JUNE 1930

PENCIL POINTS

A JOURNAL FOR
THE DRAFTING ROOM

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Note the increasing popularity of ILCO Riplstone – Send for literature

Residence, Bloomington, Indiana. Alfred Grindle, Architect. In the limestone district, the beauties and economies of stone for residence construction have long been known.

WE know that we have a beautiful building material to offer you in Indiana Limestone prepared for use as a sawed masonry facing. "ILCO Riplstone," as we call Indiana Limestone prepared and used this way, has already made tremendous progress.

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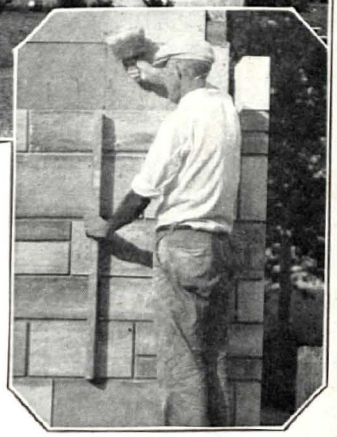

We do 90% of the work on ILCO Riplstone at the quarries by machinery. On the job, the strips of stone are broken to lengths and laid up in the wall as shown here. Speed of construction is one important feature of this use of stone. Much faster and usually cheaper than local stone.

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Polychrome on a Buff Ground

