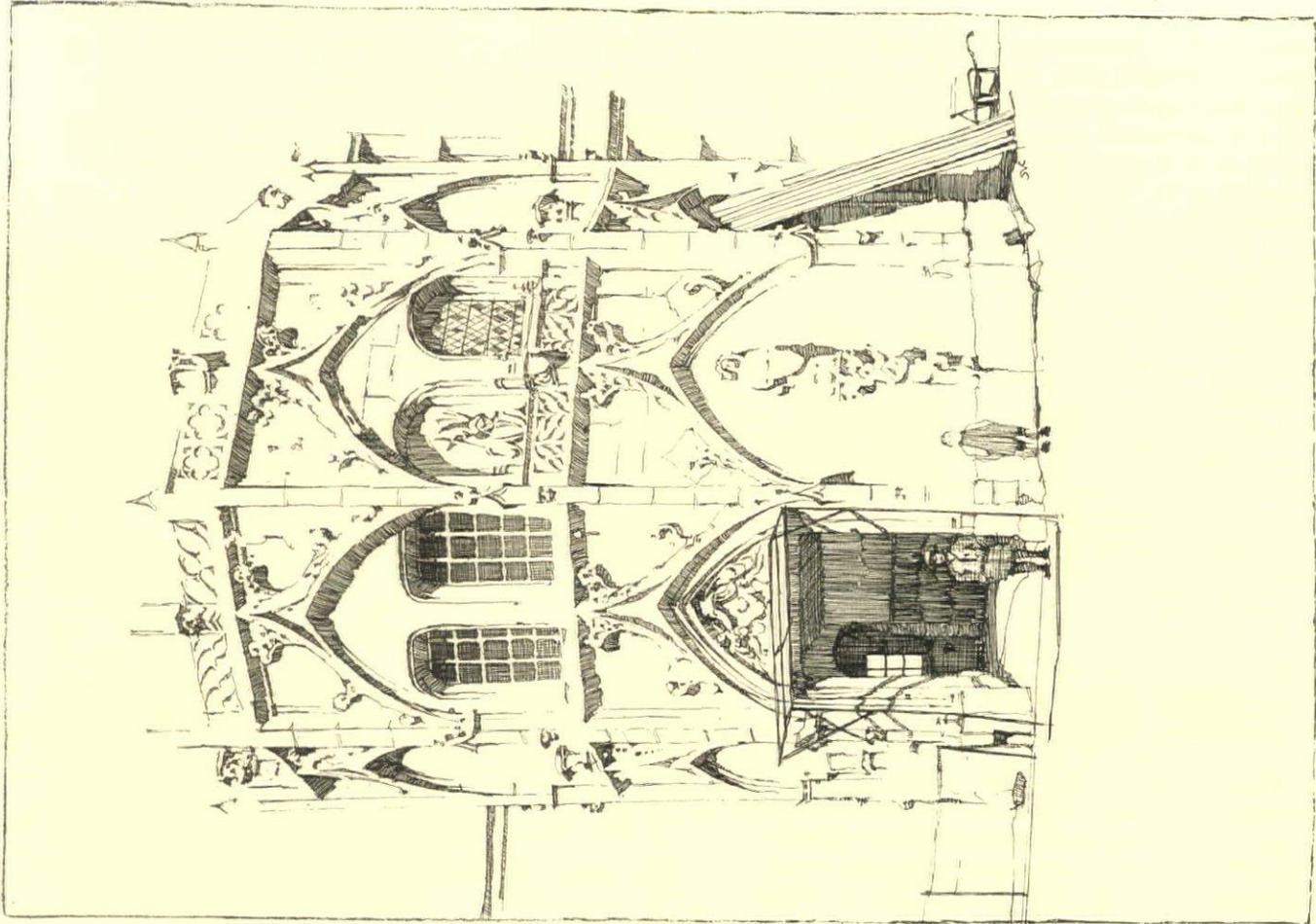
III. New construction methods intended to reduce the cost of building, together with sketches.

IV. Conclusions.

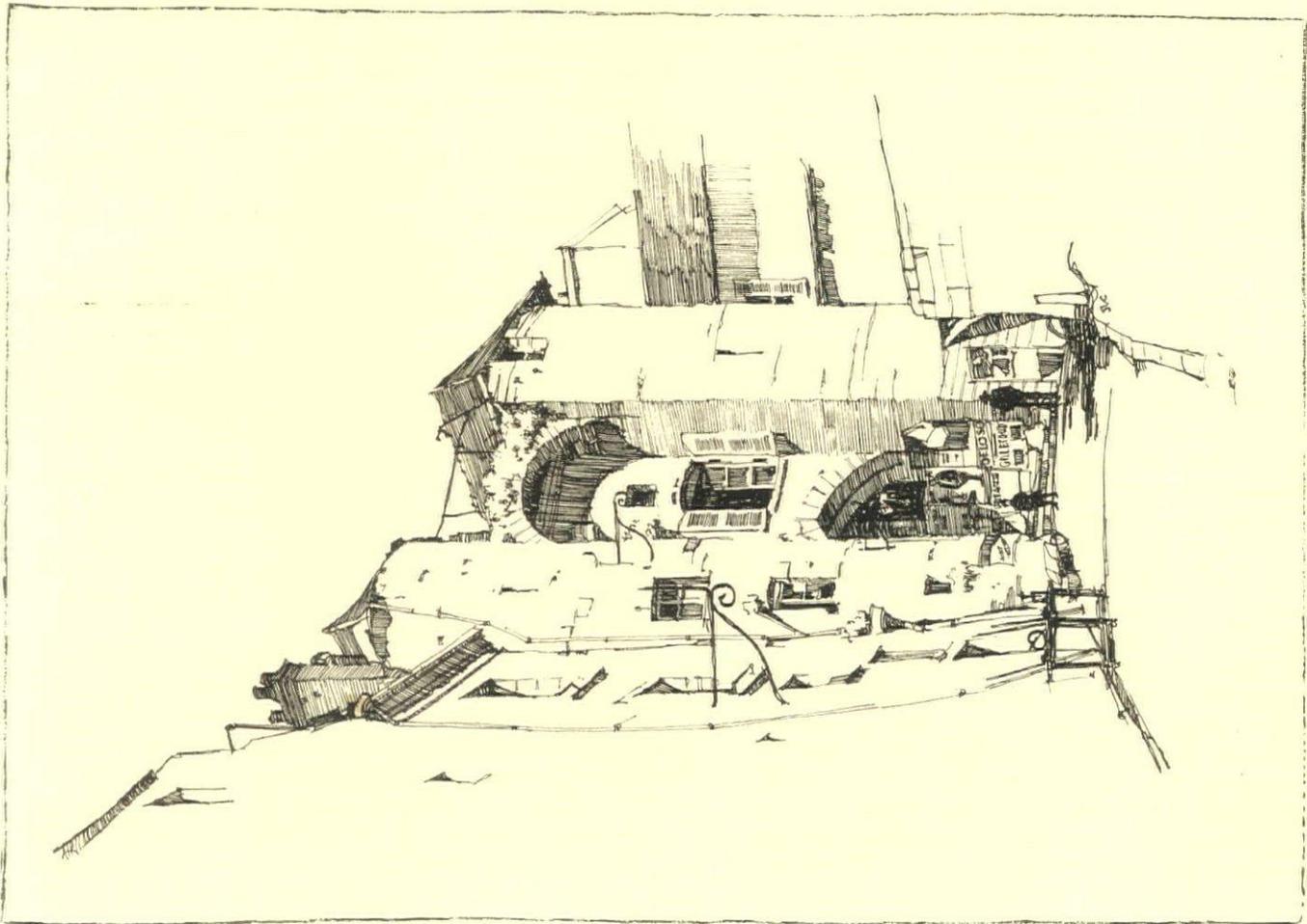
The data submitted and sketches must bear some legend or pseudonym, and be sent with an enclosed plain, sealed envelope, bearing only the legend on the outside, and containing enclosed the name, address, and profession of the competitor, which will be opened only after the winners have been selected by the jury of judges.

The jury will include at least two American members, three members will be named by the International Federation, and three by the French National Federation, and three members will be named jointly by these two organizations. The jury will choose its own president.

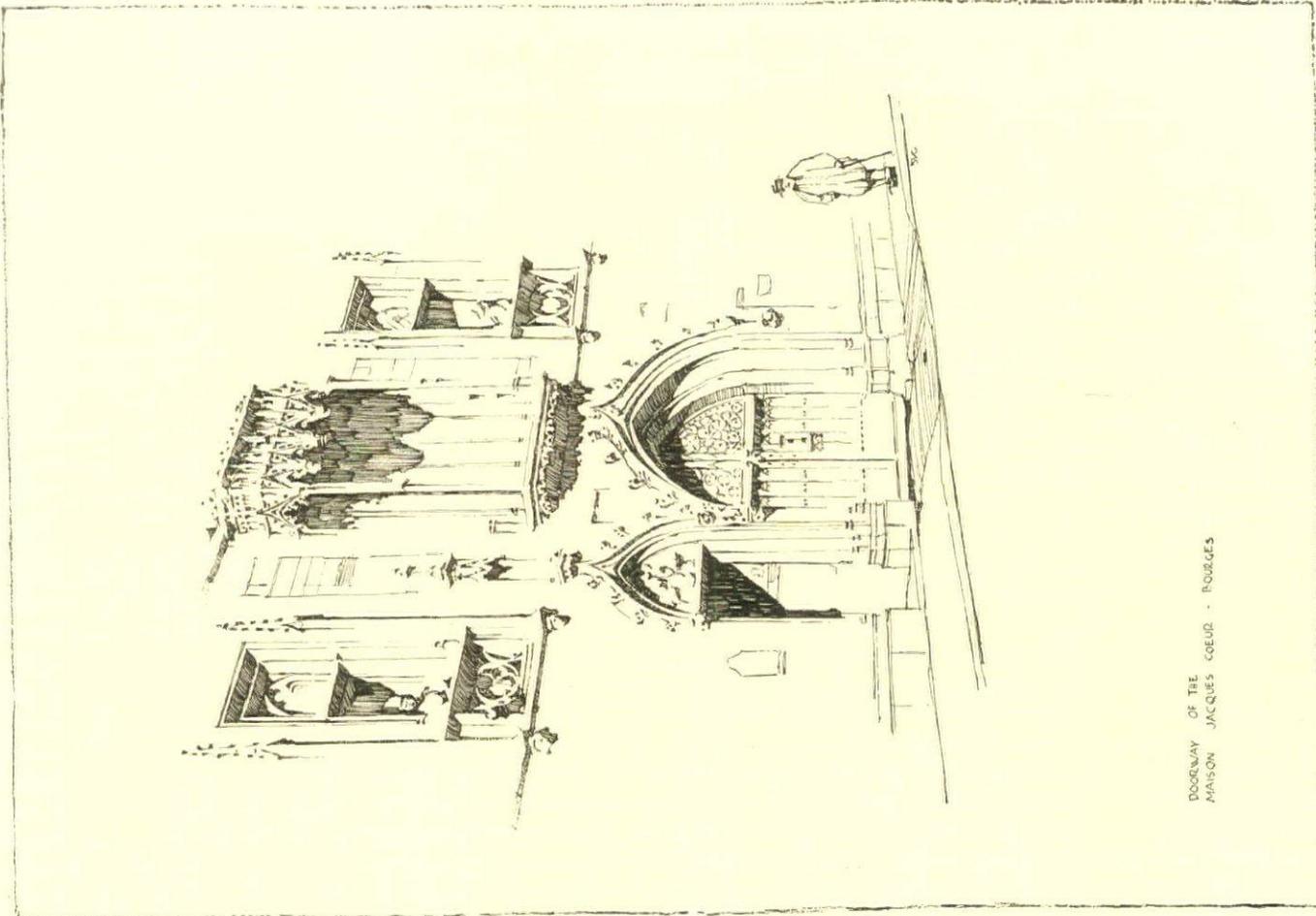
The subject of better housing for brain-workers was given primary consideration at the biennial congress of the International Federation, held in Paris in June, at which forty nations were represented, and to which President Coolidge appointed several American delegates.



DOORWAY OF THE TOWER OF THE ANCIEN HOTEL DE VILLE, BOURGES.
 The exterior of this old stair tower is bedecked with a Gothic richness seldom excelled in France. The spiral stairway is only partly expressed by the window openings. The blank window with the warlike figure carved in it disguises one of the main supports. The doorway suffered considerably at the hands of the Revolutionists. The entire building has been turned into a school-house within recent years.
 From drawings by Samuel Chamberlain.



THE PORTE CHENIZELLE, LAON.
 Disguised by ill-fitting roofs, stray vines, and gaudy posters, punctured by unintended windows, and crowded on both sides by houses which have sprouted up on a level with it, this old gate still serves as one of the principal arteries of traffic in Laon.

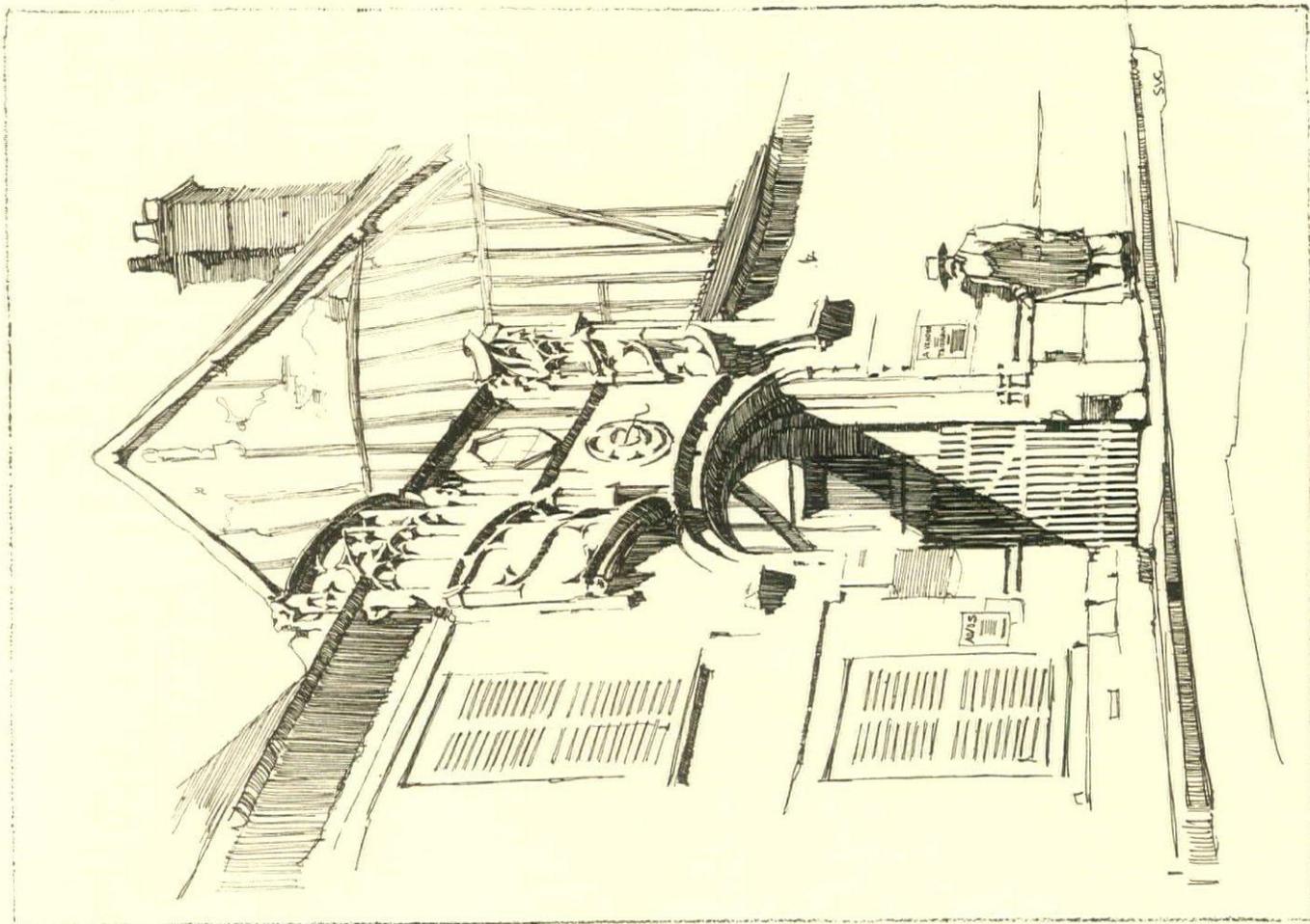


DOORWAY OF THE
MAISON JACQUES CŒUR - BOURGES

DOORWAY OF THE MAISON JACQUES CŒUR, BOURGES.

As in so many of the Gothic buildings in Bourges, there is a human touch to this doorway, especially in the two upper windows, where there are the busts of two servants, supposed to be anxiously watching for the return of their master. The door itself is a massive and elaborate piece of wood carving.

From drawings by Samuel Chamberlain.



A DOORWAY IN LAON.

All that remains of a feudal estate is this flamboyant portal, now used by an energetic tinsmith. It is such an ingenious adaptation that one cannot help wondering what it once gave entrance to.

Adoption of Administration Centre Plans by Los Angeles County

By Edward G. Leaf

RECOGNITION of the spirit of broad community service on the part of the Allied Architects Association of Los Angeles, and of the months of intensive study and research on the part of the organization in the preparation of a great administration centre plan for Los Angeles has been shown by recent action taken by the County Board of Supervisors in the adoption of the association's plan as the official plan toward the consummation of which the county will work in future years.

After ten months of study of the question of the most suitable, the most logical, and the most feasible plan for the county to follow, during which time other plans were received by the board and considered, a formal resolution was passed by the County Supervisors, adopting the basic principles of the Allied Architects' plan, and reserving only the right to make such changes in its execution as changed conditions in the future might require.

The action of the Board of Supervisors was unanimous, with not a dissenting vote. The resolution which made the plan of the Allied Architects Association the official county plan, sets forth the fact that within the next few years the county must erect at least five great administrative buildings: a new \$10,000,000 court-house for the superior courts; a junior court-house for the municipal courts; a public-welfare building, an administration building, and an addition to the Hall of Justice. The latter building, just nearing completion, will be one of the largest public buildings in the United States, but the county finds that, even before possession is taken, it will be overcrowded, and a new wing is now being contemplated. The exterior, lobbies, and court-rooms of this structure were all designed by the Association.

The resolution of the County Board further states that it is essential that these great buildings be located so as to form a harmonious group; that the cost of placing these buildings in such a manner will be no more than placing them without reference to a plan; that any plan adopted must conform to the recommendations of the Los Angeles Traffic Commission; that each building must have a large open space around it; that sufficient parking space must be provided not only for county employees, but for citizens transacting business with the county; and that the contour of the land to be used for the administration centre must be taken into account.

All of these requirements are met by the plan of the Allied Architects Association, and "The Board of Supervisors of the County of Los Angeles does adopt and approve the plan in principle as submitted by the Allied Architects Association of Los Angeles, reserving the right to make such changes as time and future conditions may require."

While the Allied Architects plan, when first presented, aroused some opposition owing to the large area which it

included, the conviction has steadily grown among county officials, and among the public at large, that the plan is none too big when allowance is made for the fact that the creators of the plan looked to the future, when the population of Los Angeles city and county will be much greater than it is now, and when the need for many great public and semi-public buildings will require large areas of ground, if these buildings are to be placed in suitable and beautiful settings.

In general, the association plan calls for the acquisition by the city, county, State and federal governments of approximately fifty square blocks, immediately adjacent to the central business district of the city.

Normally this land would be prohibitive in cost, but in this instance Los Angeles is favored as are few cities of the country. The area which the Allied Architects propose to convert into a great administration and cultural centre comprises a long, narrow, gently rising hill, once the fine residence district of the city. When the hill, known as Bunker Hill, was in its prime, the business district of the city clustered around its northern and eastern end. During the past twenty or thirty years the business district has gradually moved southward, and the residence district has moved westward, leaving the old north end, and the hill area in their wake. In recent years this area has deteriorated sadly; it has become a district of cheap business houses and tenements, with the attendant decrease in property values.

It is this property which the county proposes to convert into a great beauty spot in the heart of the city. The Bunker Hill section will become a magnificent park, encircled by broad boulevards, and providing sites for buildings of a semi-public and cultural nature. The administrative buildings of the various governments will be located in the area to the east of the hill, adjoining the original plaza of old Los Angeles, and the historic plaza church, both of which landmarks will be carefully preserved and greatly beautified in a park-like setting.

Nearly a year was devoted by members of the association, which includes seventy practising architects of southern California on its roster, in preparing this plan. Movement of traffic through the area, parking of automobiles, proper vistas for the great public buildings, the boulevard system, design and composition: all of these subjects were given the most careful attention during the preparation of the plan, which, following its presentation, received the unqualified indorsement of many of the leading civic organizations of the city.

The actual economy of such a plan, ambitious as it seems at first thought, is also making a wide appeal, for, since the execution of the plan will be spread over a period of many years, the burden on the taxpayer will at no time be excessive.

Book Reviews

ITALIAN GARDENS OF THE RENAISSANCE. By J. C. SHEPHERD, A.R.I.B.A., and G. A. JELICOE. Fully Illustrated with Photographs and Drawings. Large folio. Charles Scribner's Sons, New York.

The charm and historic interest of the Italian gardens never lose any of their appeal, and as the years add something continually to their antique picturesqueness, new travellers and old lovers study them with unabated fervor. Nowhere else in the world has the garden assumed the formal and studied character of those of Italy.

"Pandora never loosed a livelier spirit than the one for ever parting Fancy from Design. In those rare moments when the demon sleeps is born a work that stands for all time. So came into being the finest of the Italian gardens, where, in a world of beautiful thoughts, Fancy and Design roam undivided.

"The history of the Italian garden reflects the pageant of Renaissance thought: the rapid rise, the sixteenth-century culmination, the decline of over 200 years. From the gloom of the Middle Ages, when the cloister alone kept alive the spirit of gardening, Italy, by the fourteenth century, had begun to emerge. With the awakening came a greater sense of security, and an unsurpassed love of nature, sung by Petrarch and Boccaccio, answered the call of the country. Villas and their gardens rose tentatively round Florence and the northern towns. In Ferrara, particularly, gardens were laid out for that 'antique brood of Este,' famed in their passion for war and art."

The book aims to reveal the features of a sequence of gardens of the Renaissance, selected more for their value in design than for magnificence. The numerous and beautiful photographs supplemented by plans and sectional drawings give it especial value for the architect and all concerned in the making of formal gardens. A number of the villas have been illustrated in sectional drawings. There are many diagrams and perspective sketches. In addition to an historical sketch there are chapters that discuss the principles underlying the garden design and a review of the application of these principles.

THE OLD MISSION CHURCHES AND HISTORIC HOUSES OF CALIFORNIA. By REXFORD NEWCOMB, M.A., M.Arch., A. I. A. With Frontispiece in Color, 217 Illustrations and Measured Drawings, and 24 Line Drawings. J. B. Lippincott Company, Philadelphia.

There have been many hand-books published about the old missions. They have been woven into romances and tradition has enveloped them in a glamor that fascinates all who see them and absorb something of the atmosphere that pervades their picturesque architecture and environment.

The story of their founding is one of the great stories of the early days, of the coming of the Spanish adventurers in search of gold and conquest, and of the coming of the friars in search of souls.

What a picture it offers to the imagination, a picture of self-sacrifice, of bravery, of brutality, of death and failure.

We are fortunate in having a man of Professor Newcomb's qualifications willing to devote years to the study of the missions, not only with a view of telling their story from the human side, but to give us for the first time an adequate account of their building and architectural antecedents, and the significance of this architecture in our national life.

As the author says: "Too often in our minds is architecture divorced from its environment and thought of as separate and apart from that environment. This is a serious mistake, and one that any sane critic or intelligent layman must view with real concern. As a matter of fact, architecture is a perfect index to its backgrounds, material or spiritual, and expresses, as can no other art, the life and thought of a race or an age."

Certainly no architecture more vitally expresses the racial character that gave it birth than that of the old missions. It is Spanish beyond doubt, and reflects the influences of climate and environment that were known in Spain at the time of the coming of the friars to the land, that in many of its natural aspects would remind them of the homeland. The patio, such a delightful part of many modern California homes, was a direct inheritance as are the low-pitched roofs and wide projecting eaves.

Professor Newcomb begins with "The Setting—The Land of California." He tells the story of the "Padres," "The Rise of the Mission System," and "The Builders of the Missions," and gives two valuable chapters on "Materials and Construction," and "The Development of Mission Architecture." Then he goes on to relate the history of each individual mission.

Part III, "The Historic Houses," deals with "The Estudillo House," "Old Town San Diego," "The House of Spanish Santa Barbara," "The Old Houses of Monterey," including the one where Stevenson lived, Rancho Camulos, the home place of the fabled "Ramona." In a final brief chapter are some references with illustrations to modern work, and we are glad to have the picture of Mr. Goodhue's splendid California Building at the San Diego Exposition, among others.

Professor Newcomb has done a service to architects, and he has done a greater service to American history. His book will take its place as the final authority and reference on a subject of wide interest with a never-failing human appeal.

The illustrations are admirable, and the measured drawings by the author add especial value for all architects.



Villa D'Este, Tivoli

THE LAW OF ARCHITECTURE AND BUILDING. Second Edition Revised. By CLINTON H. BLAKE, JR., A.M., LL.B., of the New York and Federal Bars. Invaluable for the Architect, Engineer, Owner, Contractor, and all who have to do with Building Construction. A Consideration of the Mutual Rights, Duties, and Liabilities of Architect, Owner, and Contractor, with Appendices and Forms. The William T. Comstock Company, Publishers, 23 Warren Street, New York.

CONTENTS: Introduction. Preface by Aymar Embury II. Part I: The Architect and the Owner. Chapter I—The Relationship in General. Chapter II—The Architect as Agent of the Owner. Chapter III—The Compensation of the Architect. Chapter IV—Duties and Liabilities of the Architect. Chapter V—Death of Architect and Ownership of Plans. Part II: The Owner and the Contractor. Chapter I—In General. Chapter II—Requisites of Construction Contract. Chapter III—Terms and Operations of Building Contract. Chapter IV—The Standard Documents. Part III: Liens. Chapter I—In General. Chapter II—The Lien of the Architect. Chapter III—The Lien of the Contractor. Chapter IV—The Lien of the Subcontractor and Material Man. Part IV: The Architect and the Contractor—Conclusion. Chapter I—The Architect and the Contractor. Chapter II—Conclusion. Appendices: Summary and Final Suggestions. Appendix A—Lien Forms. Appendix B—The Standard Documents of the American Institute of Architects. General Index. Index to Forms.

THE ART GUIDE TO PHILADELPHIA. Being a Complete Exposition of the Fine Arts in Museums, Parks, Public Buildings, and Private Institutions in America's Oldest Metropolis. Edward Longsheth, Publisher, the Drexel Building, Philadelphia.

The surprising thing is that such a guide has not been made before. It reveals Philadelphia as one of our great art centres. Among her private collections are some of the most notable in the country. It will prove a helpful friend to visitors during the coming Sesquicentennial celebration.

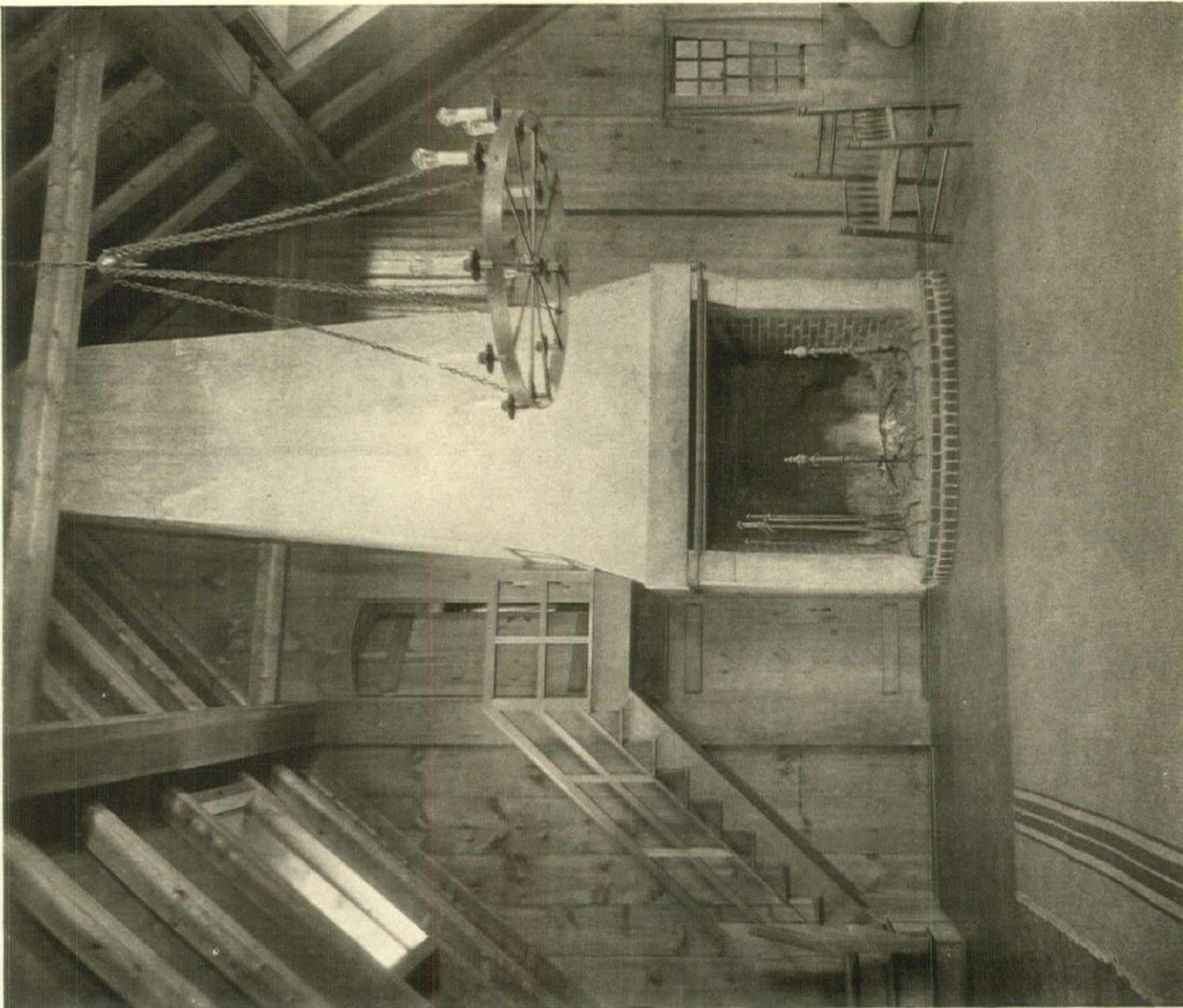
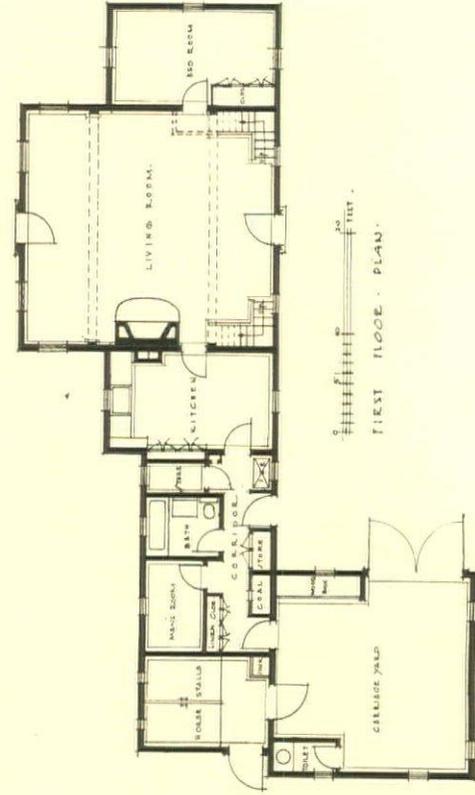
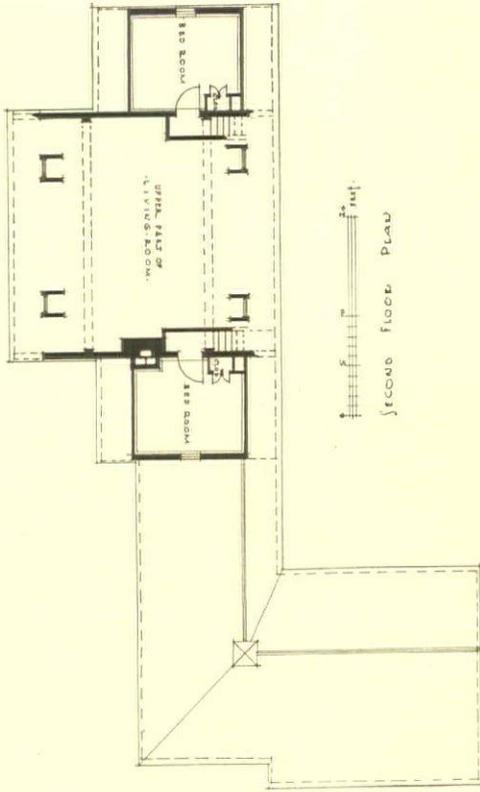
SMALL HOUSE DESIGNS

The second edition of "Small House Designs" collected by the Community Arts Association of Santa Barbara, California, edited by Carleton Monroe Winslow and Edward Fisher Brown, should be in the library of every architect in the country, and it will do a lot to set a fine standard in small-town domestic architecture. There are chapters on "Ways to Lower Home Building Costs," "Financing the Small Home," and elevations and plans of Spanish California houses, "English Rural Stucco Designs," "Wood Exterior Type Design."



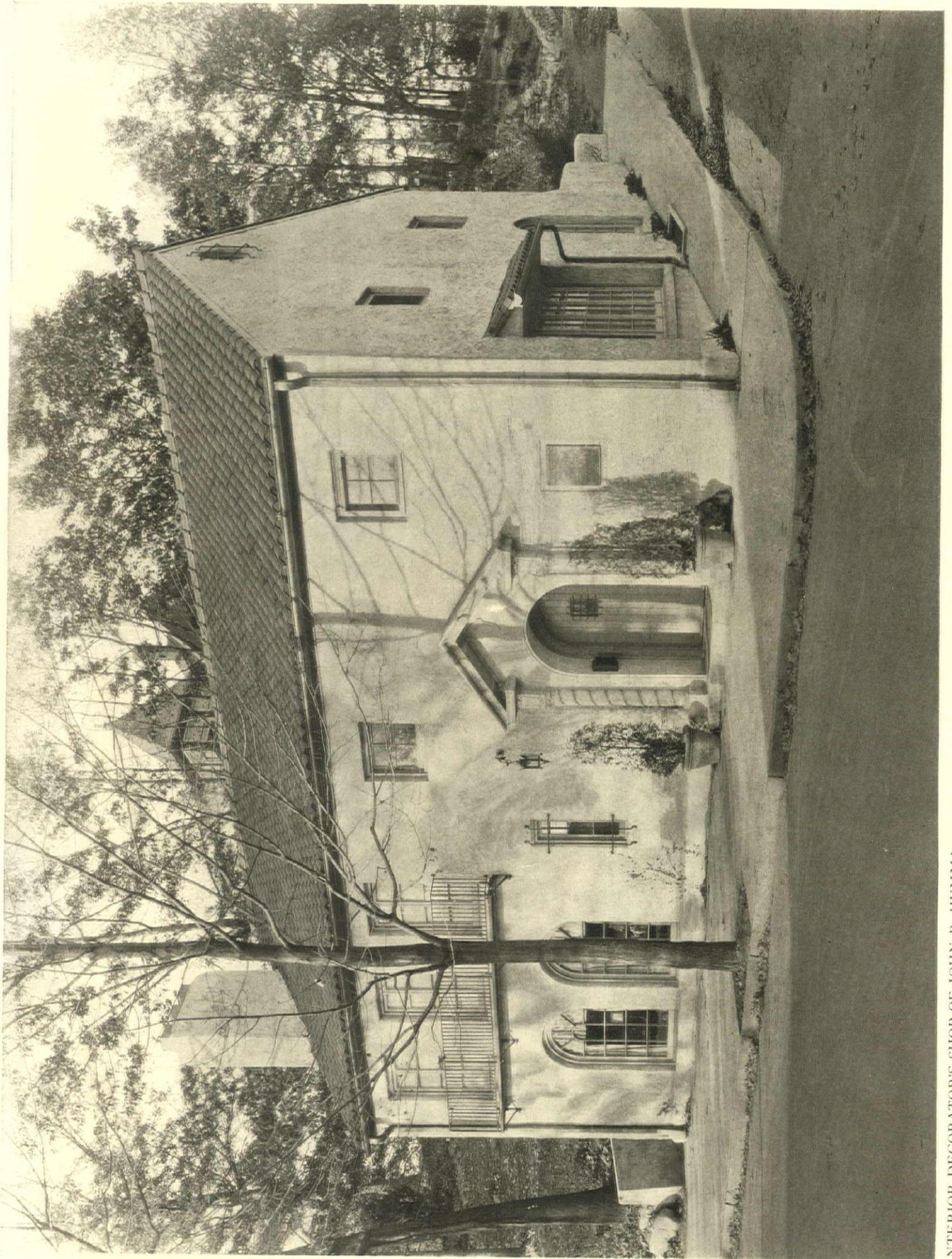
SHOOTING-BOX, EASTHAM, MASS.

H. R. Shepley and A. F. Law, Associated Architects.



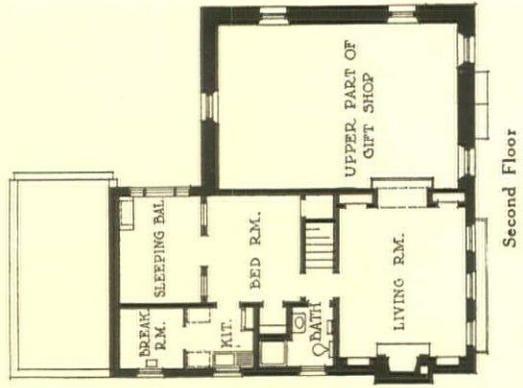
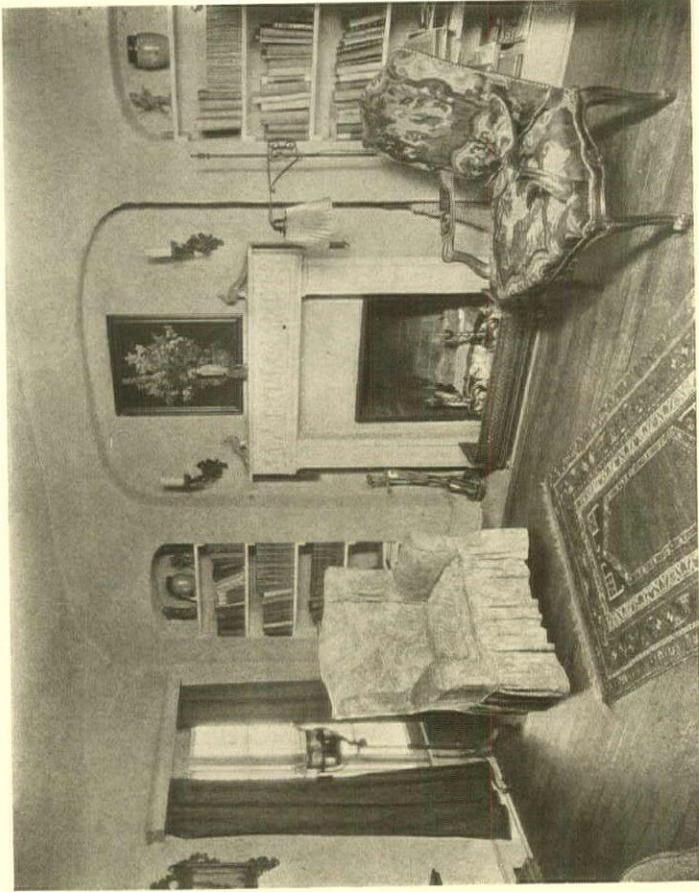
LIVING-ROOM, SHOOTING-BOX, EASTHAM, MASS.

H. R. Shepley and A. F. Law, Associated Architects.



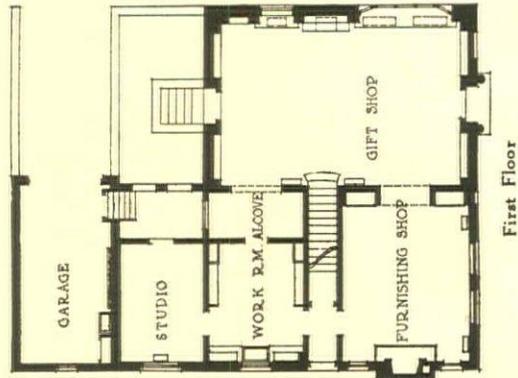
INTERIOR DECORATOR'S SHOP OF JOHN R. HUMMA.

Albert M. Bedell, Architect.



Second Floor

Albert M. Bedell, Architect.



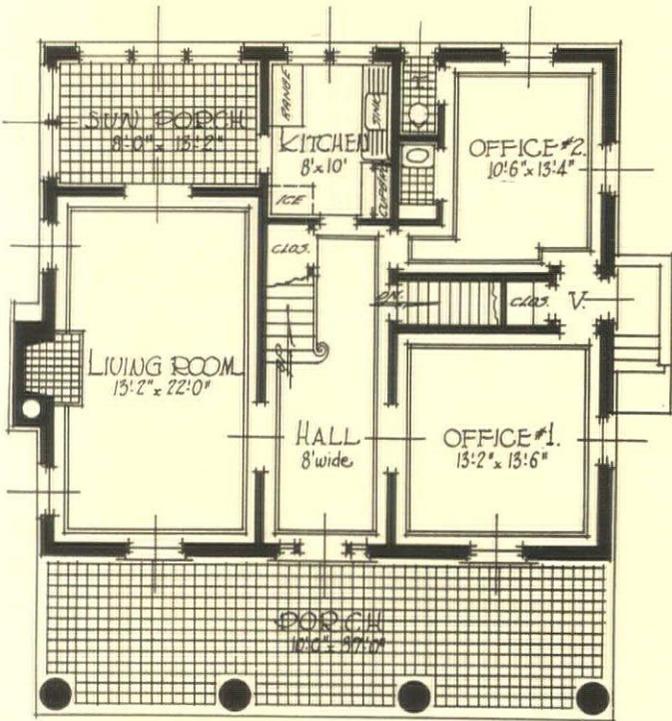
First Floor

PLANS.

INTERIOR DECORATOR'S SHOP OF JOHN R. HUMMA, RIDGEWOOD, N. J.

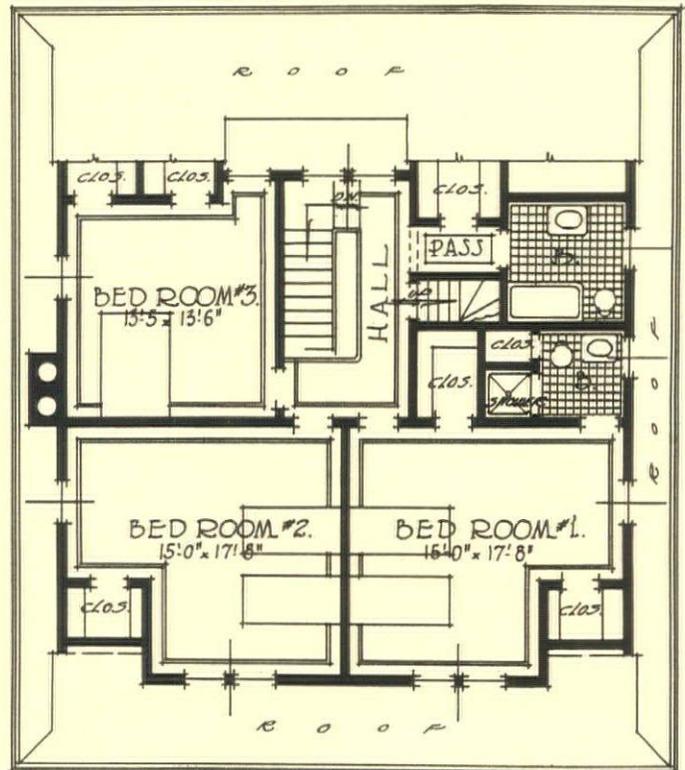


GIFT SHOP.



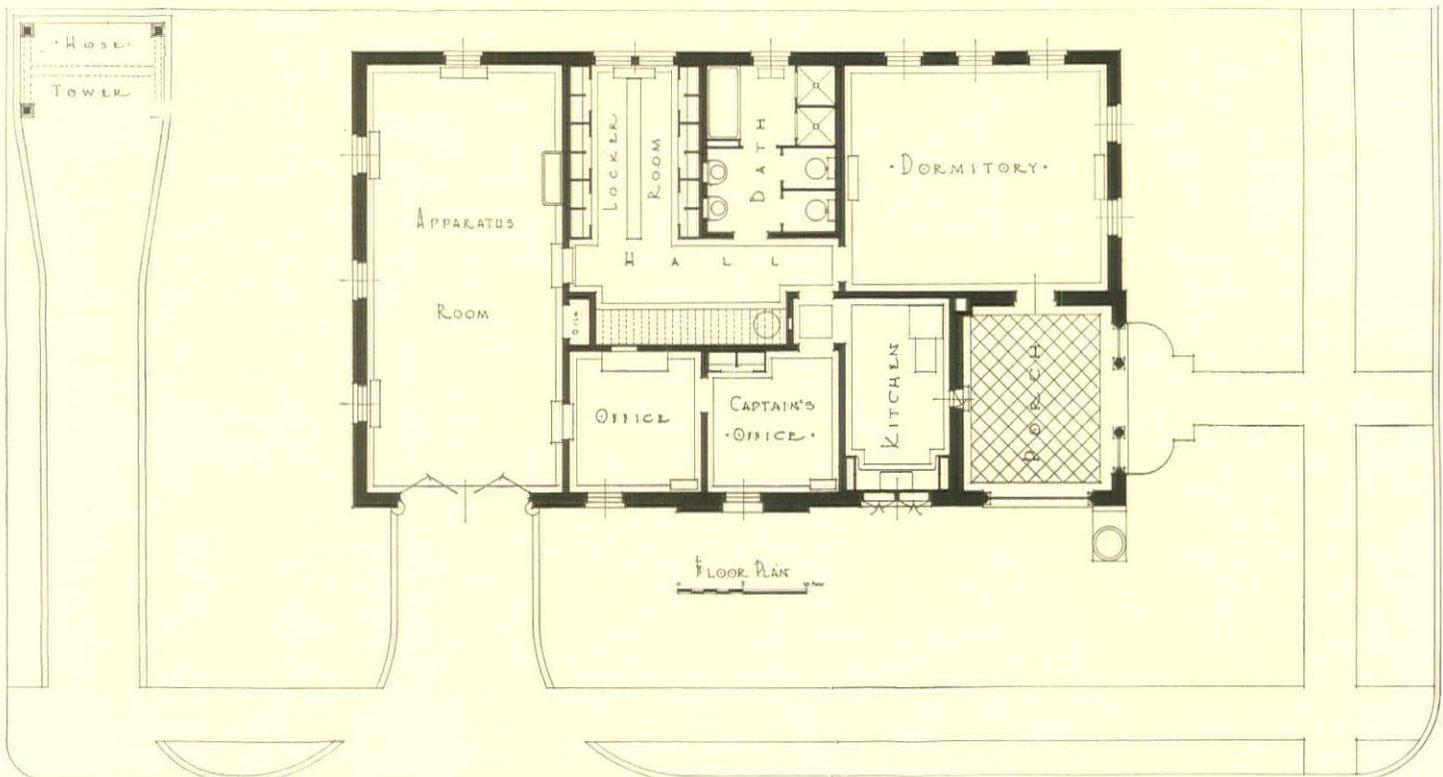
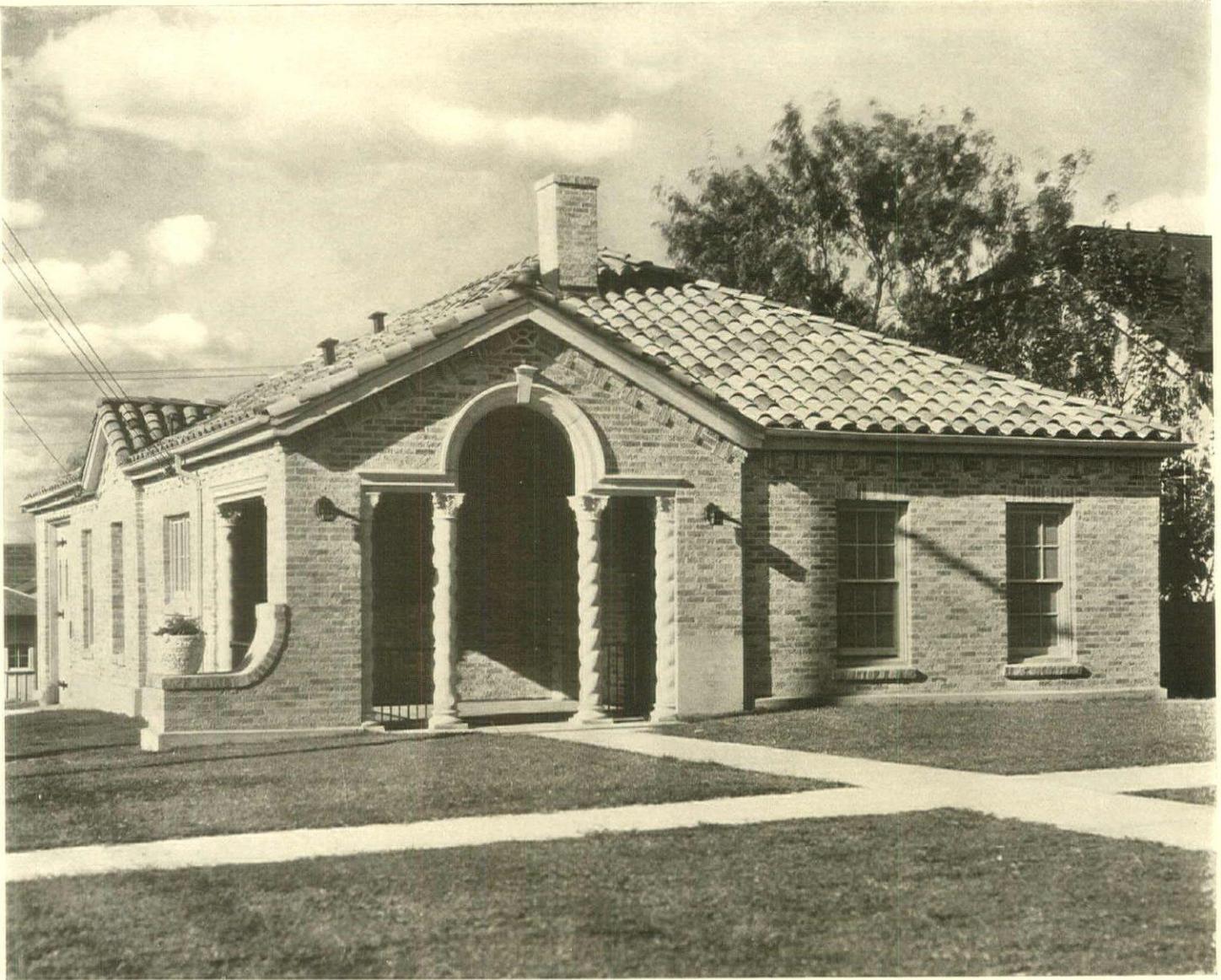
FIRST FLOOR PLAN

HOUSE, W. S. McDANNALD, TENAFLY, N. J.



SECOND FLOOR PLAN

R. C. Hunter & Bro., Architects.



COTTAGE TYPE, SUBURBAN FIRE STATION, SAN ANTONIO, TEXAS.

Harvey P. Smith, Architect.

The Effect of Gravity on Building Construction

By H. Vandervoort Walsh

Professor of Construction, School of Architecture, Columbia University

ARTICLE V

THE DAWN OF THE MORE EXACT KNOWLEDGE OF CONSTRUCTION

MEN had, for ages, observed the results of stretching a string or pulling a lump of clay apart. They watched the string lengthen, as it was pulled tighter and tighter, and jumped when it finally snapped with a resounding whack against their hands. They also had been fascinated by the change in shape that took place as they pulled a mass of wet clay apart, for the middle of it would thin down like a waist, and then finally become so attenuated that it would part, and in each hand they would have a lump, resembling a tear in shape.



Hammer Beam Truss is not a truss but an arch

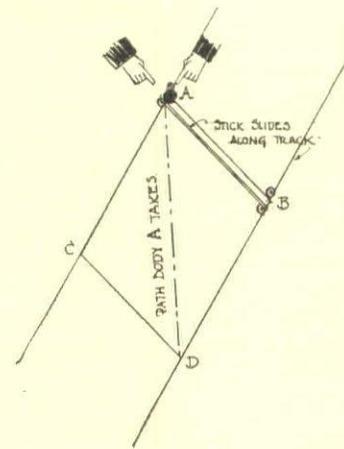
Then, they had noted how a soft thing could be flattened out by stepping on it, or crushing it beneath their heel. A round lump of dough could be squashed to a thin pancake. A poor fellow's foot that had been caught beneath the wheel of a rolling cart showed similar flatness. A bit of gold could be beaten out by continued blows of the hammer into very flat sheets, so thin that their breath would blow them away if they were not careful.

Men had noticed these things from the earliest days, but no one had stopped to consider what was happening, nor had any the slightest idea that there was anything important about it. It required a mind like Galileo's to ask questions about such things, and try to answer them. He was the first to picture a body that was acted upon by outside forces, as consisting of minute particles that resisted these outside forces by working together as a unit. If the body was pulled apart, then all of the little particles of which it was made were described by him as acting together to resist this pull, just as a group of men can be trained to pull together on a rope. If the body was crushed, the particles resisted this action like soldiers resisting the onslaught of the enemy in closed formation. He observed, too, that when a body was stretched, it grew longer before it broke, and would often return back to its original length when the pulling force was removed. In these days, when elastic bands are so common, we are continually observing this fact, for we know how they can be stretched, and yet how they will spring back into their original length if they are released for a moment. Galileo noticed that a body was lengthened as the pull increased upon it, and that a body shortened as the crushing load increased. We can hardly realize how tremendous an idea this was when it was first conceived. His work, describing his crude investigations along these lines, was published in 1638, and attracted no attention, and yet it was the seed from which our very thoughts, to-day, about mechanics of construction grew. It makes us realize that we often do not appreciate how some of the obvious ideas were once upon a time tremendous discoveries. It is hard

to believe that Galileo was the first man to state clearly the fact that a force produces two effects upon a body, *either changes its motion, making it move faster or slower, or deforms it by changing its shape.* This seems so obvious to us after we have heard it stated that we can hardly realize the magnificence of the idea.

But because a few great minds were able to state such truths which men had neglected to notice, because they were so obvious, it is possible for us, to-day, to have some abstract picture of the force of gravity. We are not able to see this mysterious thing, but we are able to know of it by its effects upon buildings and objects that surround us everywhere. And these effects are that it will either make a body move or change its shape. If we drop a stone from the top of a tower, we know that the force of gravity is working upon it, because it moves downward toward the ground. If we pile a load upon the top of a wooden post, we will notice that it bends, like an old man, under the weight, and will finally break, if the load becomes too big, because we say the force of gravity is working to pull down everything to the ground, and since the post cannot move, its shape is changed.

We have learned to visualize this force as a pull upon every little particle of which the body is constructed, acting downward toward the earth. We know this because, if we drop some stones into a well, they will all fall in the same direction, parallel with each other, and splash in the water the same distance apart that they were when they were released at the top. If we suspend these stones by strings, the strings will hang in the path along which the stones would



The ancient statement of the theory of the parallelogram of forces

drop if they were released. It is from these strings that we can get our mental picture of a force having a line of action. And, then, we learned from Archimedes that there is a point in the middle of every body where, if a string is fastened to

it, the body will be suspended in equilibrium. This point is called the centre of gravity. In addition to this, we have established a measure by which we can say that this or that body is pulled downward, this or that number of pounds. And so by one idea added to another, we have learned to recognize the force of gravity by its actions, although it still remains a mystery to the eyes and ears.

Now Galileo had contemporary thinkers who were also making observations about forces, and one of the most important of them was Simon Stevinus, a military engineer for Prince Maurice of Orange. He published a book at Leyden, in 1608, called "Mathematical Memoranda" (this, of course, was given a Latin name), in which he summed up his own researches and the common knowledge of arithmetic, geometry, statics, optics, and fortifications of his day. In this book Stevinus describes, indirectly, a method of determining the action of forces, which we now designate by the name, "graphic analysis." He defined forces on a sheet of paper by a line, the direction of which was the direction of the force. He then pictured the result upon a body if two forces acted upon it, which were not parallel to each other, but pulled off at an angle. In other words, he raised the question in what direction will a body move if it is influenced by forces acting from the centre of a body in an angle similar to the sides of the letter V. He did not answer this question completely, but he did suggest the answer close enough to be credited with the discovery. It was not developed and stated as a principle until about ninety years later, when Pierre Varignon set it forth in a paper before the Paris Academy, in 1687. In the same year Sir Isaac Newton published his "Principia," in which he established this new method of computing the action of forces from his observations and theories of moving bodies. This principle is now known as the "triangle of forces." Newton offered the idea that if a body in space were acted upon by a pushing force, it would move in a straight line, but if at the same time another force acted upon it, at an angle to the first force, the body would take an intermediate course, called the resultant path. This path was graphically determined by first drawing a picture of the two forces. They were represented by lines which symbolized their direction, like a V outward from the body. Their magnitude was described by drawing them to a certain scale which corresponded to the number of pounds of their action. When this unequal-sided V was drawn, a parallelogram was constructed with it by drawing another V upside down, joining the open ends. Now Newton deduced from his three fundamental laws of motion, that the diagonal of this parallelogram was the resultant path along which the body would move when acted upon by the two forces. Its length also was the magnitude of the resultant action of the two forces along this line.

But Pierre Varignon, in his book, states this in a much simpler way. Many of our modern text-books on mechanics have copied his statements, and it is well to know something of what he says. Therefore we are giving here an interpretation of one of his diagrams.

The body marked *A* in the diagram is acted upon by two forces, suggested by the two hands with pointed index finger. One of these forces pushes the body along the line,

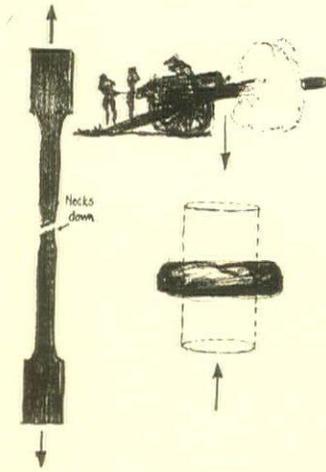
slanting downward and to the right, called *A* to *B*. The other force pushes the body along the line, slanting downward and to the left, called *A* to *C*. Imagine that the body moves along the line *A-B*, as though sliding along a stick. Now also imagine that the stick is sliding along the line *A-C*, keeping its same angle all the time to *A-C*. Assume that the stick reaches *C* at the same moment that the body reaches point *B*, at the end of the stick. Now where will the body be? It is obvious that it will be at point *D*, in the diagram. And what will be its path in travelling? The diagonal of the parallelogram, or the line from *A* to *D*.

The velocity of the moving body depends upon the size of the pushing force behind it. The diagonal, then, shows the proportional relation of the velocity of the resultant to the original forces, and likewise the proportional relation of their size or magnitude. Thus if line *A-B* is drawn to represent 100 pounds at a certain scale, and line *A-C*, 120 pounds, then the length of the diagonal at the same scale is the size or magnitude of the resultant.

This method of computing the direction and size of the resultant of two forces acting upon a body is called the principle of the triangle of forces, because instead of completing the parallelogram each time, it is only necessary to draw one-half of it, or the triangle represented in the diagram we have been discussing, called *A-C-D*. This, of course, is only a short cut to eliminate unnecessary labor in arriving at results.

This method of determining the size and direction of the resultant of two forces acting upon a body can be applied over and over again, step by step, to find the resultant of many forces working upon a body, provided these forces all work through the same point in a body. This method of thinking made possible the invention of the truss, a structural framework that has become an indispensable feature of modern buildings. Before men were able to think of the action of forces in this way, they were unable to imagine a trussed structure. The so-called timber trusses, used in mediæval times to cover churches, were not trusses at all, in the modern sense of the word. The hammer-beam truss was merely an arch of wood, and did not possess the structural secrets of a modern truss. The clumsy form of timber framing that was used over the vaults of French cathedrals would be silly to use to-day, when we know more about the action of forces in a truss. It is amusing to read the excitement of some historians over the discovery of bronze trusses, used by the Romans, when we note that the trusses are not trusses at all.

No, the ancients could never have thought of a framed structure as we do, to-day, because they did not possess the knowledge. And yet, strange to say, the coming in of this new way of thinking has never been heralded by historians of architecture. We have searched many of their works, but we have not found any mention ever given to this new and revolutionary idea, applied to building construction. When was the first real truss built, according to these principles? No historians mention it. Even the Encyclopædia Britannica gives only a vague light upon it, saying that braced trusses were built for some of the early railroads. It is quite evident that this new knowledge of construction slipped into the scheme of things without cre-



A body acted upon by a force either moves or changes its shape

ating much comment concerning its revolutionary character. And yet it is one of the most important events in all the history of construction and architecture, for it represents the turning-point, when builders began to be able to reason about their structures before they were built. It marks the beginning of the age when structural forms and materials were to be examined in the laboratory, so that their actions when used in a building could be predicted. It ushers in the day when men can build great towers and wide spans, and have no superstitious fears that the jealous gods may cause them to fall.

Swedish Architecture

THE exhibition of drawings of Sweden by the eminent Swedish architect, Ferdinand Boberg, at the Brooklyn Museum, will continue until January 11, 1926.

Some of Mr. Boberg's work is shown in the book recently published by Charles Scribner's Sons on "Modern Swedish Architecture," together with important work by other Swedish architects.

Announcements

The office of Arthur W. Angel, Architect, is now located at 3400 East Fifth Street (Fifth and Lorena), Los Angeles. Former address, 3404½ Whittier Boulevard.

Felix P. McKenna, Jr., and Thomas H. Irving beg to announce the formation of the partnership of McKenna and Irving, Architects, 15 Park Row, New York City, to continue their practice of architecture. They will give the same undivided attention to all ecclesiastical work entrusted to them as they have conscientiously done in the past when Mr. McKenna was practising his profession in partnership with Elliott Lynch and Mr. Irving was managing the New York office of Emil G. Perrot, of Philadelphia, Pa.

For a Better Knowledge of Brickwork

D. KNICKERBACKER BOYD, architect and member of the firm of Boyd, Abel & Gugert, Philadelphia, is chairman of the Committee on Promotion of Knowledge of Brickwork of the American Society for Testing Materials, and is therefore especially fitted to discuss brickwork.

According to Mr. Boyd, any requirements for an individual brick should be based upon the performance expected of the collective units when assembled under actual service conditions in the form of a wall or pier rather than upon the performance of the unit itself, and then such requirements should be workable and elastic enough to provide for the selection of the different grades of brick common to each locality and suitable to appropriate conditions of use.

As bricks are used for foundations, bearing-walls, curtain-walls, party-walls, fire-walls, and piers vary universally, the physical requirements for each purpose could readily vary considerably. It has been found that different bonds, or methods of laying the brick, influence the strength of the wall to a great extent. All of these things and many others must be fully studied and considered before a specificational requirement can be considered final. Comparatively few tests on walls have been made and many more are needed.

There is one factor which seems to have great bearing on the interpretations of laboratory tests of brick in reference to absorption and freezing and thawing. Practically all tests that have been made heretofore have been made on new brick. There are, however, thousands of buildings in this country in which brick has been subjected to the rigors of a hundred and more severe winters and an equal number of torrid summers. By testing these bricks, when

they are available, a knowledge of how freezing and thawing has really affected brick might be obtained, and this information used as another basis on which to interpret the results of laboratory tests and arrive at a conclusion which will be substantiated in actual practice.

Take as a well-known example Independence Hall, Philadelphia. This building has been subjected to over a hundred and fifty winters of freezing and thawing and the bricks are apparently in perfect condition. It is not known how laboratory tests might have classified these bricks, but they might not have indicated this wonderful life and service rendered to date with apparently centuries yet to go.

The Increasing Use of Color and Varying Wall Textures

AMONG the many things which go to make a house individualistic is color. Home builders and architects have long realized this fact, as has been demonstrated by our continued use of color on frame houses. We painted to preserve the exterior of our houses, but we also used color because of the distinction and air of difference such painting gave our homes. It is only natural, then, that color in stucco houses should show development.

In the stucco house, the entire exterior surface is susceptible to color treatment. The relation of the color of the wall to the color of the roof, and to the setting of the house, are important. Through this use of color we give our home an air of belonging to its site, give it an expression of our own personality, accentuate the architectural beauty of the structure.

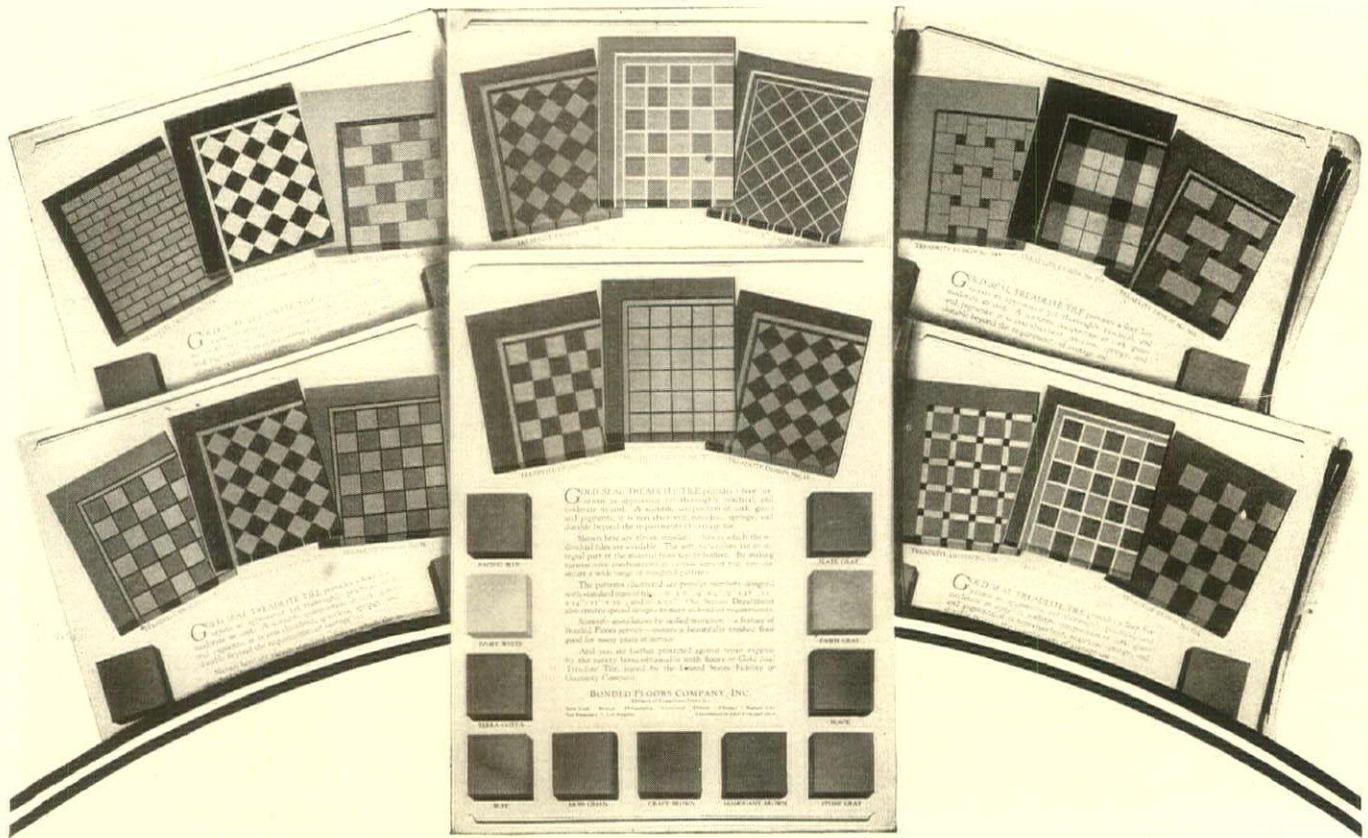
But, unlike houses of other materials, use of color does not exhaust the possibilities of treatment in the stucco house. Combined with this wide range of color is textural treatment. By the use of the steel trowel, the wood float, the carpet or burlap covered block, even the hands, an almost limitless variety of surface textures is possible.

Walls can be given lights and shadows, reliefs and tones through a manipulation of the stucco coat. There are delicate, concise textures, for the small cottage or bungalow, and there are also bold, sweeping textures for the large or rambling home. These various textures can be intimately incorporated with the architectural style of the house.

To-day we are not surprised to see stucco houses of pink, buff, green, red, black, even blue, and all the intermediate shades and colors. Whole districts of stucco houses, containing almost every conceivable color for houses, have sprung up over the country. And without exception there is no color or note to mar the beauty of the whole.

Yet even here the possibilities of stucco color and texture have not been exhausted, for these colors, these textures, these lights and shadows are permanent. There is no need for annual freshening, no cause for worry because of fading colors, no expensive maintenance, for with Portland cement stucco these features are as permanent as the concrete dams, bridges, and buildings which dot the country.

New conceptions of home beauty have come into being with this growing use of colored stucco. Color and texture in stucco have brought into favor architectural styles long considered impossible of transposition. This movement toward more diversified architecture has brought forth English, French, Spanish, Italian, and many other Old World styles of home architecture, and not only for large and pretentious homes, but for the smaller cottage and bungalow these styles are now being adopted. The result has been an increased beauty, more livableness, greater fire safety, and more permanent homes.



For Your Information File—

These six pattern sheets have been prepared to give architects an idea of the all-round adaptability of floors of cork composition tile.

Each sheet reproduces eleven standard colors in which Treadlite Tile is made; shows three attractive examples of how the various colors of individual tiles may be combined; and illustrates a typical installation.

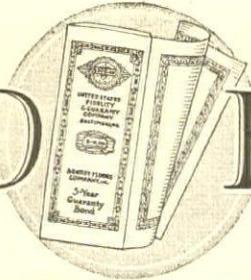
The architect will find this series of color sheets useful in many ways. It will help him to clarify his thoughts on floors and to visualize accurately how various combinations of Treadlite Tile look when installed. It will give him something tangible to show clients who have to be informed on the idea of artistic, colorful floors. It will help him to choose or create suitable floor designs for interiors requiring decorative floors.

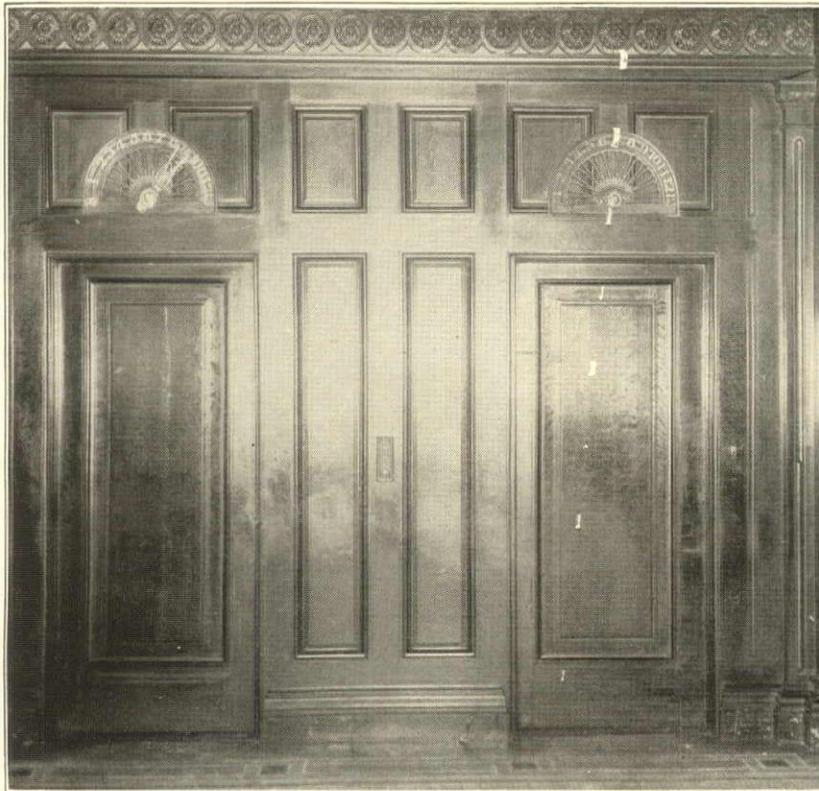
We will be glad to mail you a complete set of these useful pattern sheets. Working specifications on *Gold Seal Treadlite Tile* are also available, if you wish.

BONDED FLOORS CO., INC.

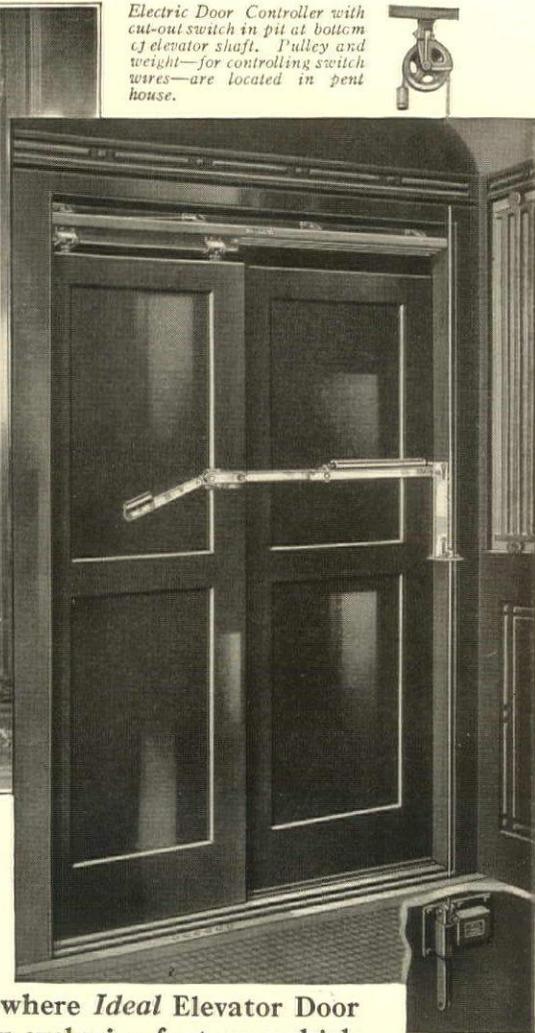
New York ✕ Boston ✕ Philadelphia ✕ Cleveland
 Detroit ✕ Chicago ✕ San Francisco

BONDED FLOORS

Resilient Floors  *for Every Need*



Electric Door Controller with cut-out switch in pit at bottom of elevator shaft. Pulley and weight—for controlling switch wires—are located in pent house.



“A Protection from Noise, Dirt and Accident”

The statement invariably made by building managers, where *Ideal Elevator Door Hardware* is installed. *Ideal* equipment possesses many exclusive features which contribute toward lower installation costs; greater ease of operation; greater safety, cleanliness and quiet; and lower maintenance. Write for a demonstration and full information on this superior equipment.

A. M. Gutterson, Manager, The Prince George Hotel, New York City, says:

“The central yet quiet location of this 1,000-room hotel is a feature that appeals particularly to our guests. Naturally, we make every effort to avoid all unnecessary noise inside the house.

“Richards-Wilcox elevator door hangers and closers insure our guests freedom from the annoyance of noisy, banging elevator doors. This equipment was installed 8 years ago on 64 doors and has rendered the most satisfactory service. Ball bearings, and an even distribution of weight which prevents sagging, result in doors that operate easily and quietly. Moving parts are covered, excluding dirt which would result in excessive wear, and protecting passengers and operators from dropping oil or grease. The door closers function effectively; and with the adjustable

liquid checks, give us doors that close rapidly, yet without banging.

“The Inter-Lock feature cuts off all power from the car by breaking the circuit as soon as a door starts to open. This is the most efficient safety device of its kind that we know about, for it absolutely prevents starting a car until the door is entirely closed. Having only one switch for each shaft prevents trouble. These features make a substantial yearly saving for us in liability insurance premiums.

“The perfect operation of our R-W equipment not only contributes to the comfort and safety of our guests, but also saves us money. But little maintenance is required and repairs are almost never necessary.”

Richards-Wilcox Mfg. Co.

“A Hanger for any Door that Slides.”

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(623)

Please mention ARCHITECTURE in writing to manufacturers

The Leanto Adjoining the Garage

WITH a Southern side available, the two bench Leanto against the garage has three distinct advantages.

It is more economical to build than an even span house of same width. The protection of the garage from North winds makes it easy to heat. The one heating plant can take care of both, with very little additional fuel.

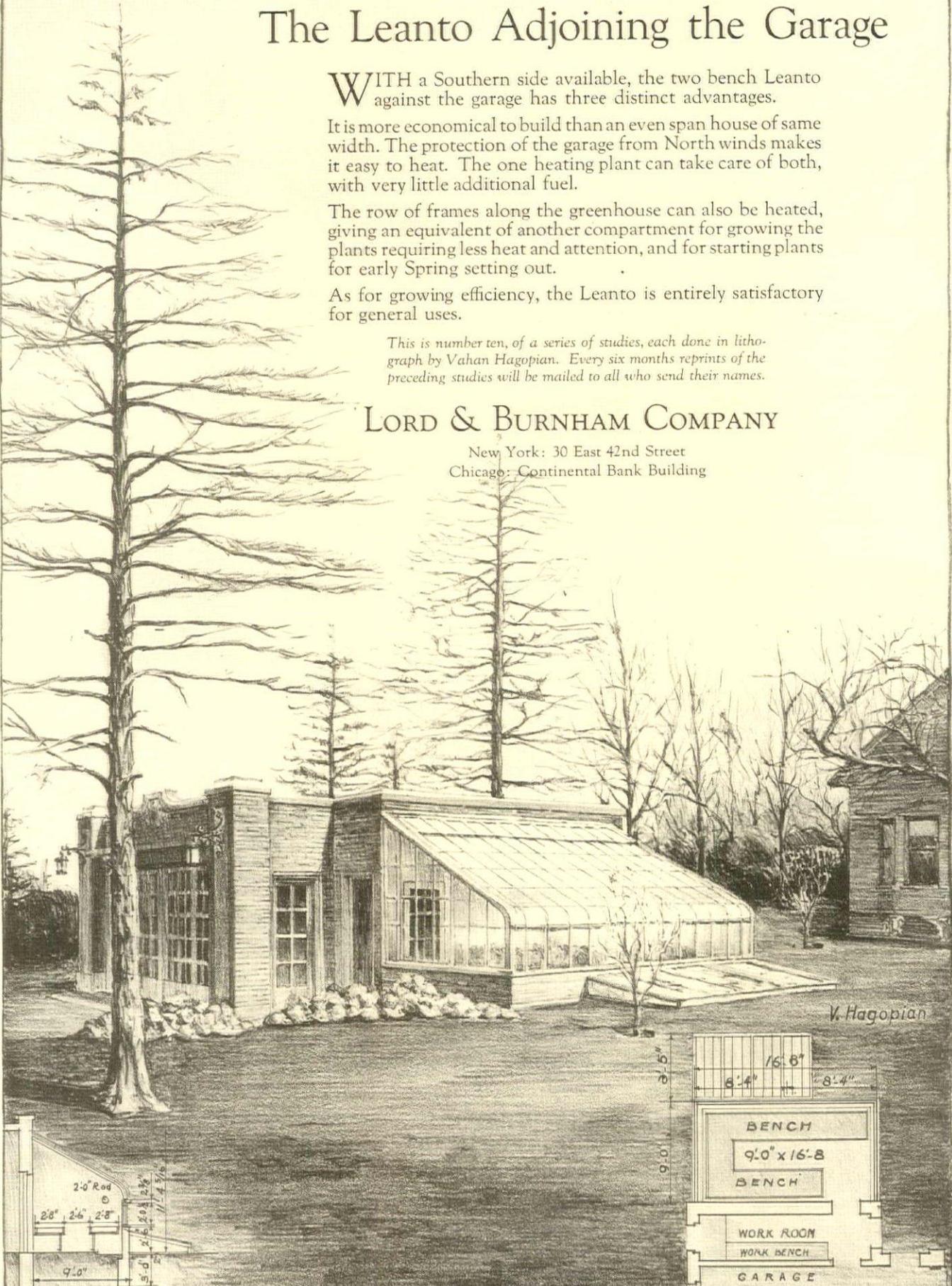
The row of frames along the greenhouse can also be heated, giving an equivalent of another compartment for growing the plants requiring less heat and attention, and for starting plants for early Spring setting out.

As for growing efficiency, the Leanto is entirely satisfactory for general uses.

This is number ten, of a series of studies, each done in lithograph by Vahan Hagopian. Every six months reprints of the preceding studies will be mailed to all who send their names.

LORD & BURNHAM COMPANY

New York: 30 East 42nd Street
Chicago: Continental Bank Building



GLASS ENCLOSURE STUDIES, PLATE N° 10

Please mention ARCHITECTURE in writing to manufacturers



Detail of Terra Cotta windows, Palazzo Municipale, Piacenza, Italy,
erected in 1281 A.D.

THE DURABILITY OF TERRA COTTA

In 1281 A. D. the Palazzo Municipale was erected in Piacenza in stone, brick and Terra Cotta. The Terra Cotta architraves start from the stone base, enclosing a series of similar windows throughout the entire facade and are in perfect condition after six hundred and forty-three years exposure.

Modern Terra Cotta in its perfected scientific process of manufacture retains all the durable properties of the earlier product. The problem of a corresponding durability rests in its appropriate structural relation with other materials under the differing principles of present day construction.

NATIONAL TERRA COTTA SOCIETY

19 WEST 44th STREET

NEW YORK, N. Y.

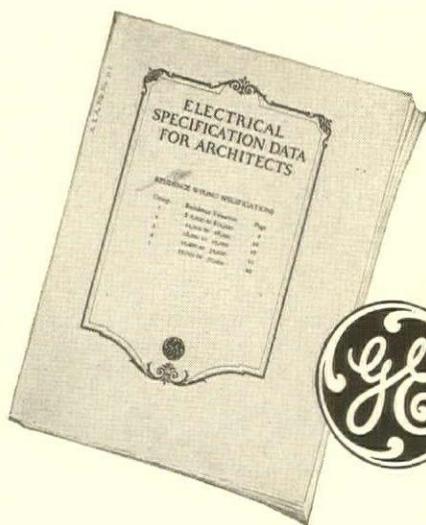
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Write for your copy of
the G-E Specification Data
Book for Architects.

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Merchandise Department
General Electric Company
Bridgeport, Connecticut



- 1 You simply copy from the Data Book the G-E Wiring System specifications for the particular class of house you are building—noting any additions or exceptions. Every piece of material needed in a complete wiring system is pictured in the book, and you get exactly what you are ordering without going into tiny technical details.
- 2 The contractor, guided by a Data Book that is a companion to the architects', bids on exactly what you order—and presents the bid on a new G-E Proposal Form that you can read at a glance.
- 3 You get truly competitive bids—on materials of highest quality—all guaranteed by General Electric. And the house you are planning is wired to the highest satisfaction of your client.



WIRING SYSTEM

—for lifetime service

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. A. I. A. File No. 31c

Please mention ARCHITECTURE in writing to manufacturers



BISMARCK Hotel, Chicago: C. W. and Geo. L. Rapp, Chicago, Architects; Weil-McLain Co., Chicago, Plumbing Jobbers; E. Baggot Company, Chicago, Plumbers

CHICAGO will soon have another great hotel—the new Bismarck, now building. Rising eighteen stories and planned for the later addition of eighteen more, the Bismarck is an integral part, together with an office building and a theater, of a greater structure which occupies an entire city block in the heart of the “Loop.”



The Seal of Kohler Village
There is much to interest the architect, the landscape architect, and the town-planner in that unusual community where Kohler plumbing fixtures and private electric plants are made

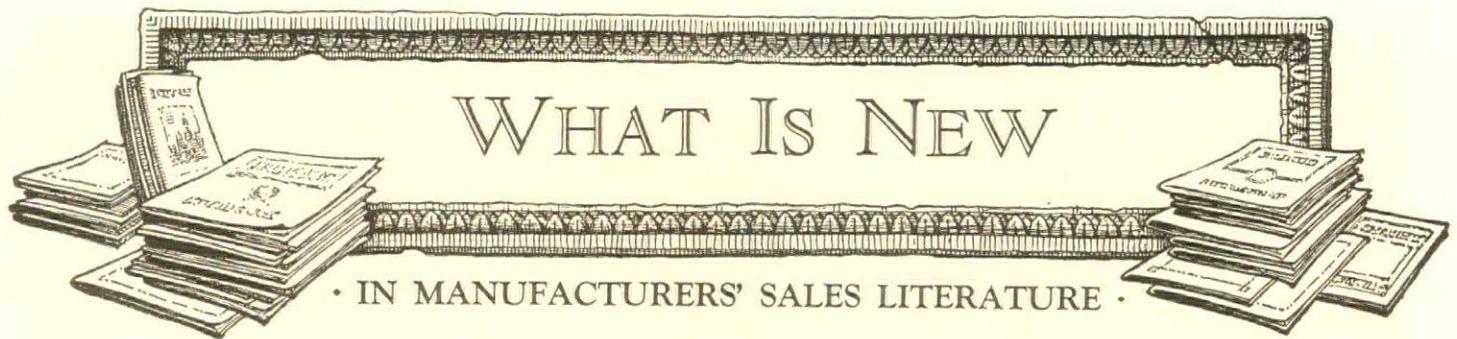
The Bismarck's 492 built-in baths are of Kohler make and “Viceroy” pattern—a not undeserved tribute to the beauty and excellence of this ware, and, more particularly, to the exceptional quality and uniform, immaculate whiteness of the Kohler enamel.

KOHLER CO., *Founded 1873*, KOHLER, WIS.
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KOHLER OF KOHLER

Plumbing Fixtures

Please mention ARCHITECTURE in writing to manufacturers



Architects and every one interested will find here the latest and most up-to-date information on building equipment. These publications may be had by addressing SERVICE DEPARTMENT, ARCHITECTURE, 597 Fifth Avenue, New York, or by addressing the companies listed below, in which case please mention ARCHITECTURE

A. C. HORN COMPANY

A handsome new book, the finest of the printer's art, has just been published concerning Keramik. It shows a group of color plates and takes up a detail description of Keramik and Horn's Water-Proofings.

PLATE GLASS MANUFACTURERS OF AMERICA

"The Low Cost of Dignity and Beauty" is the title of a booklet just published by the Plate Glass Manufacturers of America.

The booklet shows by means of photographs and text the added architectural distinction achieved by the use of plate glass. An added feature of interest to all architects and builders is a glossary of terms used in specifications for plate glass.

MANHATTAN TERRAZZO BRASS STRIP CO.

This concern has now established its new plant and offices at 155 East 128th Street, New York.

NATIONAL LUMBER MANUFACTURERS ASS'N

A survey of fire losses in residences, prepared and made public by Robert Beck, president of the Longacre Engineering & Construction Company, New York. This survey covers many sections of the country and is perhaps the best of its kind that has been compiled up to this time.

PUBLIC RELATIONS, INC.

A new circular says: "It has been estimated that if one-third to one-half of the owners of medium-priced homes in the \$5,000 to \$10,000 class would insulate against the escaping heat units, their collective saving, at present prices of anthracite and bituminous coal, would be the interesting sum of \$45,000,000 to \$70,000,000 annually."

INDIANA LIMESTONE ASSOCIATION

"Cleaning a Stone Building with Steam" has lately been issued in conjunction with the Department of Commerce.

"COLD WEATHER MORTAR"

This new bulletin has just been issued by the National Lime Association. It describes the kind of mortar necessary for winter construction.

"THE MONOGRAM"

This very interesting house organ published by the General Electric Co. always contains much of interest to architects.

CRANE COMPANY

The "Valve World" for December contains a contribution on the "Accuracy in High-Temperature Testing of Materials."

DU PONT TONTINE SHADE CLOTH

An interesting booklet and group of samples are available to the profession.

GENERAL ELECTRIC WIRING

The literature for the profession includes: "Data for Electrical Contractors," "Specification Data," "Special Electrical Data and Specifications for Architects."

STRUCTO SLATE

"Structural Slate in White or Any Color" is a new booklet published by the Structural Slate Co.

"SILENCE IS GOLDEN"

This catalogue explains the theory and practice of the Stevens System of Sound-proofing.

OIL BURNER BULLETIN PUBLISHED

A 28-page bulletin, thoroughly covering the methods and procedure in oil-burner testing wherever the burners are fired under boilers or in warm-air heating plants, has just been issued by the American Oil Burner Association, New York. The bulletin discusses such theoretical considerations as are needed for the practical application of the methods and procedure given, which apply for both industrial and domestic burners.

HOME COMPLETE EXPOSITION

The Indianapolis Real Estate Board has published its plan for the Fifth Anniversary Exposition, April 10-17, 1926.

METTOWEE STONE

A unique and beautiful rock furnished exclusively by the Vendor Slate Company for use in garden-walks, terraces, porch floors, and interior flooring of all kinds. Their circular entitled "In the Garden" illustrates numerous installations of "Mettowee Stone."

STANDARD PATTERNS IN FLOORS

The Norton Co. are publishing a series of separate pages of standard body and border patterns of their ceramic mosaic floors.

"TRIANGLE NEWS"

This interesting house organ contains an article by A. C. Borzner, A. I. A., in its November issue on "What One Architect Thinks About Our Stand on Fair Boiler Ratings."

DEPARTMENT OF COMMERCE

"The Progress in Eliminating Waste" has recently been issued.

"STUDIES IN POLYCHROMY"

"Atlantic Terra Cotta" contains this article, dealing with sculpture, by Leon V. Solon.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

The "Report of the Technical Research Committee" was issued a short time ago.

AMERICAN ZINC INSTITUTE

The latest issue of "ZN" contains an interesting article by W. R. Ingalls on "Zinc, Its Present Position and Prospects."

U. S. GYPSUM CO.

Special booklet presenting over 70 designs including the 28 award winners in the recent Structolite Contest will be sent to architects.

LORD & BURNHAM

Reprints of the studies in lithograph by Vahan Hagopian will be sent on request.

DAHLSTROM DOORS

Several pieces of valuable literature, prepared particularly for the profession, will be sent on request.

CRESCENT CORK TILE

United Cork Companies have issued a folder describing their products.

"KELSEY ACHIEVEMENTS"

This book is chock full of pertinent information for the architects' files.

"ARMSTRONG'S CORK TILE FLOORS"

This 32-page book illustrates the floors in color and contains complete specifications.

H. B. SMITH BOILERS

"Guaranteed Heating Satisfaction at a Minimum Cost" is just off the press. It is a timely discussion of boiler ratings.

VENTILOUVRE CO.

The new catalogue on the Panelouvre is a dandy and should be in every architect's hands.

TANGLDUST AIR FILTER

The Cooling Tower Co. has recently issued a circular on their new air filter.

NEW YORK BUILDING CONGRESS

A newly issued statement reproduces the speech of J. L. Eysmanns, delivered recently before the Congress.

WHAT IS AHEAD?

"What Is Ahead, More or Less Building?" takes up a survey of construction conditions. It is published by the Upson Company.

ELECTRICAL DRIVES FOR POWER PLANT AUXILIARIES

Electrical Drives for Power Plant Auxiliaries, a very opportune subject, is the title of a circular, 7381, recently issued by the Industrial Department of the Westinghouse Electric and Manufacturing Company.

HARTMANN-SANDERS

Catalogue B-47 of columns or the new Catalogue B-51 of Colonial entrances will gladly be sent on request.

"EXTERIOR LIGHTING FIXTURES"

Architects will find in this book complete information regarding exterior fixtures, produced by Smyser-Royer Co.

BOOKLET L-202

G. L. Miller & Co. in this booklet tell how the Miller plan of financing operates.

WINDOWS FOR SCHOOLS

"Austral Steel Windows for Schools," published by the International Casement Co., is of decided interest to architects.

UNIVERSAL SAFETY TREADS

A new booklet explains the qualities and application of these treads.

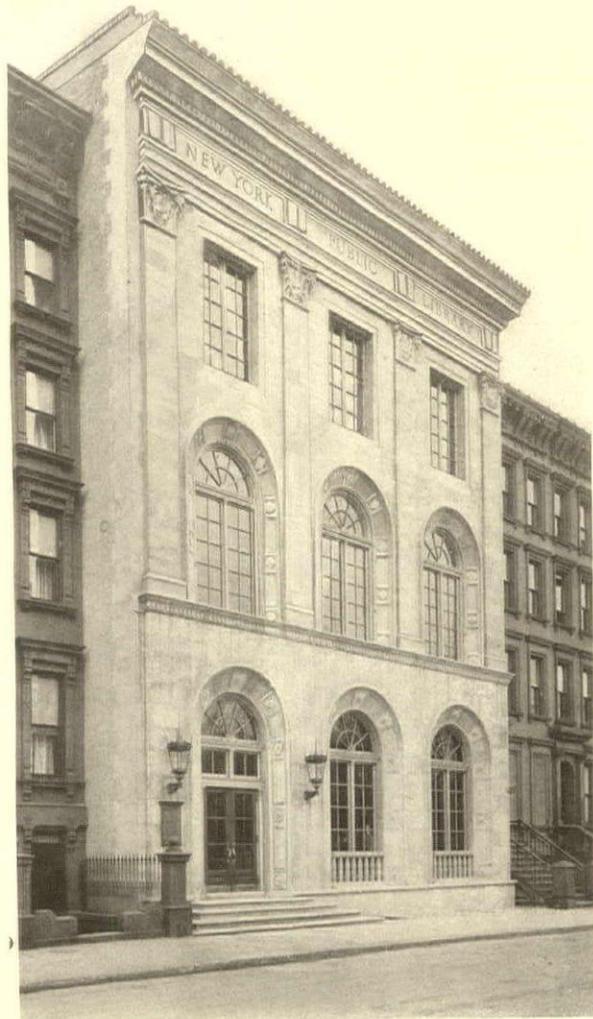
BOYLE'S BAYONNE CLOTH

Sample book "L" gives the architect the opportunity of examining Boyle's Bayonne Roof and Deck Cloth.

AUSTRAL WINDOW HARDWARE

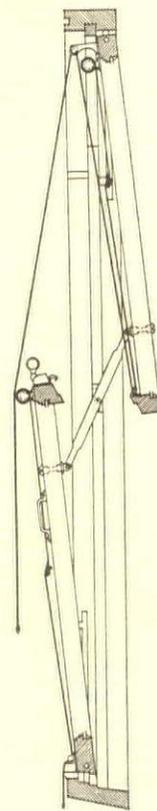
Wood-Rolled Steel Construction

Metal Covered-Hollow Metal Construction



New York Public Library, 9 West 124th Street.
McKim, Mead & White, Architects.

Where Quiet Is Necessary

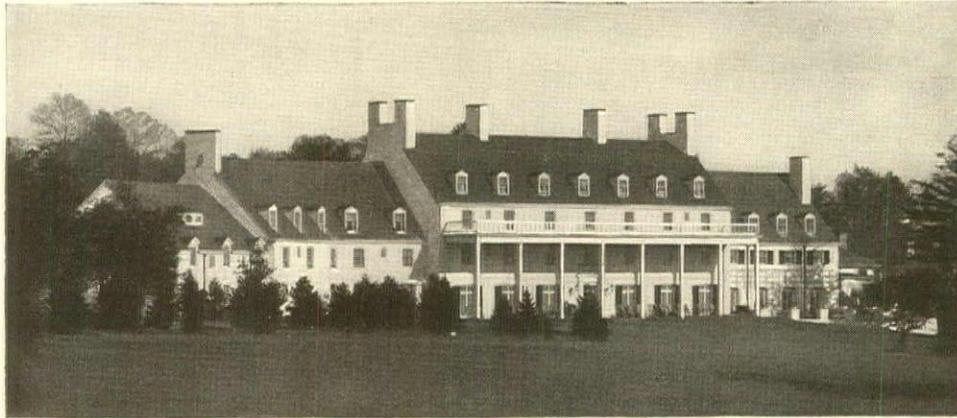


Section through window partly open,
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WHAT could be more distracting to the reader's attention than flapping shades and direct drafts! On the ordinary window the resistance of the shades to the incoming air causes them to flap and tear. On the AUSTRAL WINDOW separate shades are attached to the upper rail of each sash, making it impossible for them to become loose. Shades may be adjusted at any point, cutting off direct rays of light but allowing free ventilation without draft.

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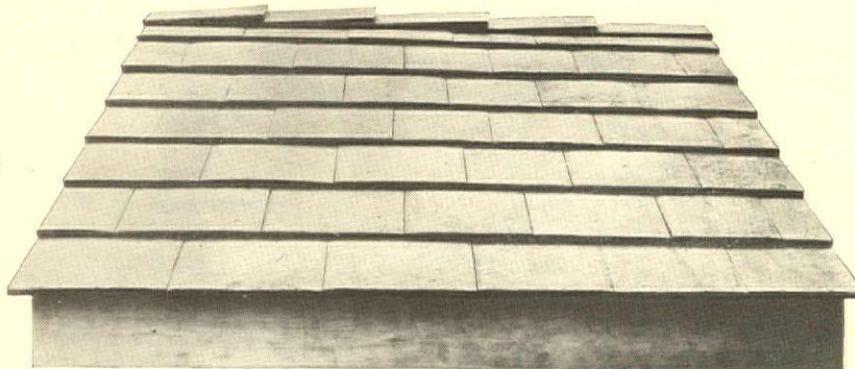
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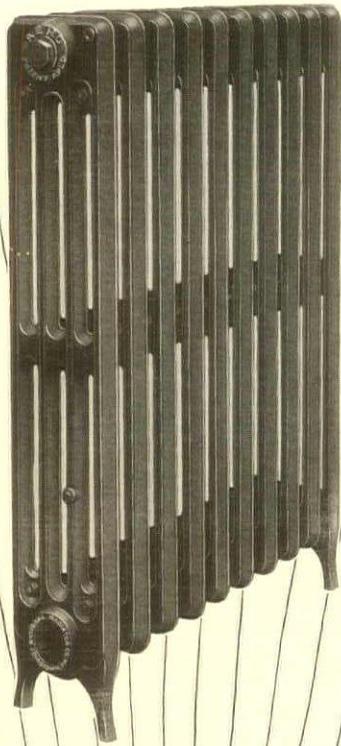
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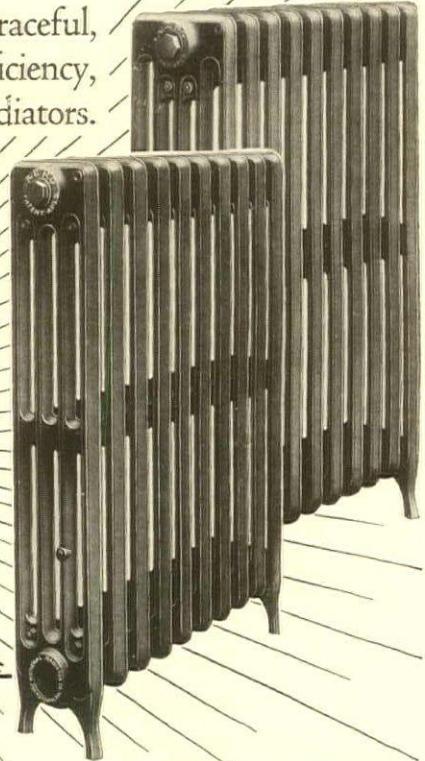
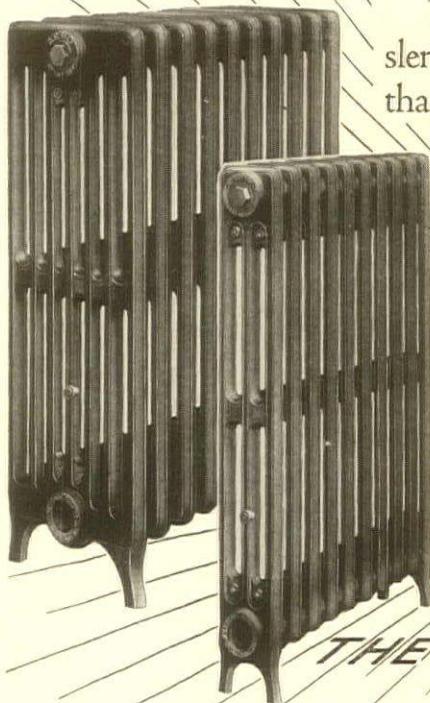
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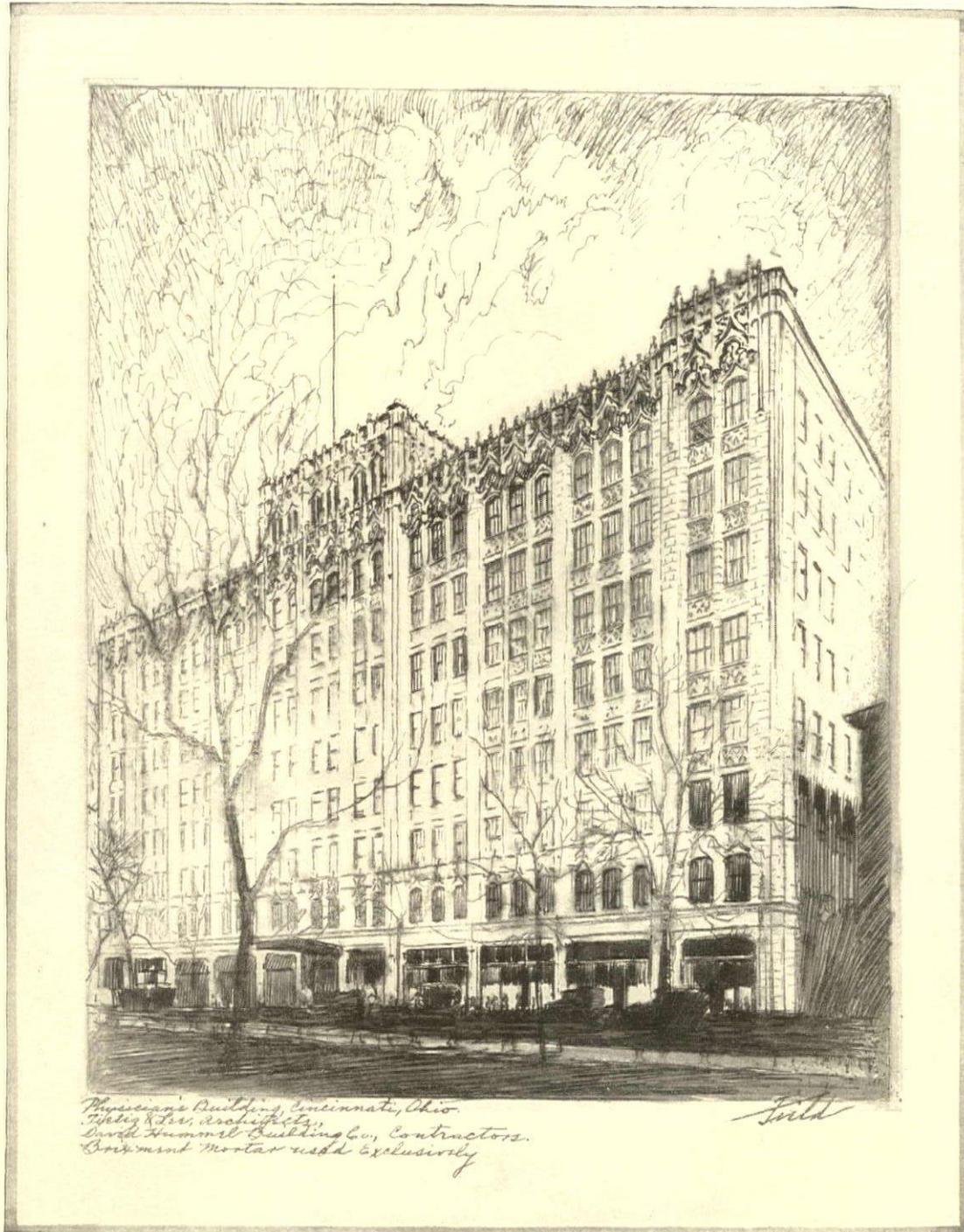


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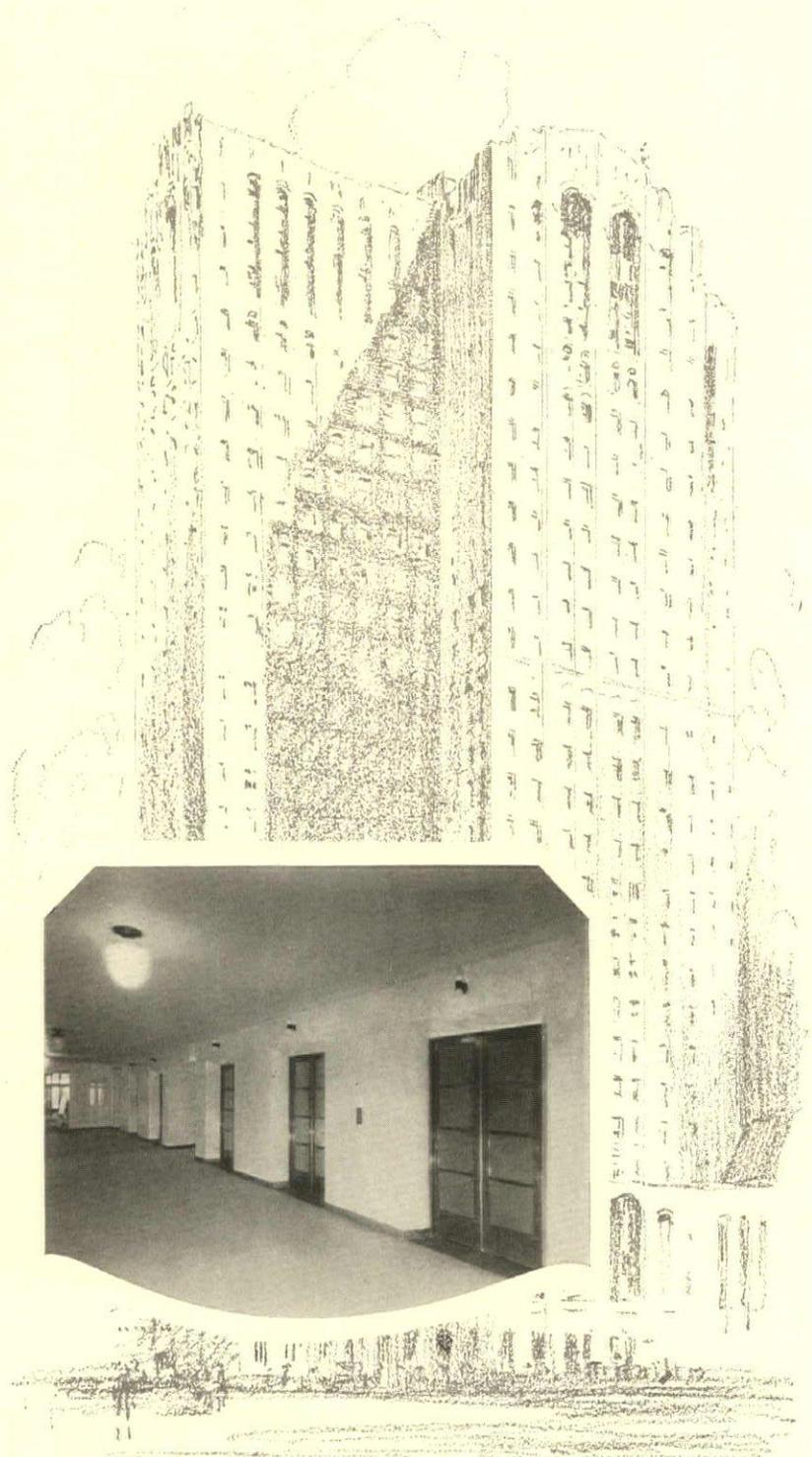


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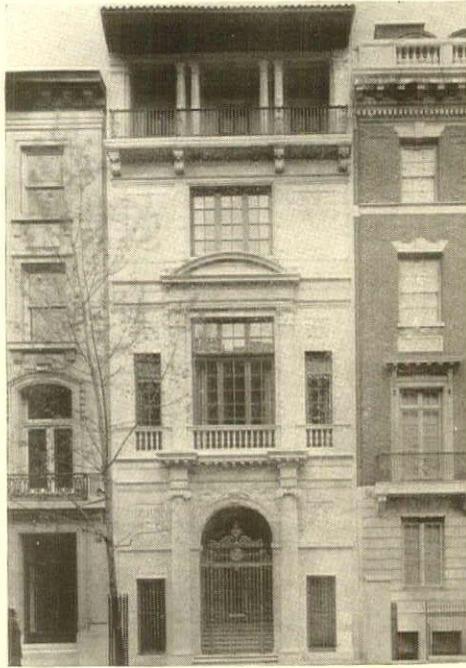
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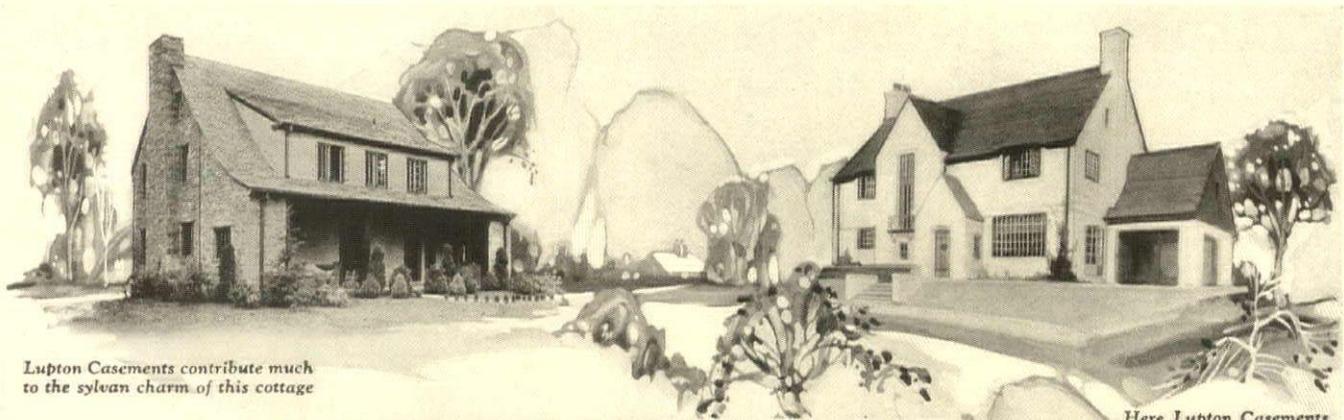
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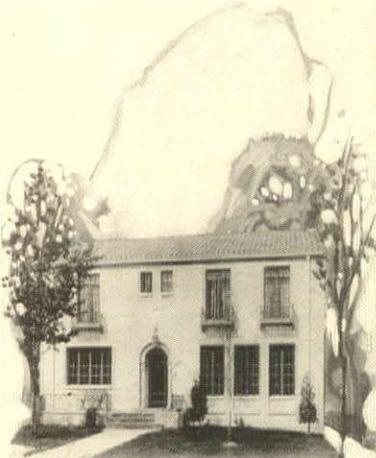
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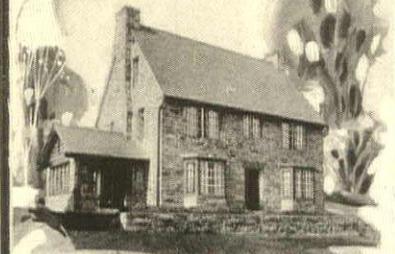
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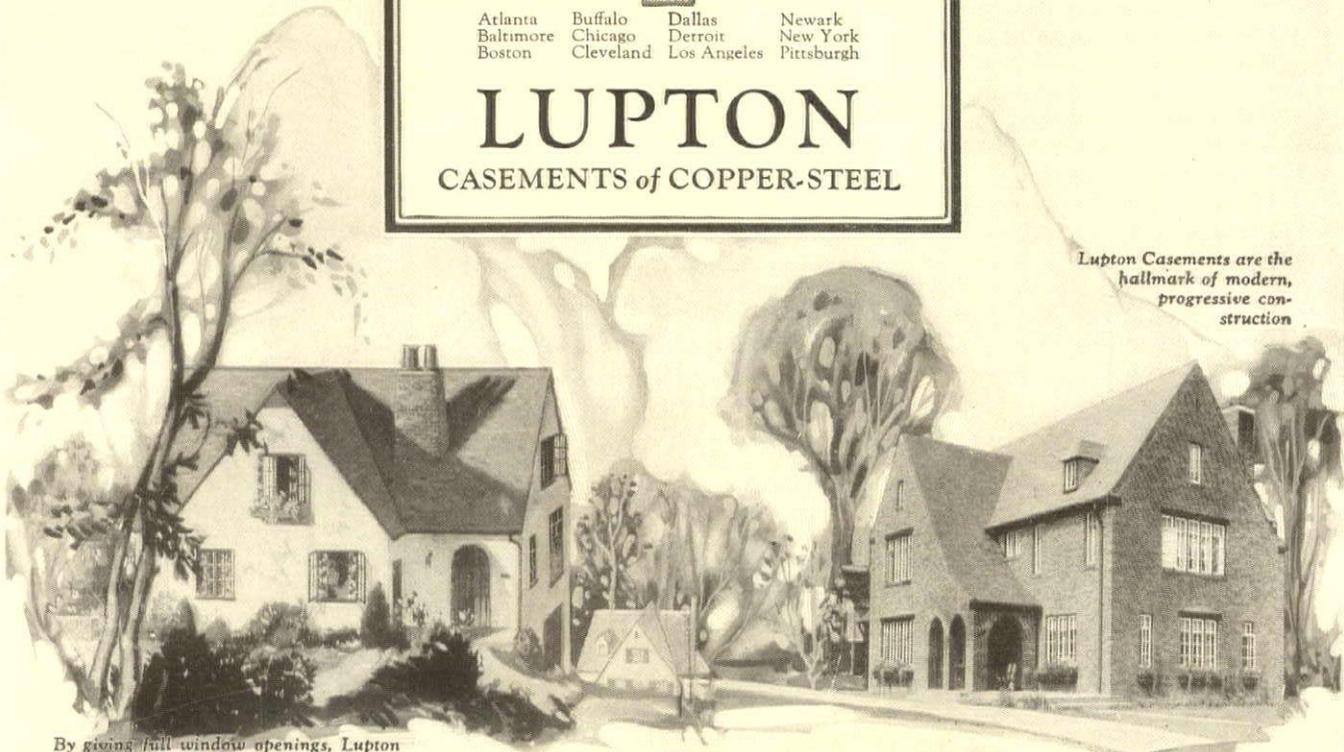
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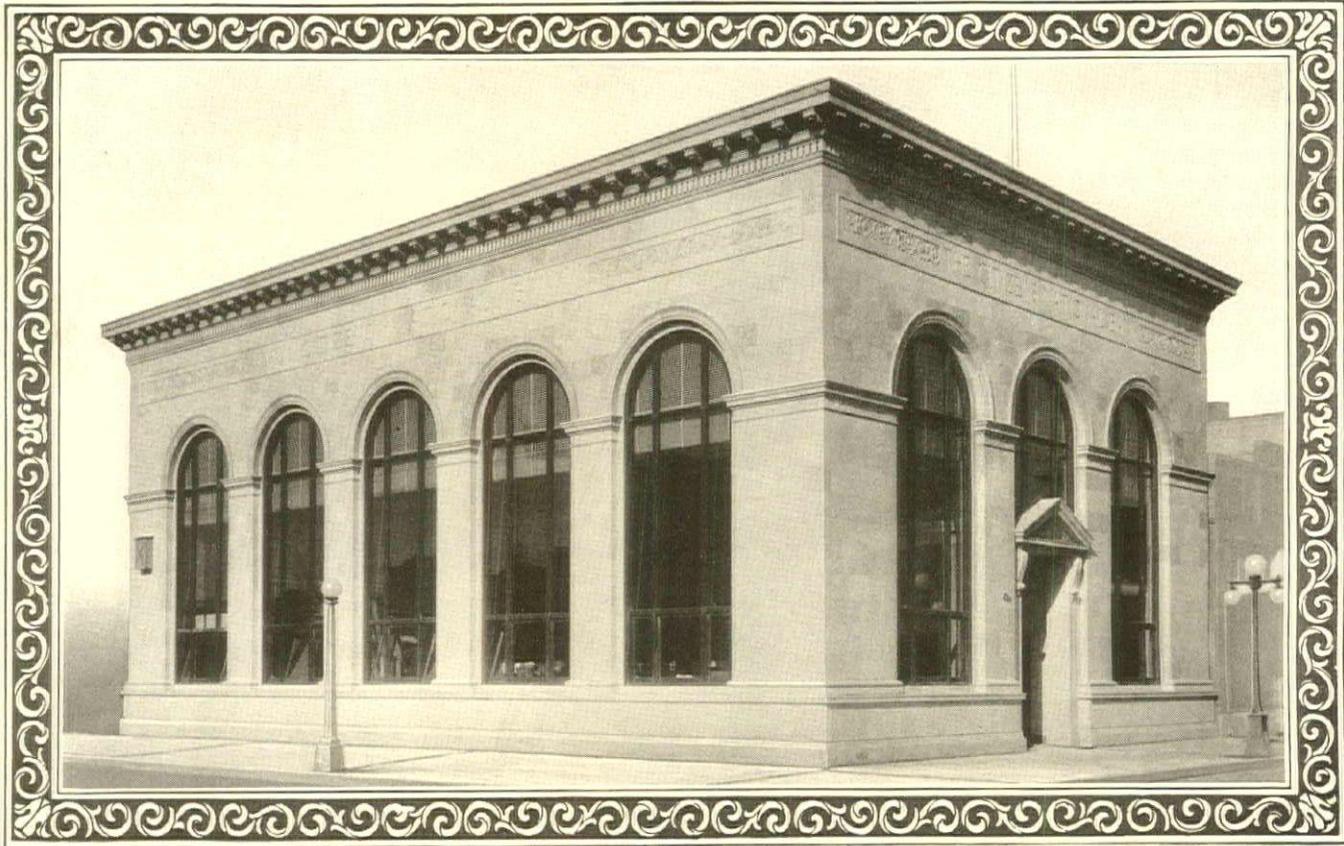
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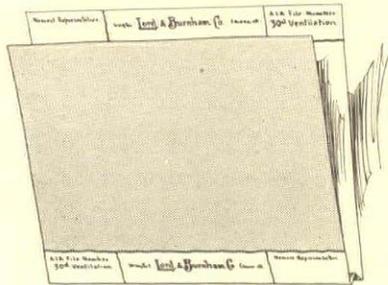
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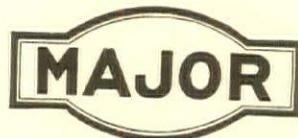
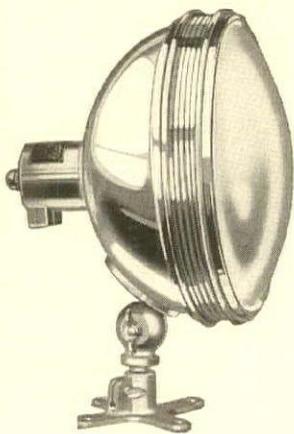
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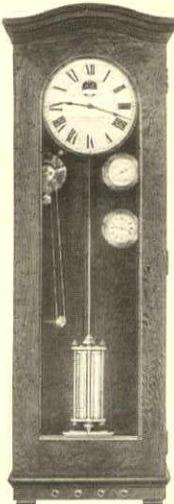
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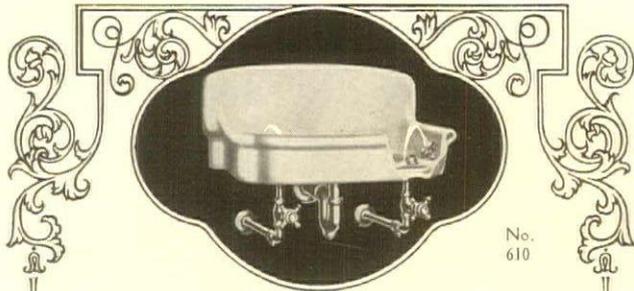
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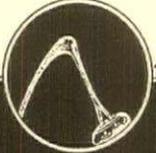
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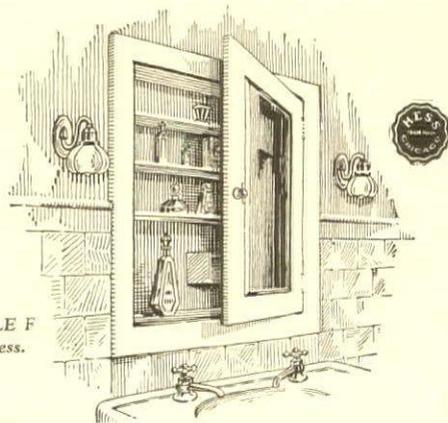
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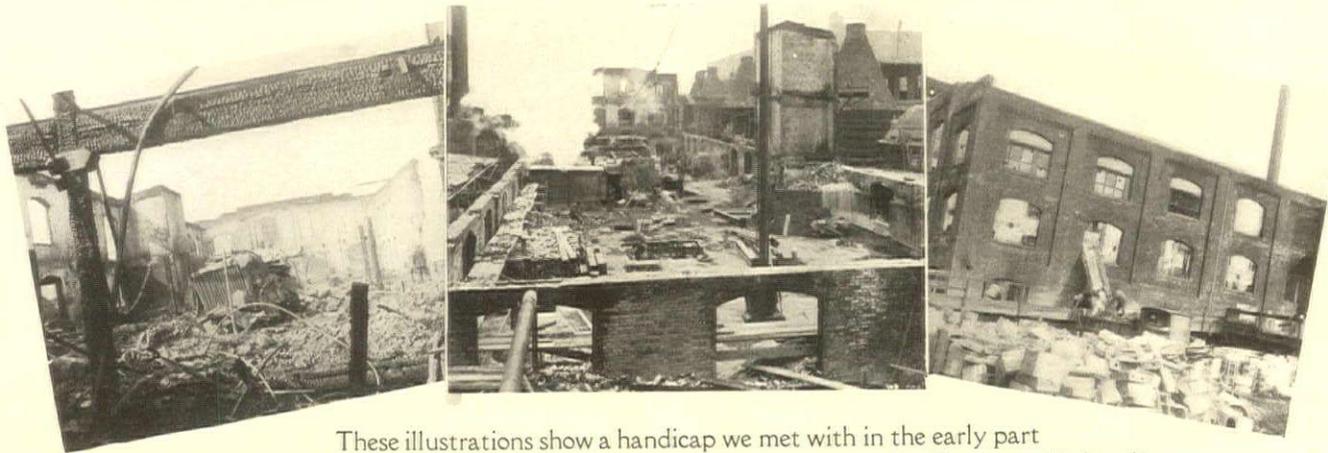
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BUILD WITH ARCHITECTURAL TERRA COTTA



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"Lattis-Trusses"
used in
Round Hill Land Corporation Riding Ring
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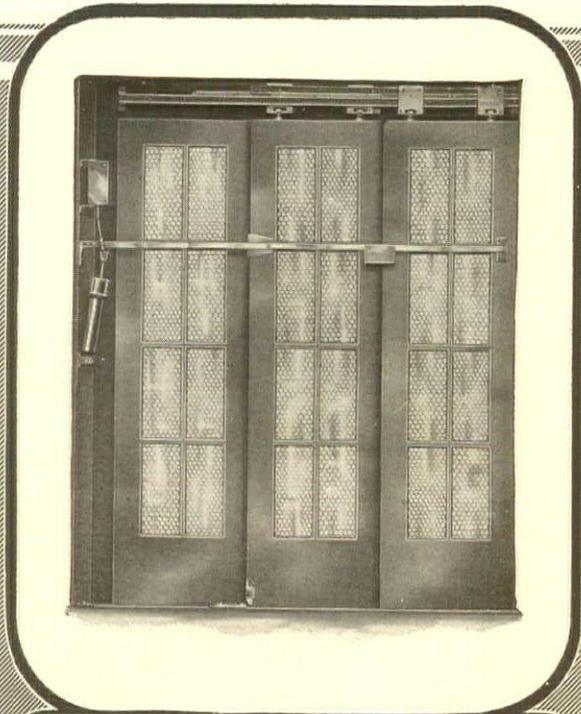
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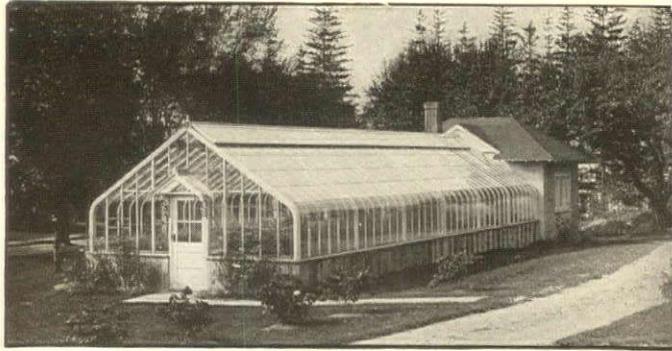
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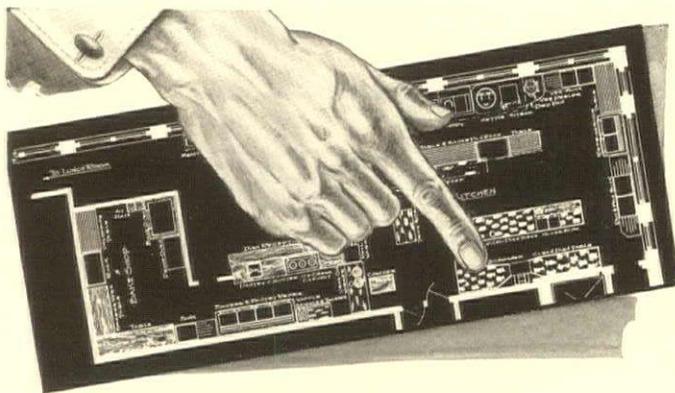
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JR237

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DESIGNERS - ENGINEERS - MANUFACTURERS
Lighting Equipment

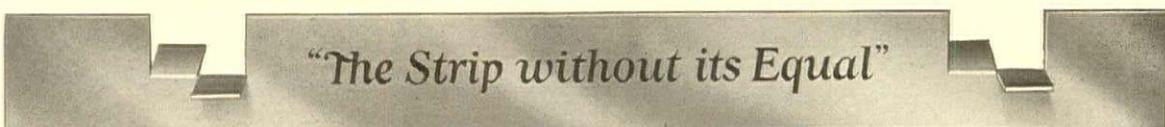


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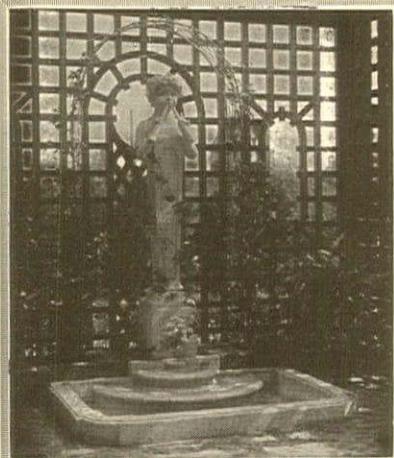


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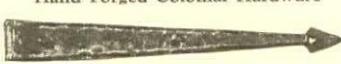
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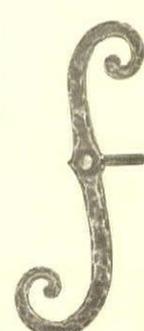
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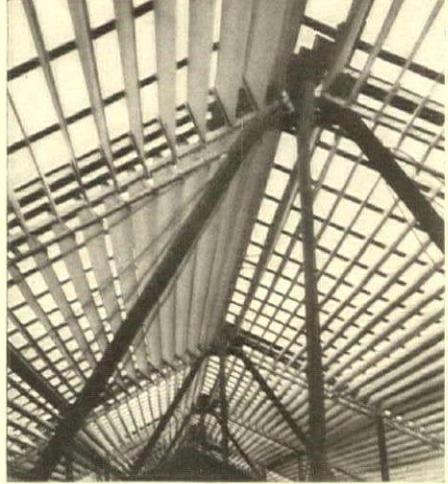
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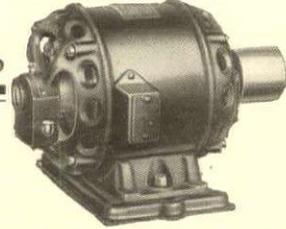
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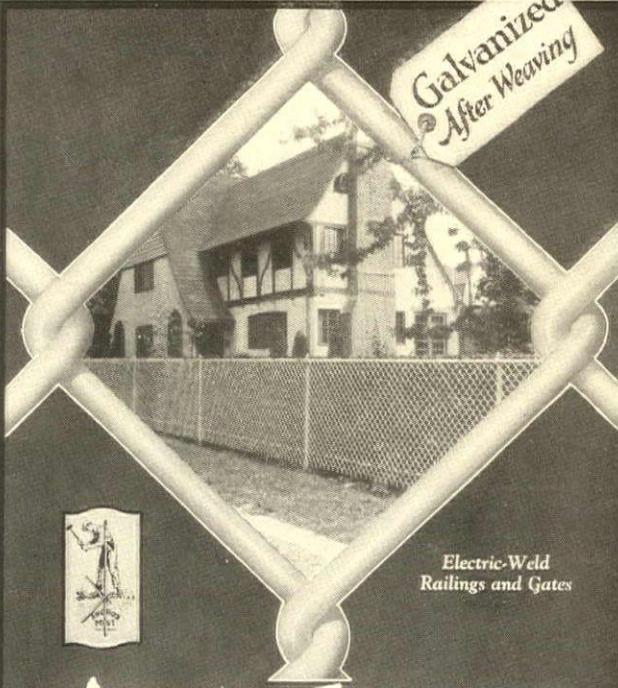
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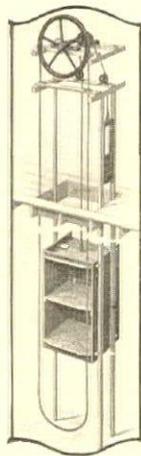
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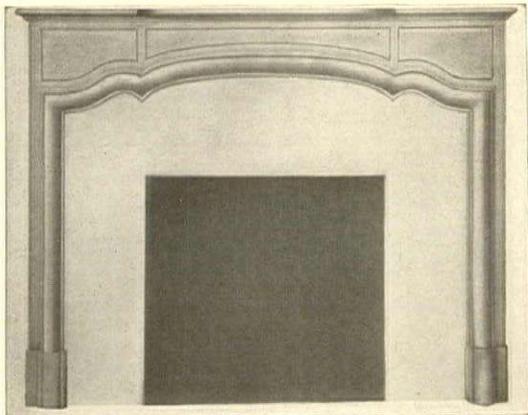
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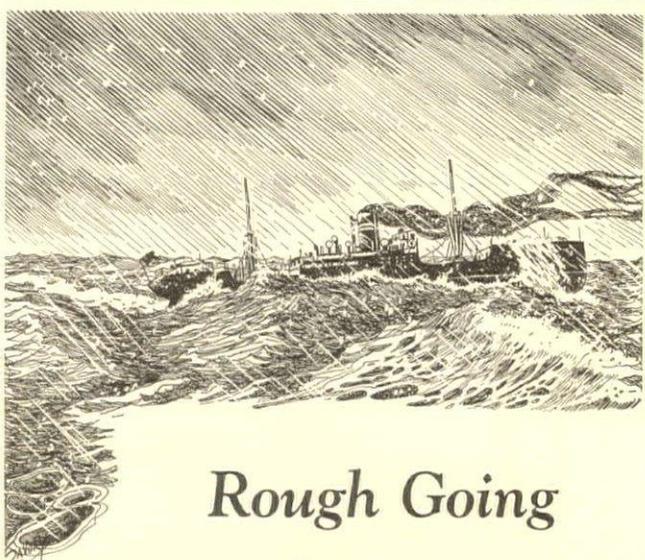
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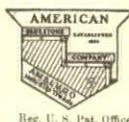


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Fig. 157
Note the construction of patent interlocking device used on Edwards Metal Shingles and Spanish Tile.

Fig. 367
Metal Spanish Tile for main part of roof.

Edwards "Queen Anne" Metal Shingles



RESIDENCE, SENATOR GEO. S. NIXON, RENO, NEVADA. EDWARDS METAL SPANISH TILE USED ON THIS BUILDING.

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When an Edwards Roof is laid, it is there to stay.

Send for our literature—it explains

The Edwards Mfg. Co.

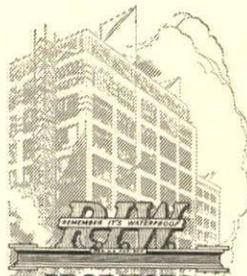
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Concrete Anti-Freeze and Accelerator

"R.I.W." Quick-Done



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PRESERVE METAL CONCRETE,
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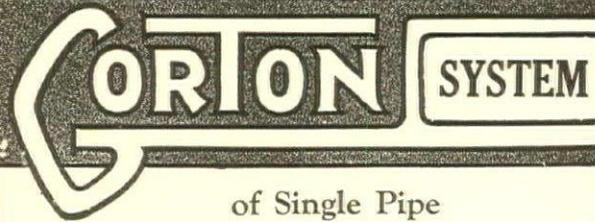
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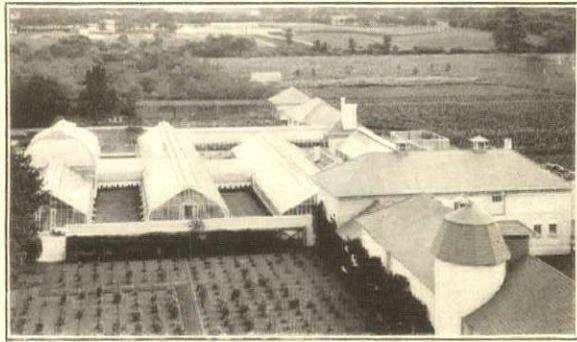
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204 A	1 1/2	6	8 3/4	3 3/4	5 1/2
205 A	2	6	9	3 3/4	5 1/2
206 A	3	5	10 1/4	3 3/4	6 1/2
207 A	3	6	10 1/4	3 3/4	6 1/2
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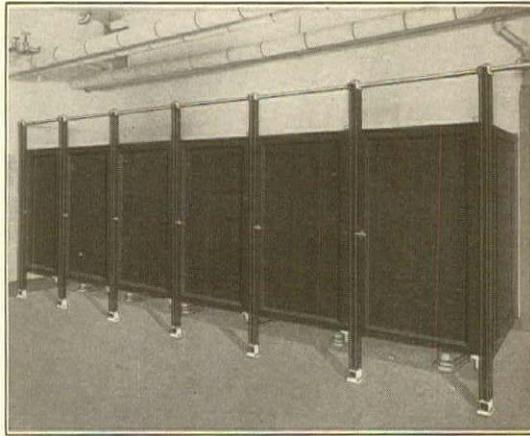
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Drop all waste here—then FORGET it!

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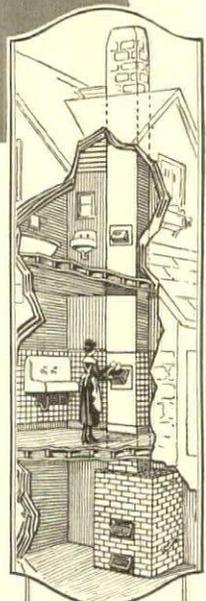
All waste—garbage, sweepings, tin cans, broken glass and crockery, papers, and the like—dropped through the handy hopper doors, falls to the brick combustion chamber, where an occasional lighting (no gas, oil, wood, coke or any fuel) is all that's needed. Metallic objects (tin cans and the like) are flame-sterilized for removal with the ashes.

See Sweet's, 1925, Pages 2800-01, or write

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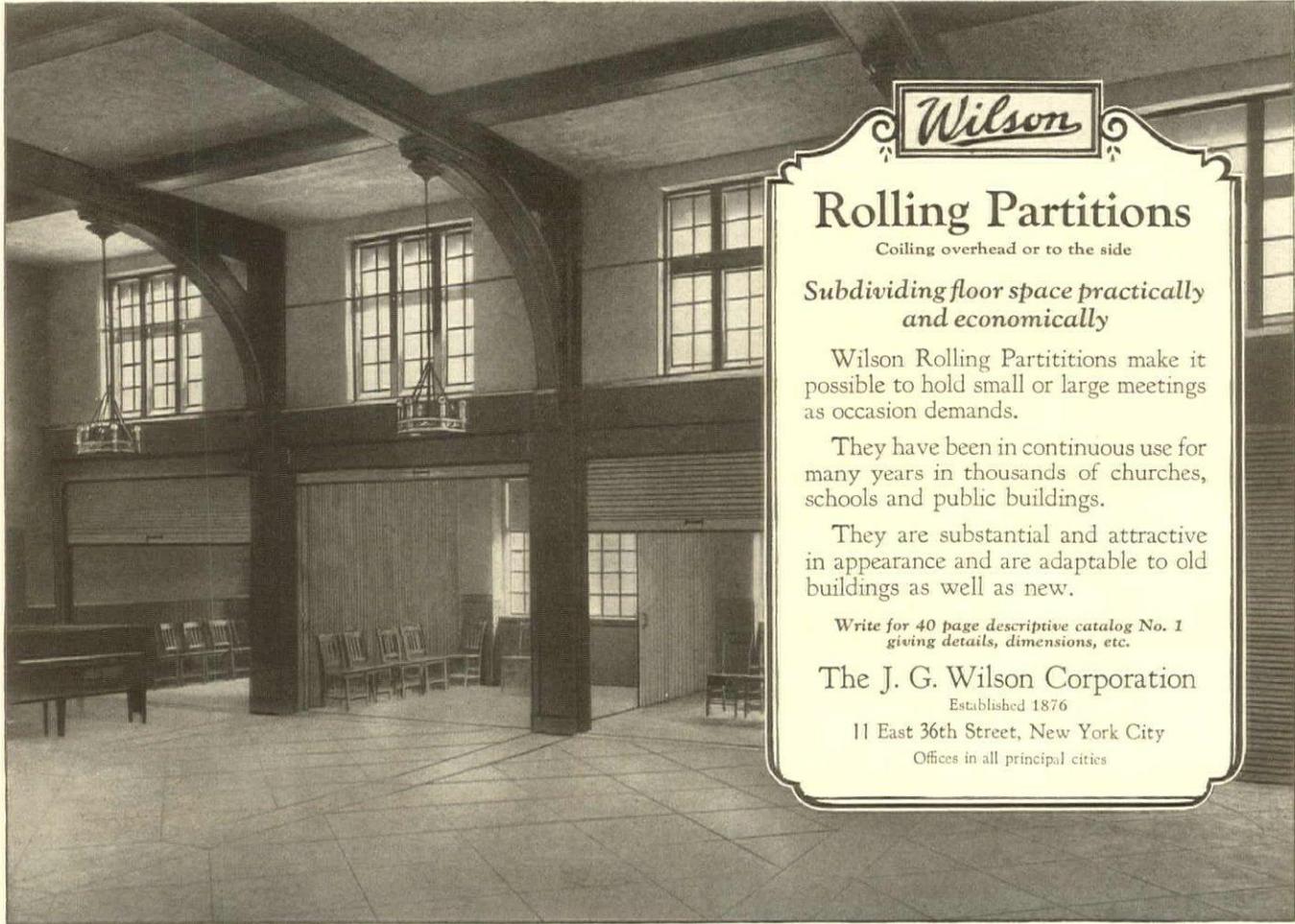
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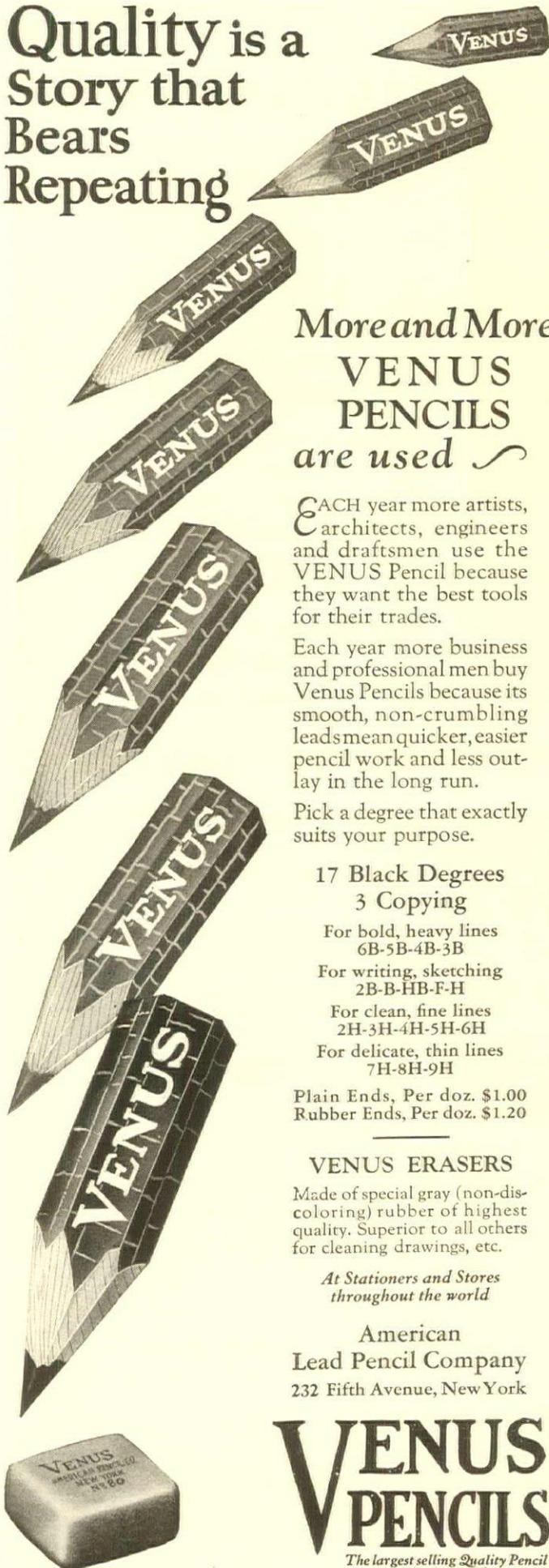
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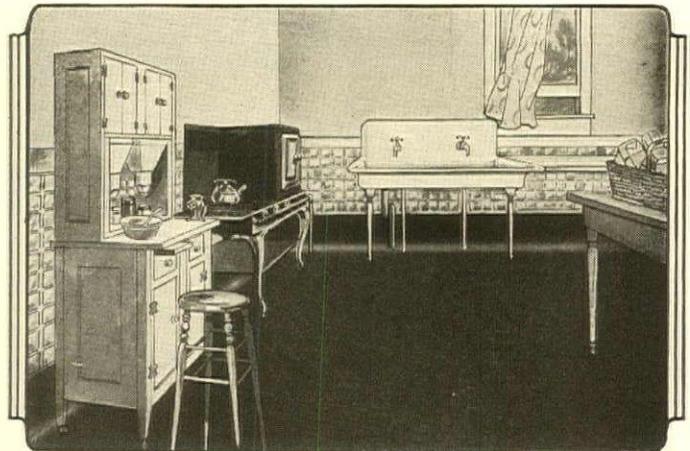


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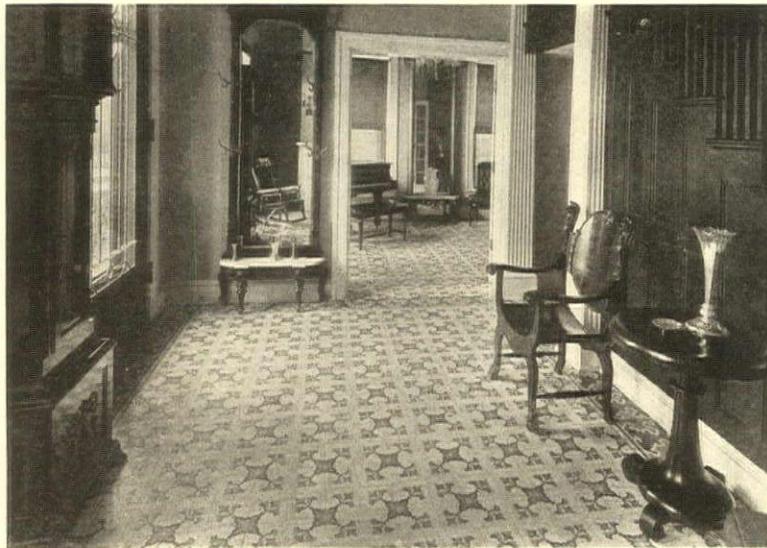
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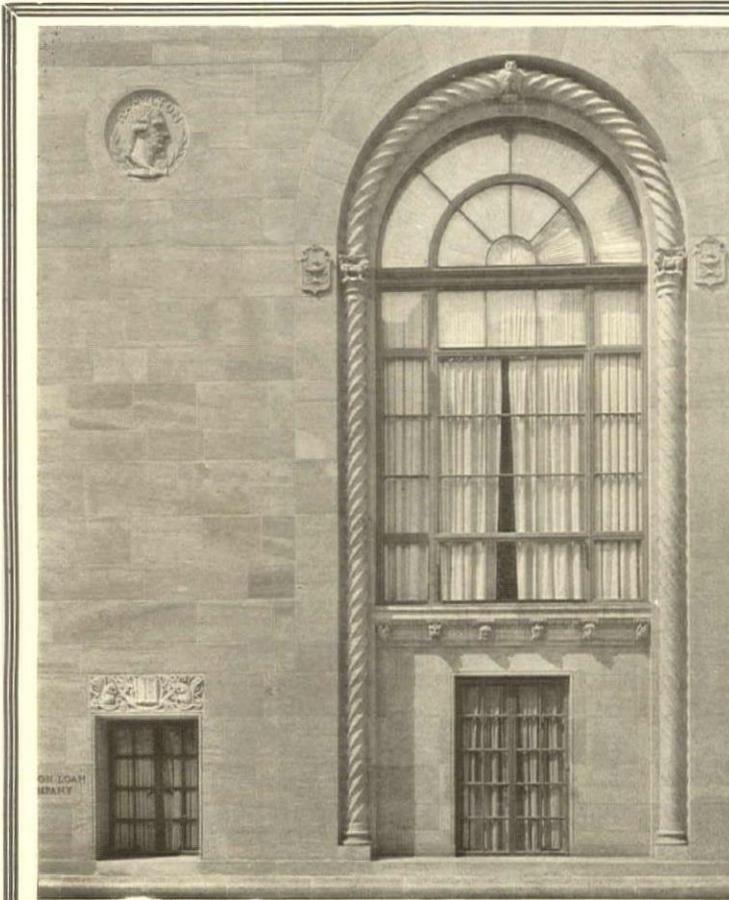
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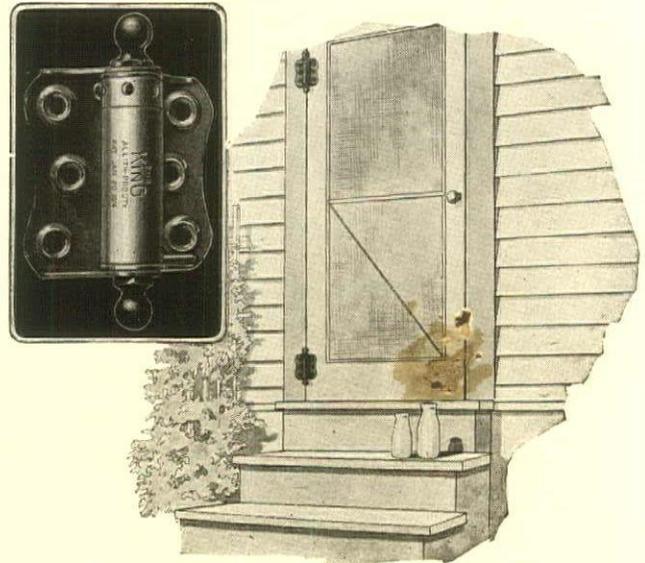
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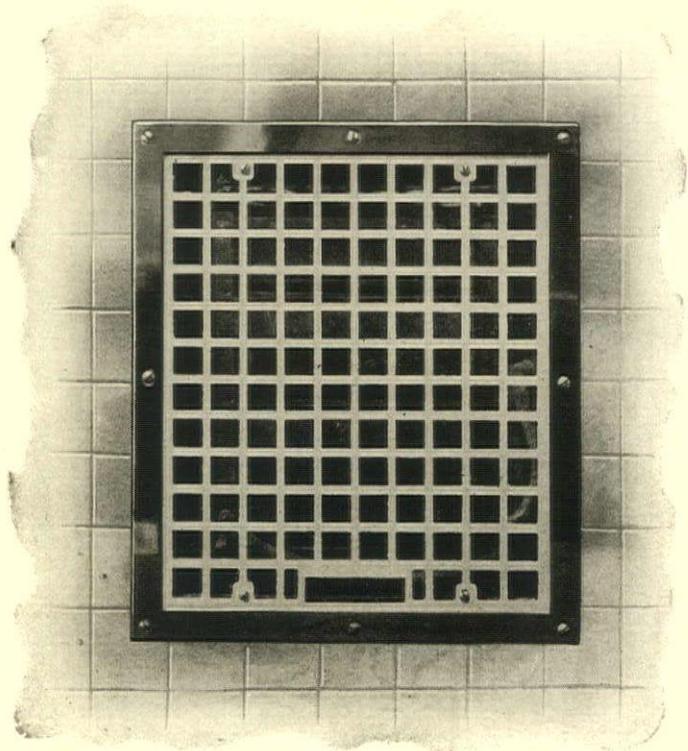
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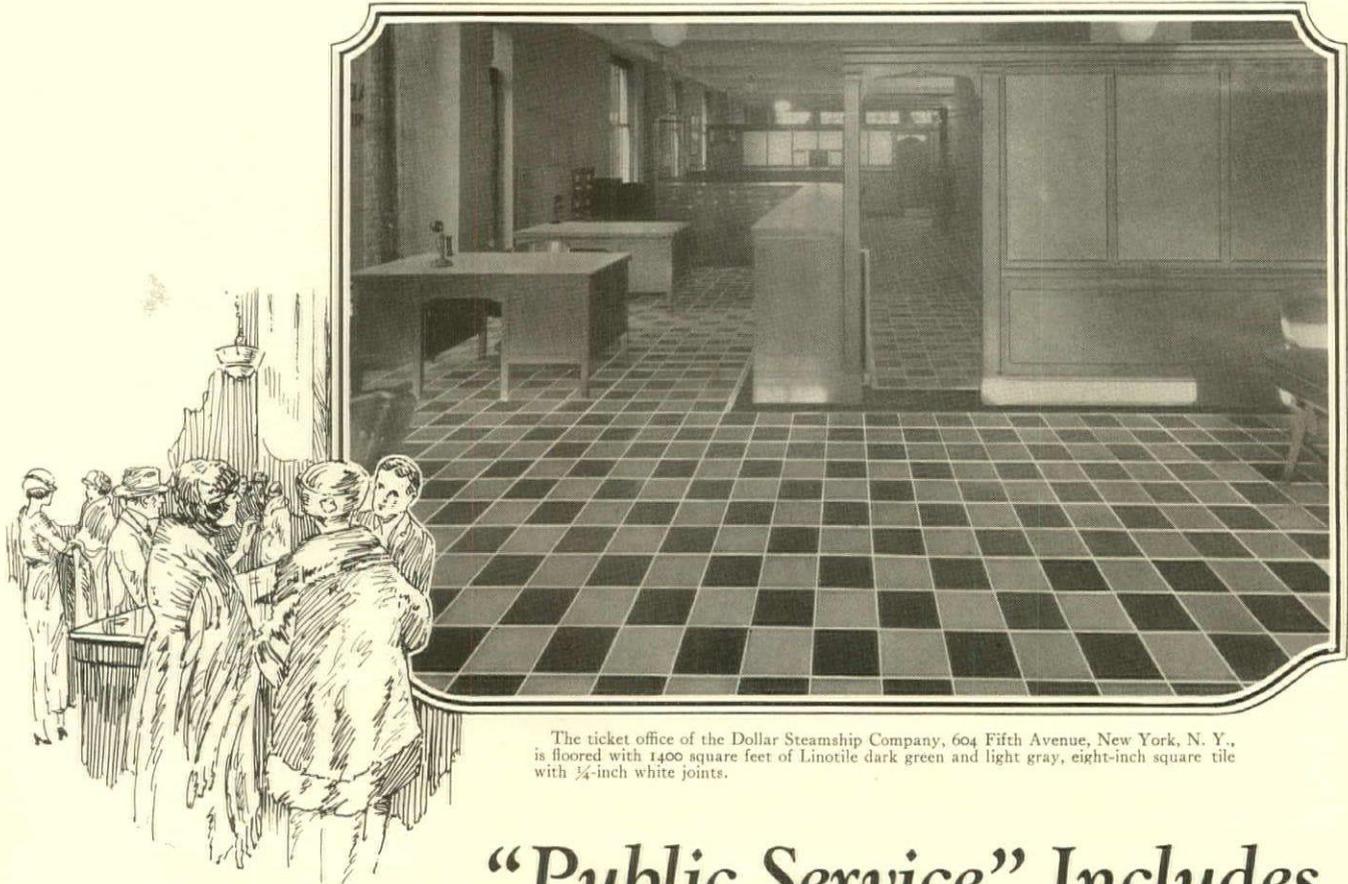
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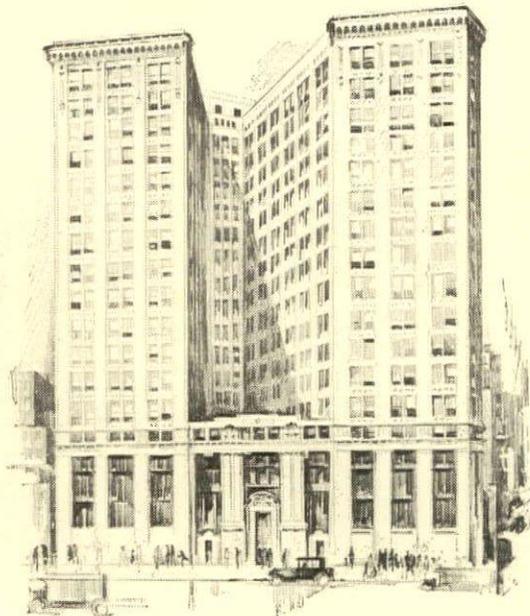
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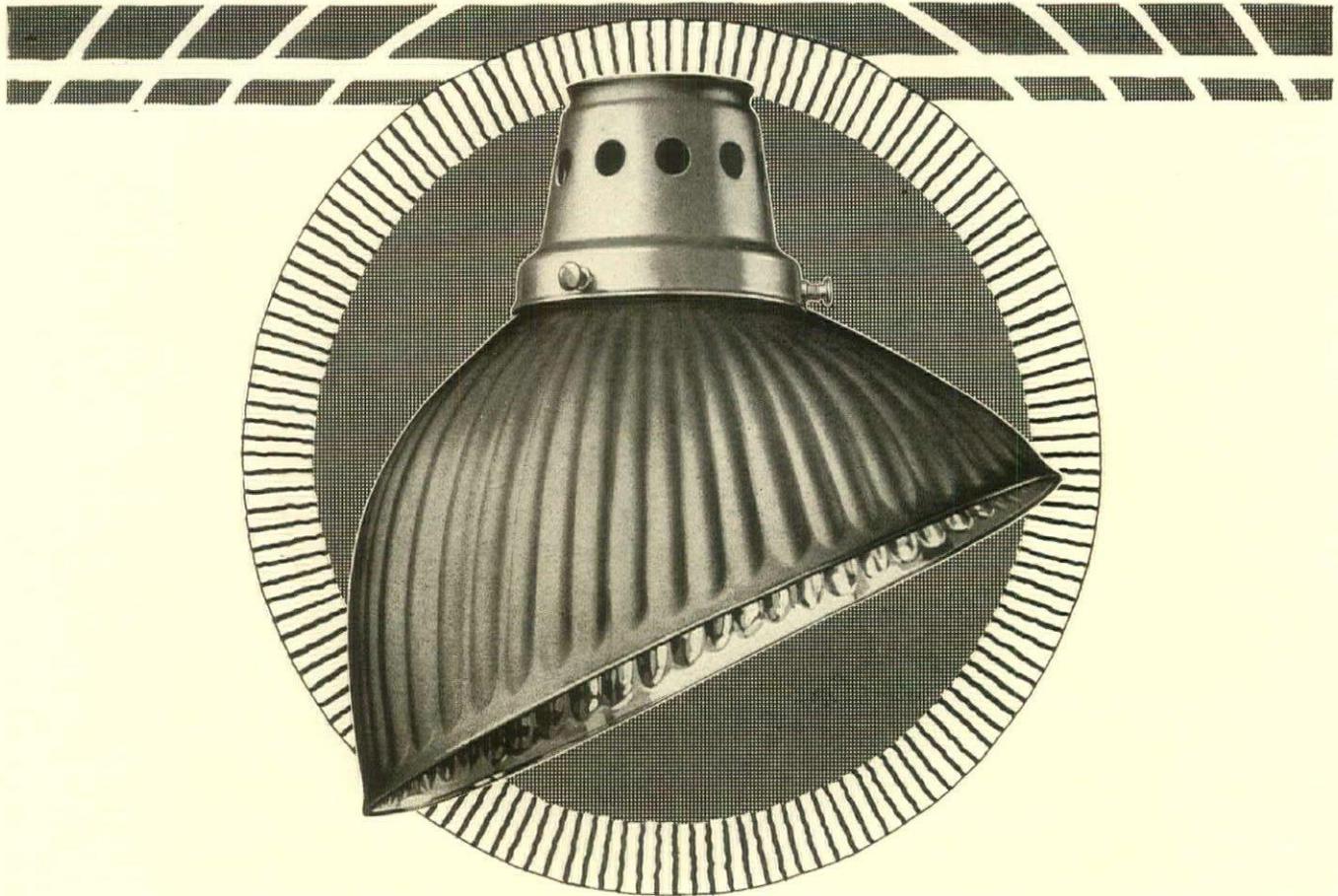
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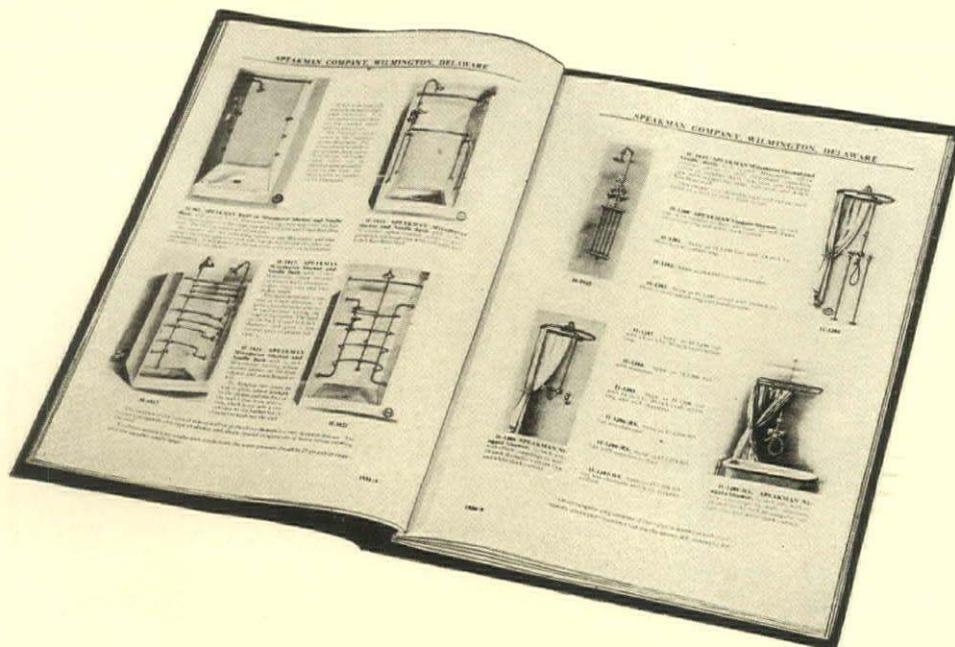
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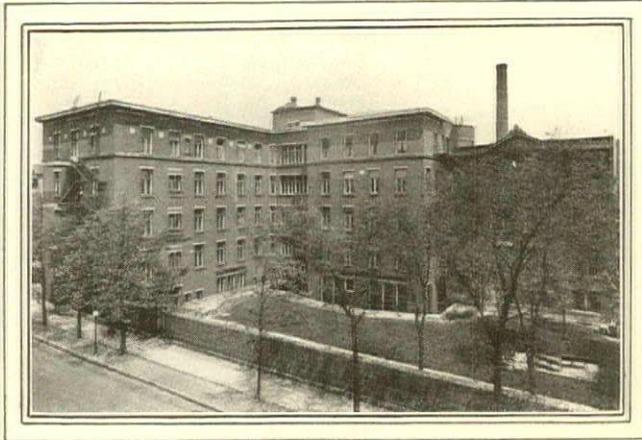
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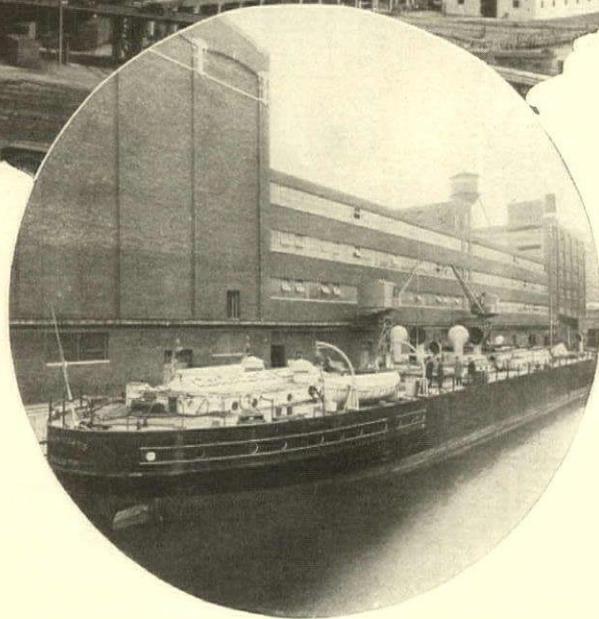
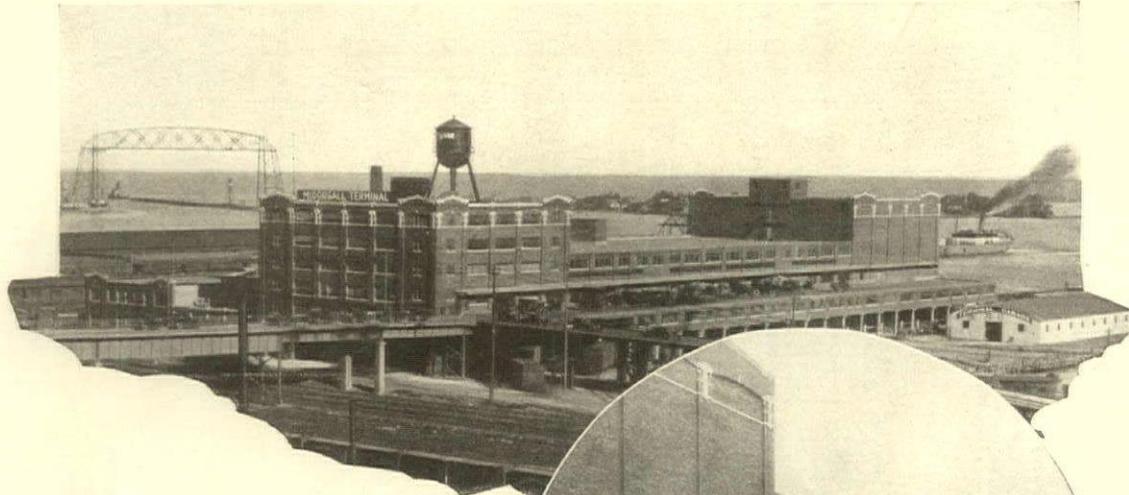
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*“Efficientized” with
Jamison Products*

THE “big butter and egg men” require refrigerated space in which to store their products pending their unloading on the market. Which creates another business in itself—refrigerating warehousing.

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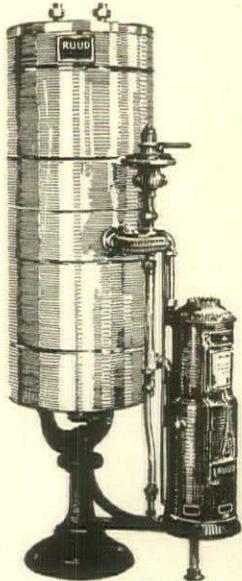


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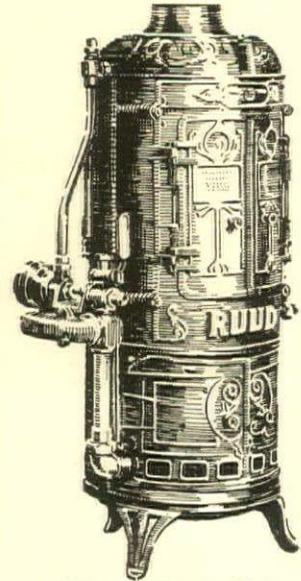
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Entrance lobby, Besse Security Building, Springfield, Mass., Brown and Von Beren, New Haven, Conn., Architects. Photograph by courtesy of the W. J. Kelly Co., Contractors.



Ninth Street Entrance, New Winthrop Hotel, Tacoma, Wash., W. L. Stoddard, New York, Architect.

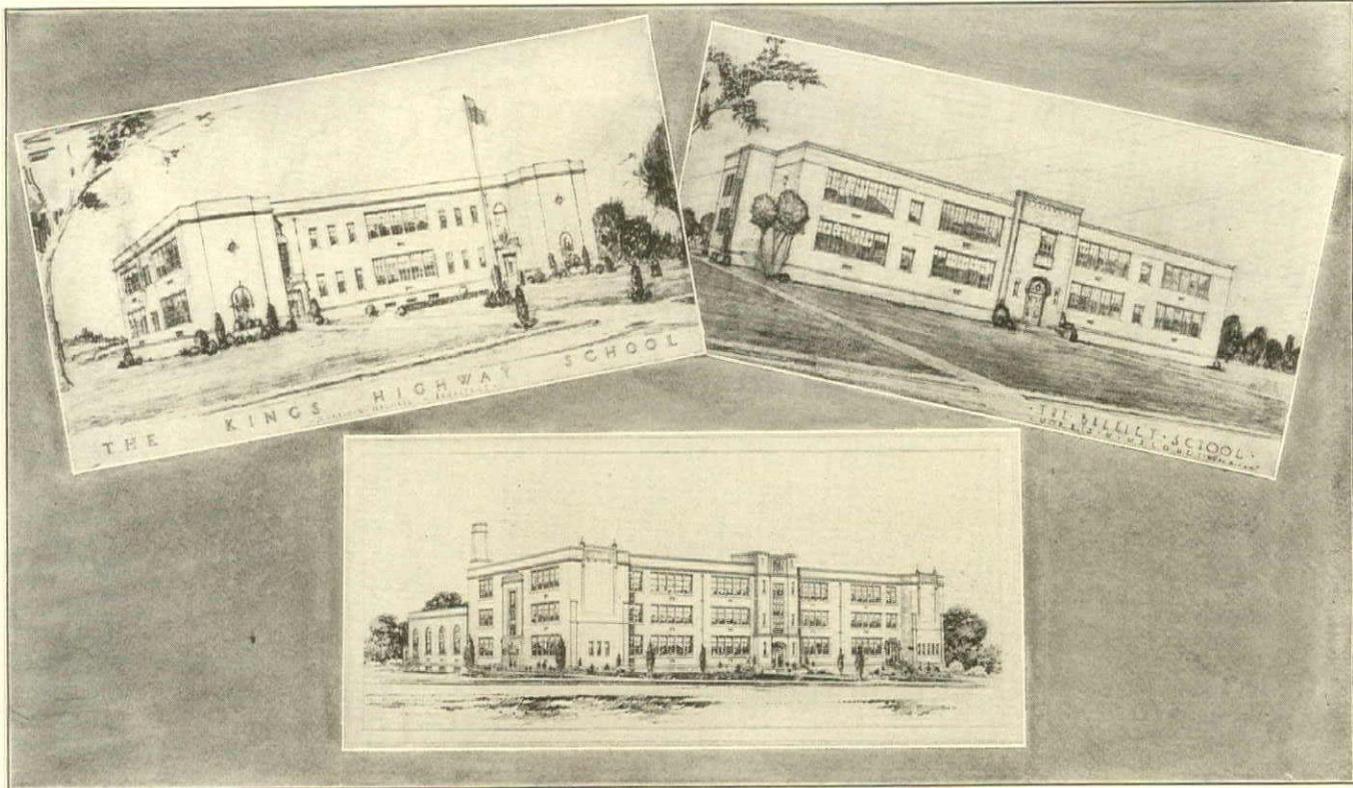
IN 1908, when our Alaska quarries were opened, the output was used very largely on the Pacific Coast. But in a few years the marble was coming East. It has been coming ever since — each year in larger quantities. It appeals to builders everywhere, not alone as an unusual product with strikingly different veining, but as a wonderful color-blend of blacks and whites, set forth permanently under a rich unbroken polish.

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UNIVENT EQUIPPED Schools, Springfield, Mass.
Center—Elias Brooking School
Morris W. Maloney, Springfield, Mass., Architect

Right—The Balliet School

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It is a great thing to create a beautiful building, but even greater is the achievement when it also directly results in sturdier, healthier, more alert, more capable lives. Recognizing this responsibility—and welcoming it—an increasing number of architects are specifying Univent Ventilation.

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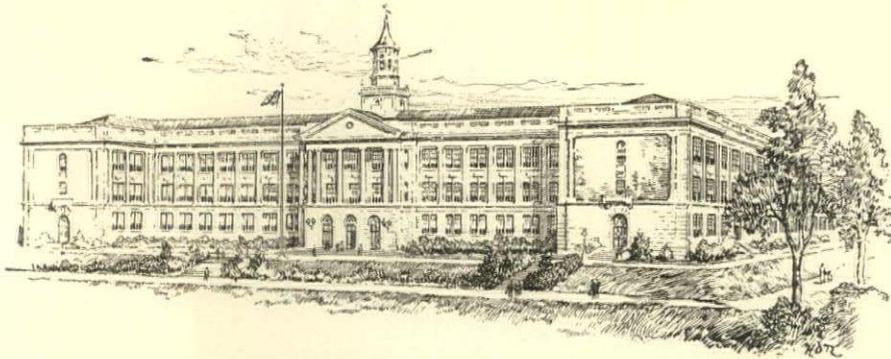
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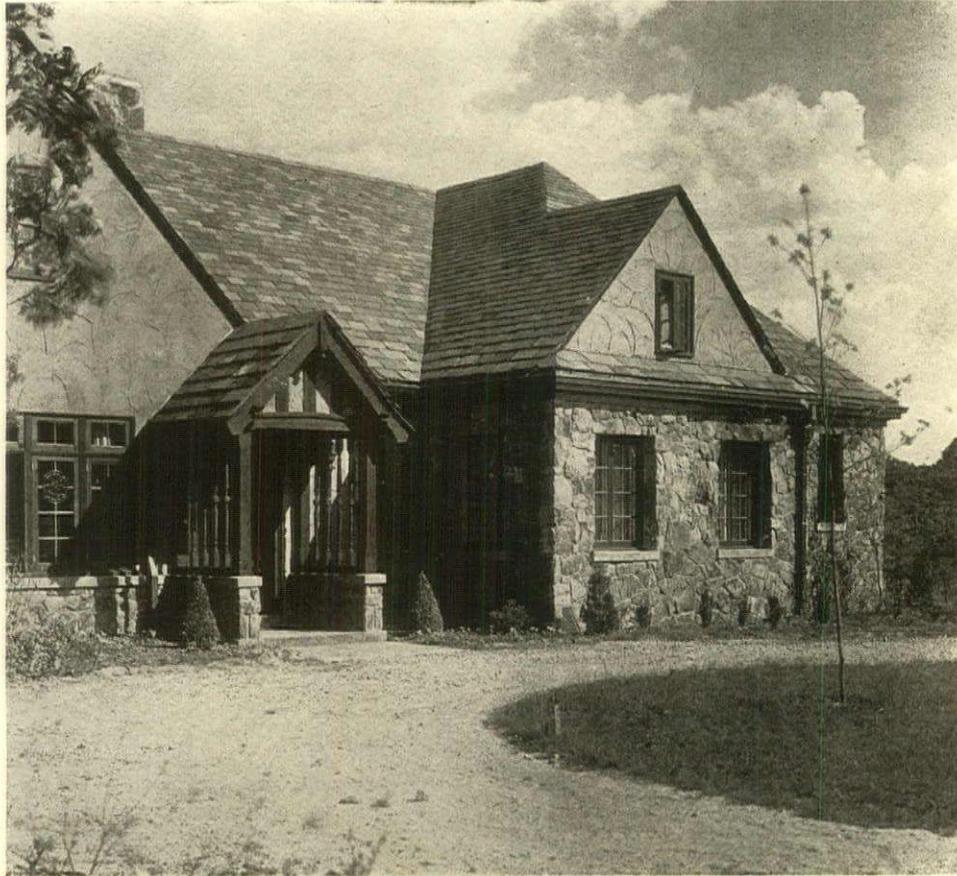
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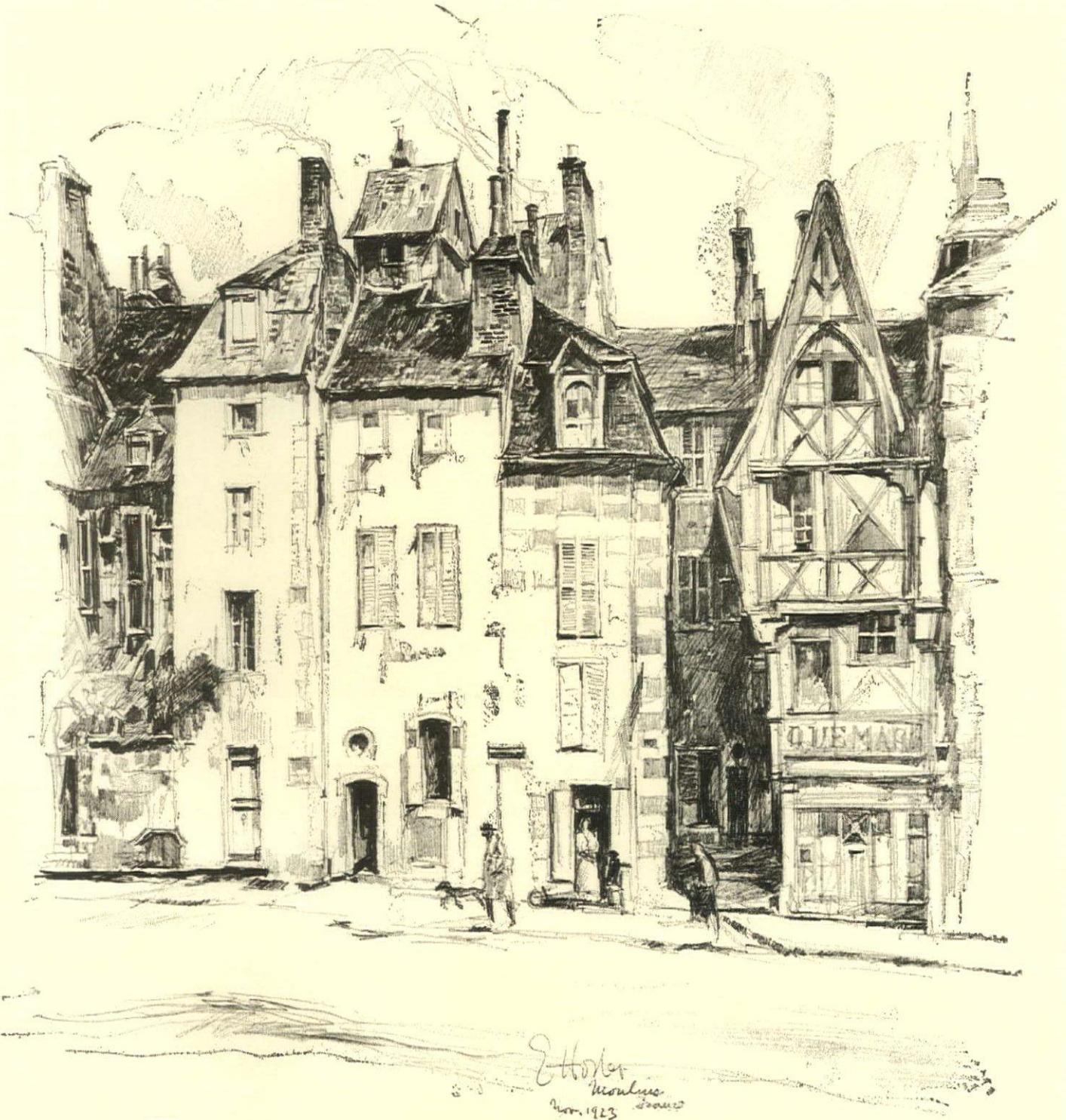
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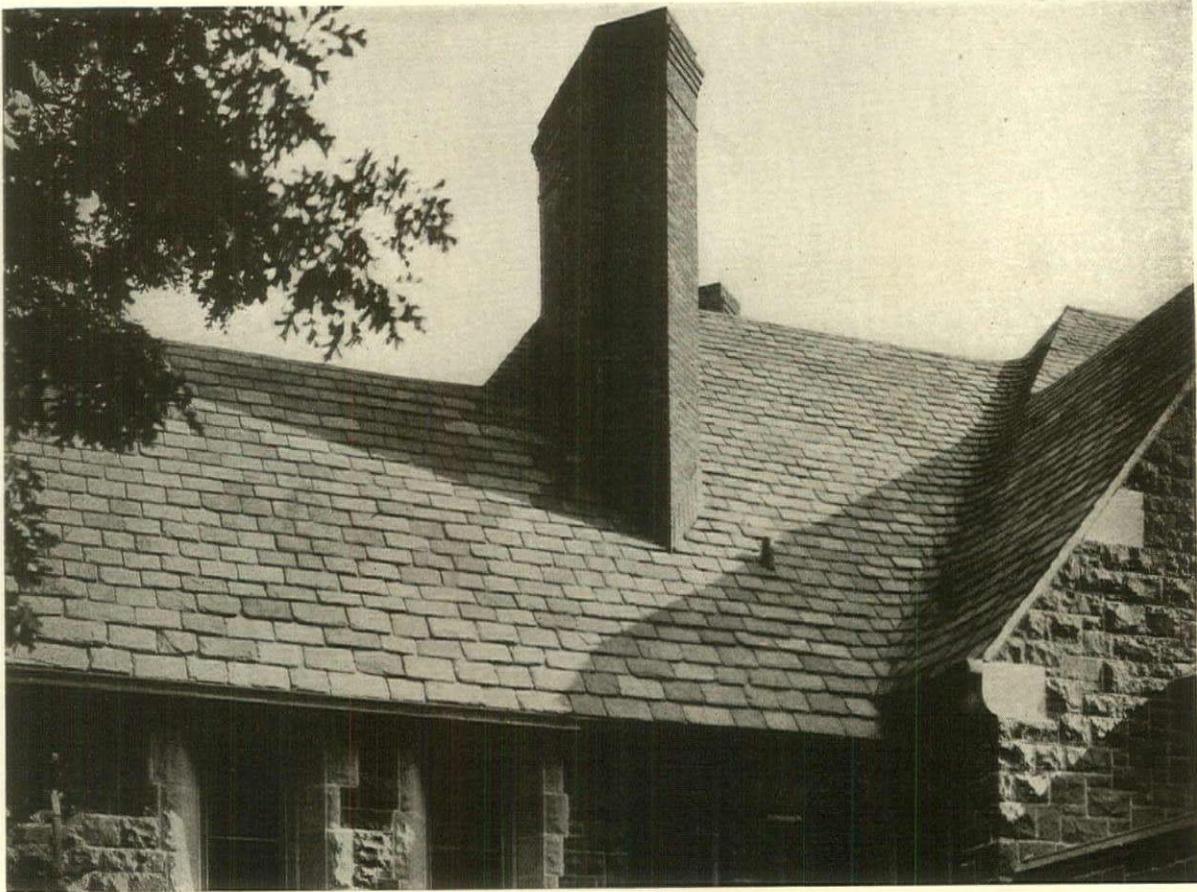
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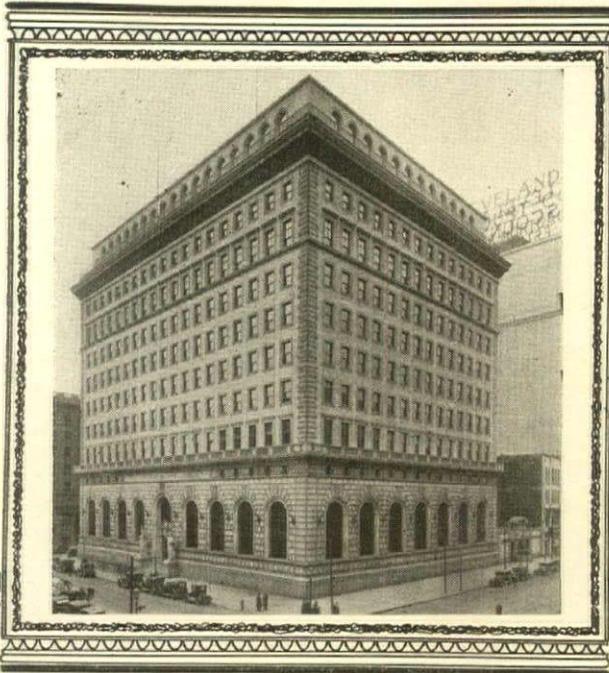
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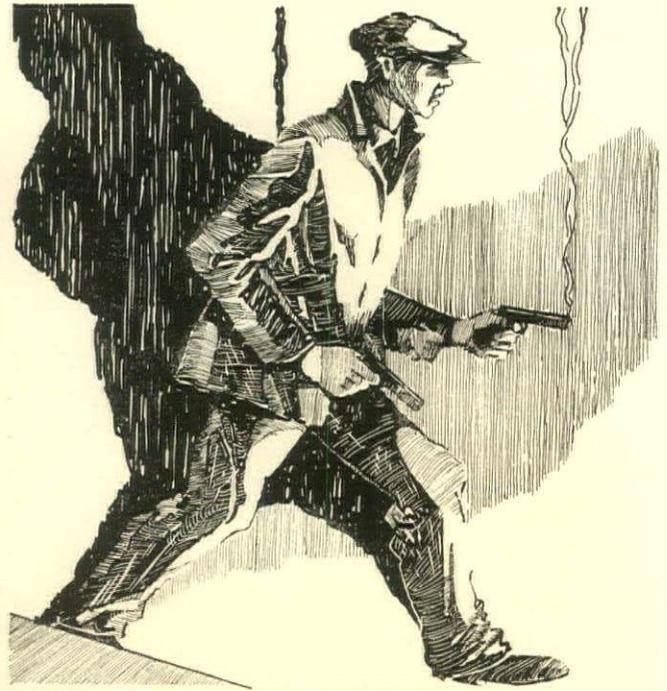
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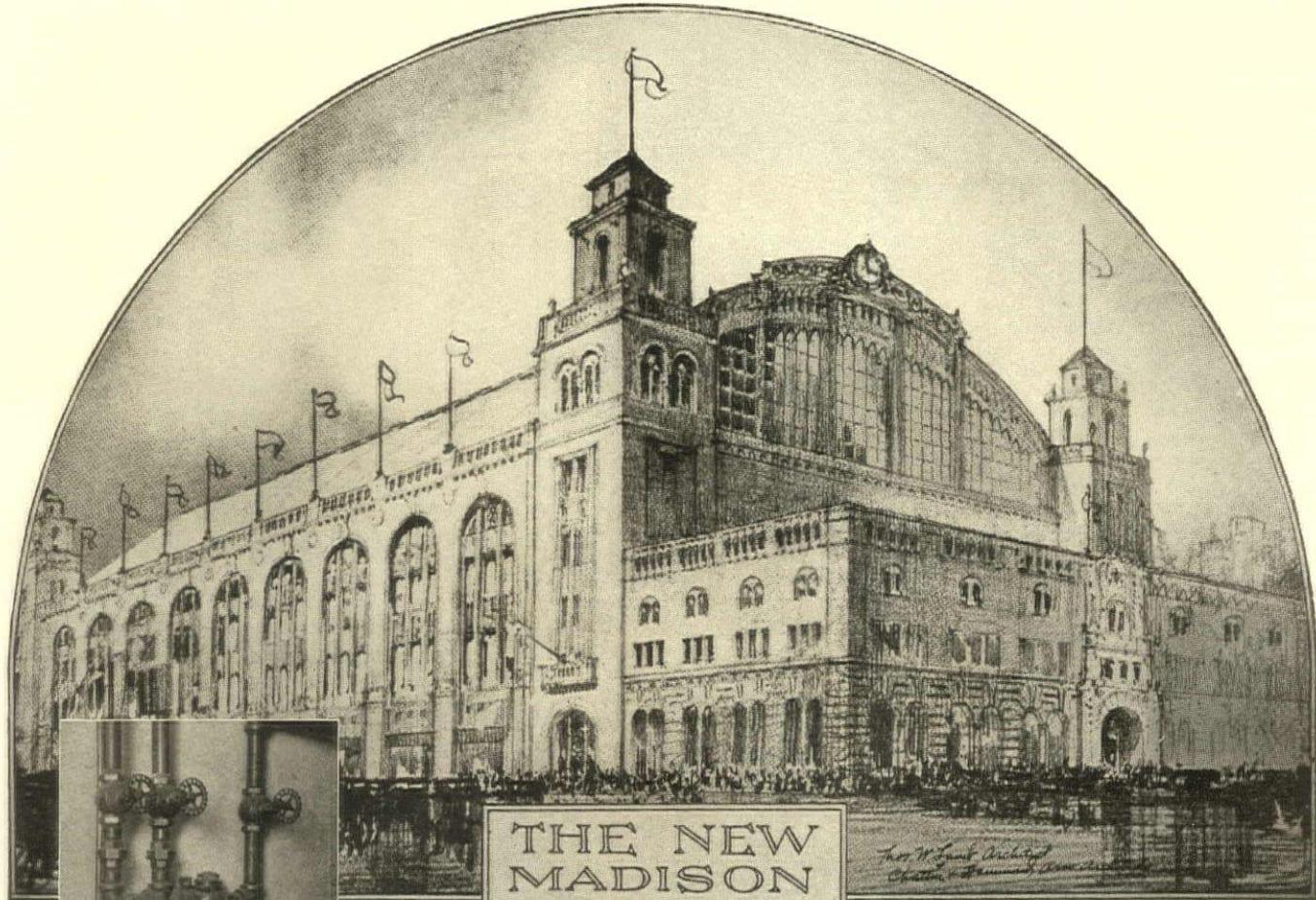
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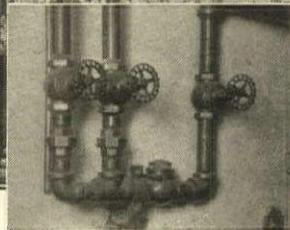
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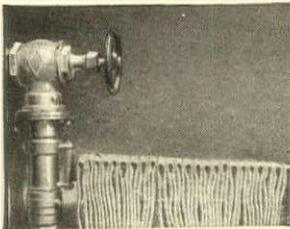


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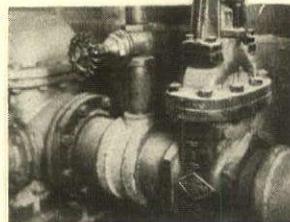
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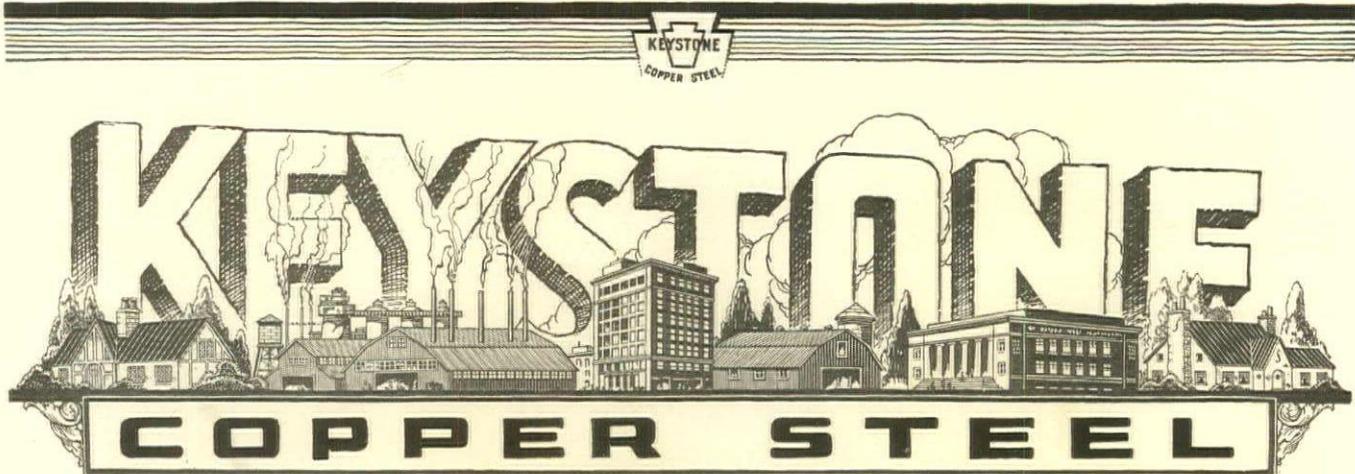
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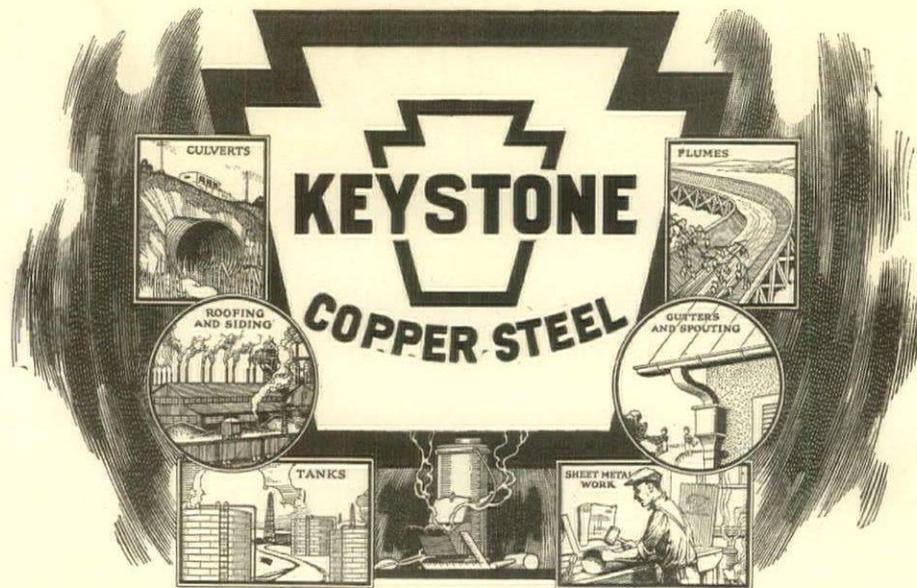
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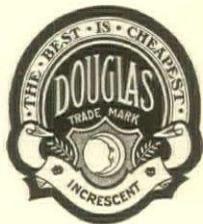
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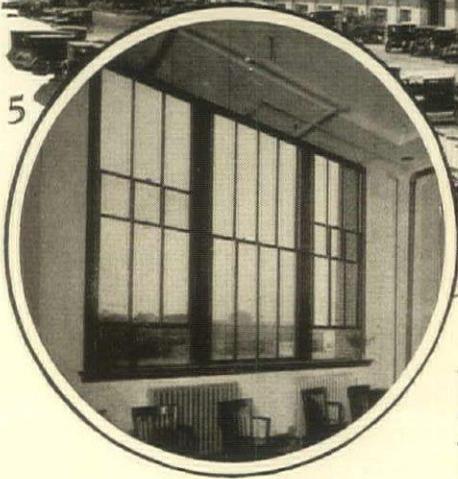
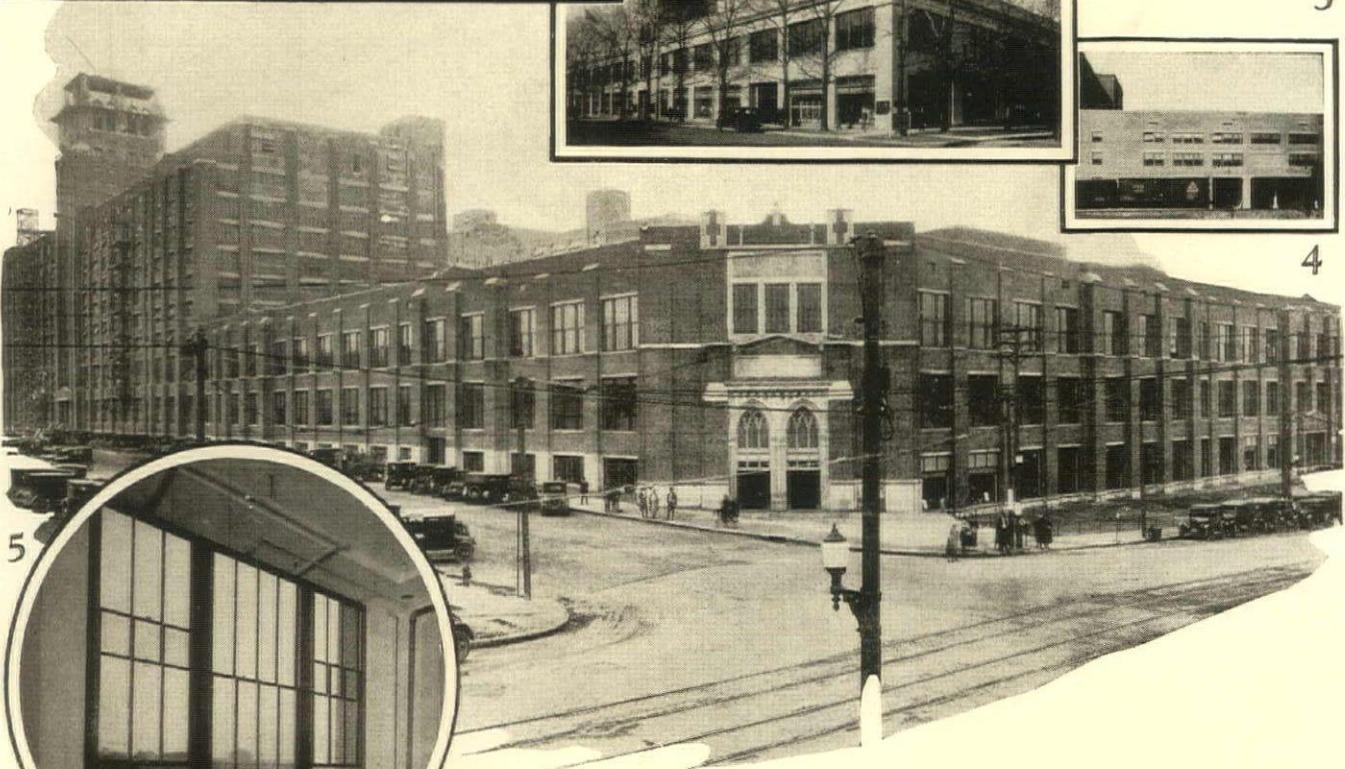
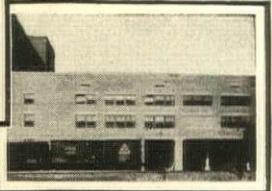
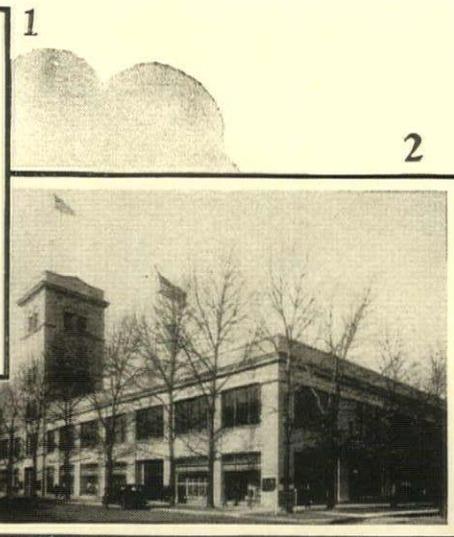
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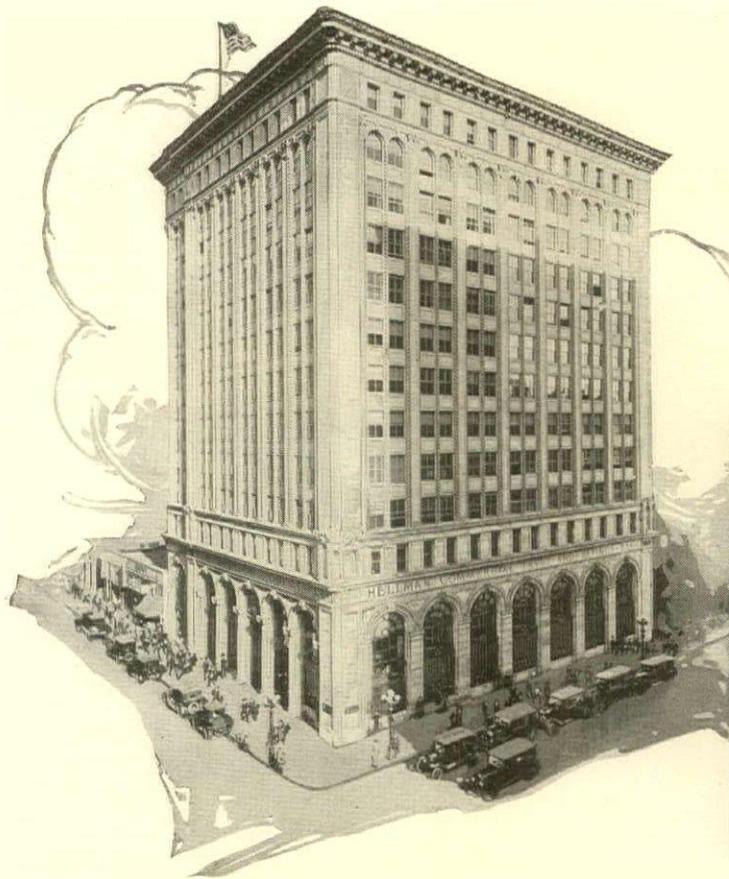
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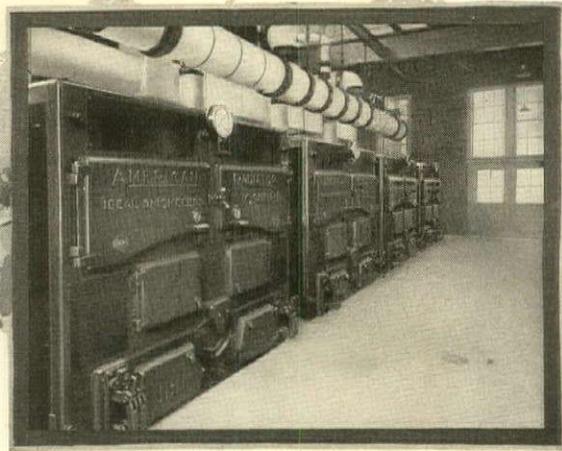
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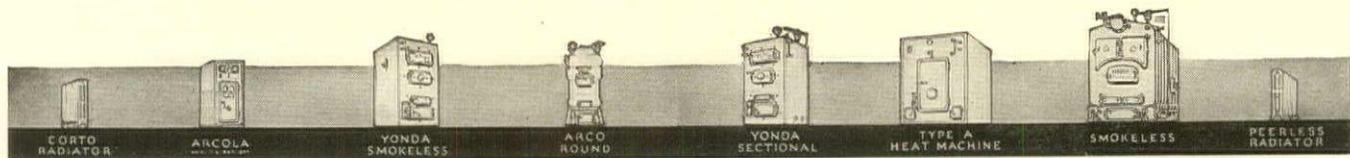
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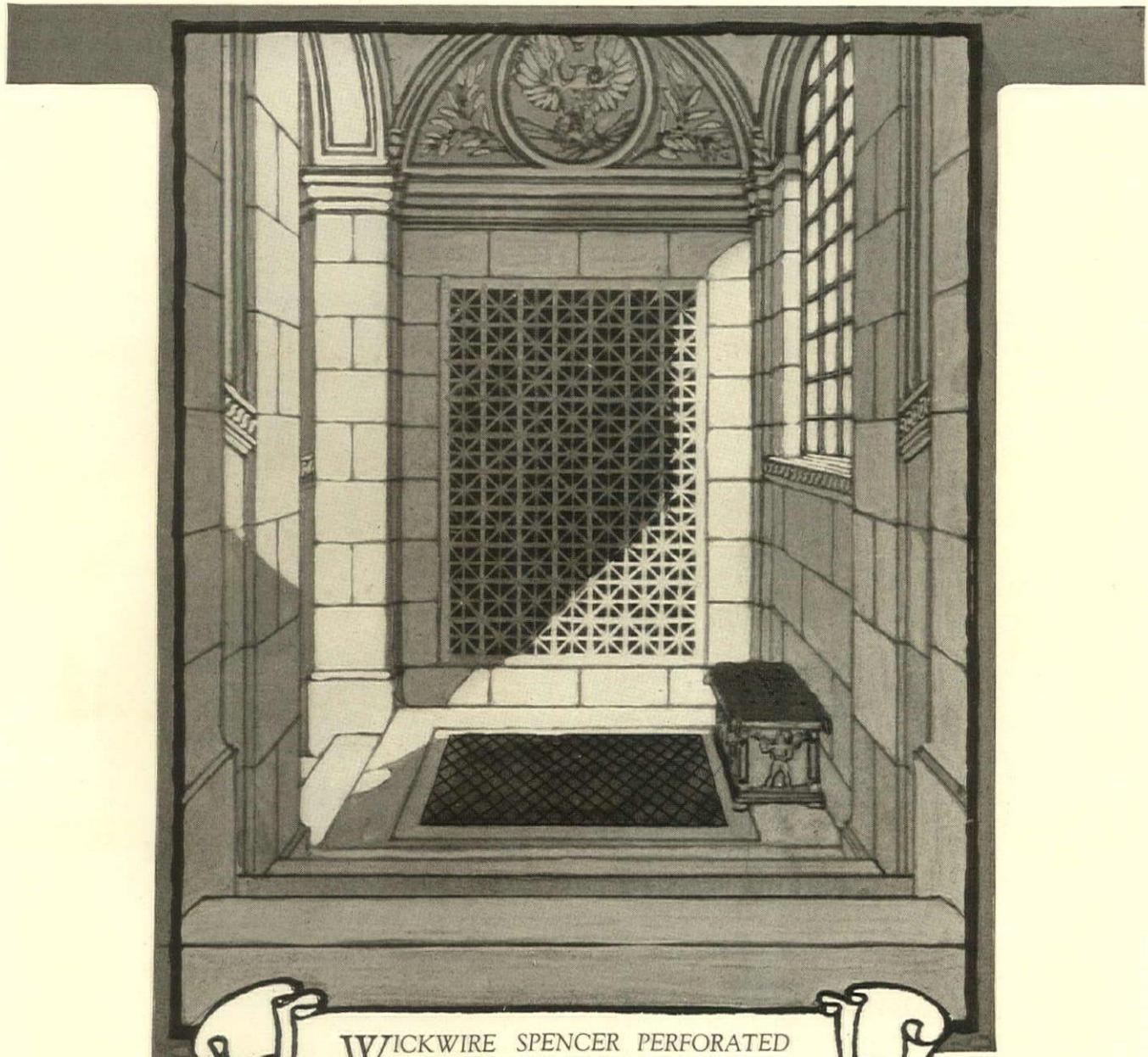
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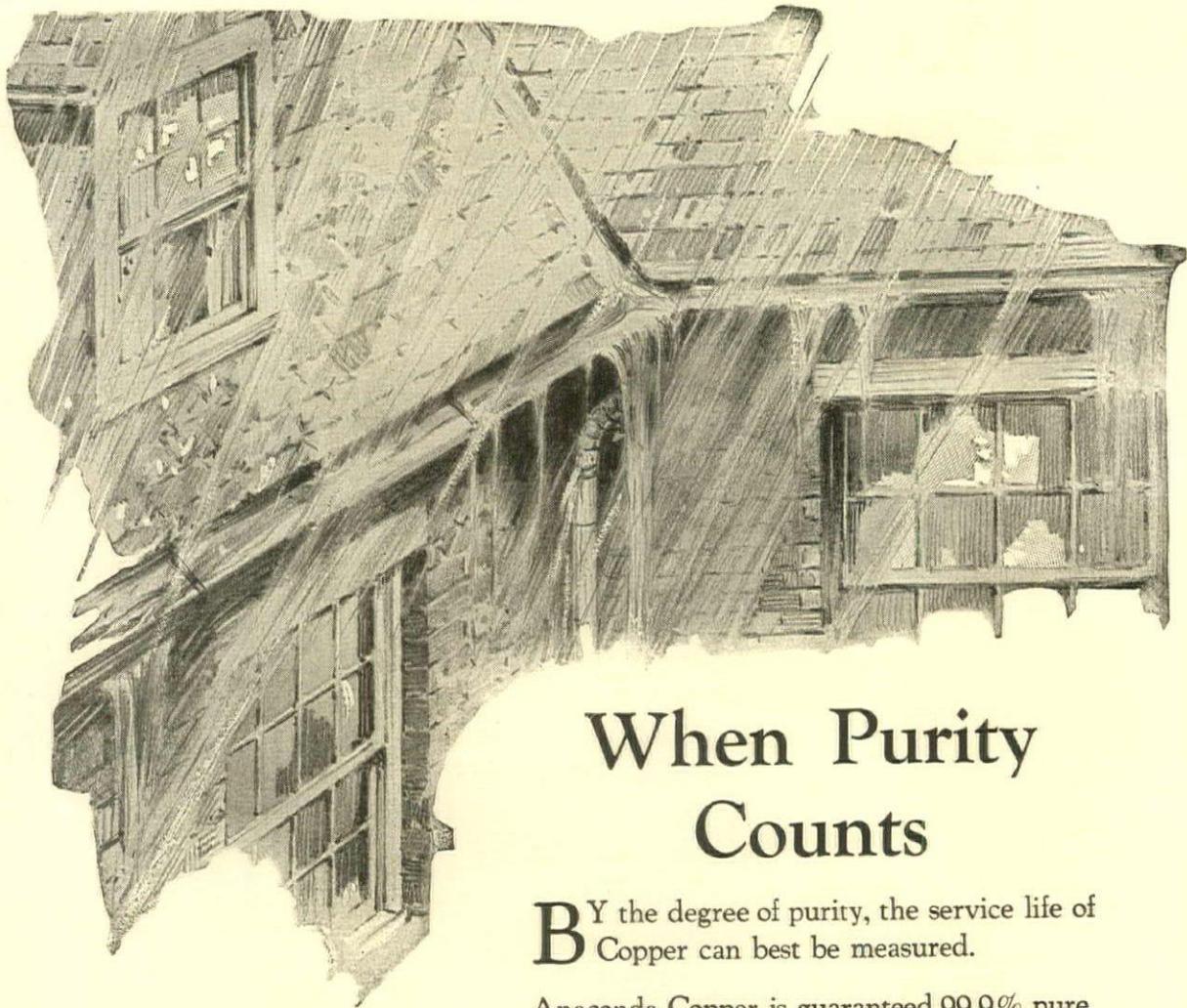
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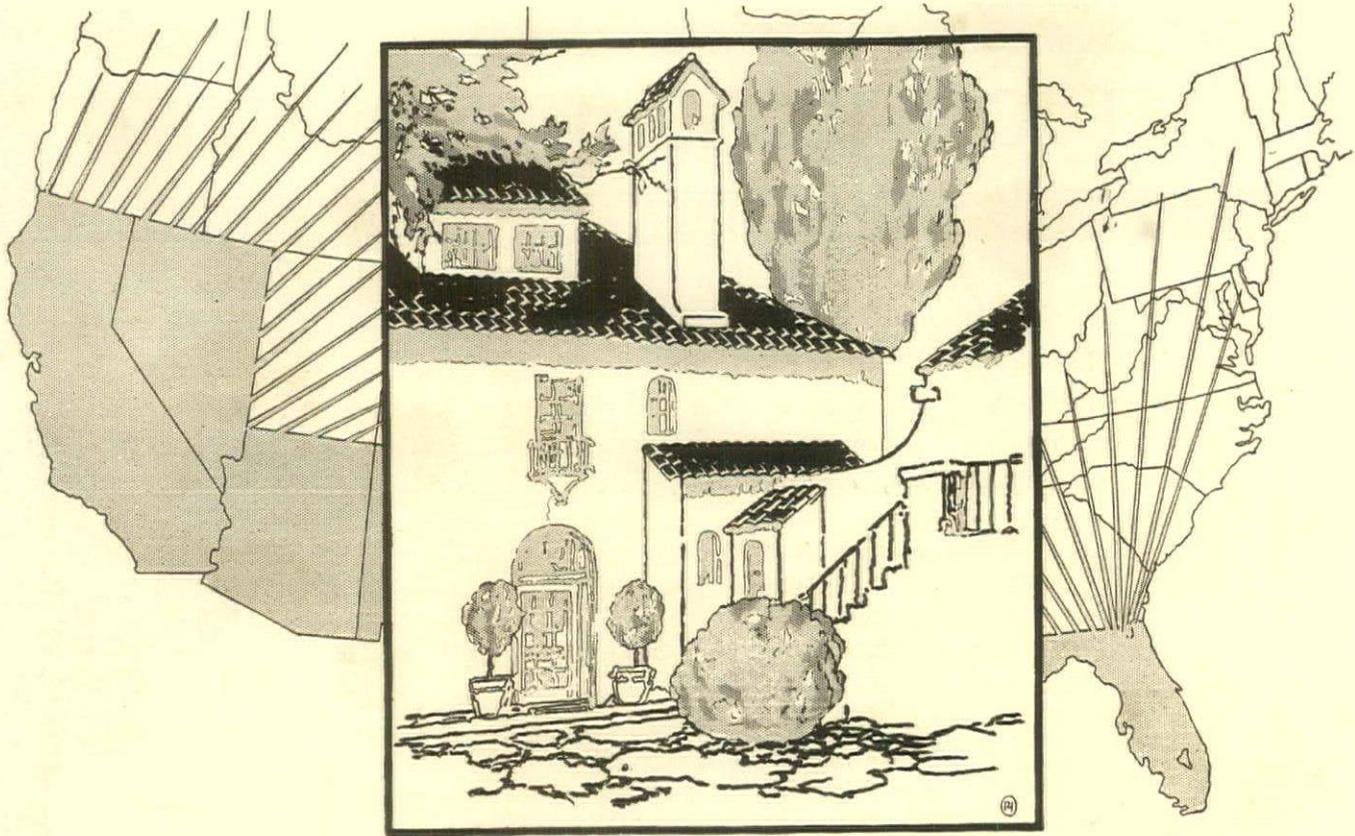
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		Major Equipment Company	54	U. S. Mineral Wool Company	56
Edwards Mfg. Company	63	Manhattan Terrazzo Brass Strip Co.	60		
Electro-Light Engraving Company	60	McKeown Brothers	57	Vendor Slate Company	84
Erkins Studios	60	Miller, G. L., & Company	75	Ventilouvre Company	29
		Milwaukee Corrugating Company	98	Vermont Marble Company	81
Fitz Water Wheel Company	62	Mississippi Wire Glass Company	72	Vitrolite Company	8b
Ford Hardware Company	60	Moulding, The Thos., Brick Company	78		
				Wagner Mfg. Company	58
General Chemical Company	91	Nairn Linoleum Company	18	Warren Webster Company	9
General Electric Company	22-23	National Floor Tile Company	69	Weatherbest Stained Shingle Co.	66
General Electric Co. (Merchandise Division)	38	National Radiator Company	44	Whiting-Adams Co.	58
Georgia Marble Company	20			Wickwire Spencer Steel Company	95
				Williams, J. W., Slate Company	86
				Wilson, The J. G., Corp.	67

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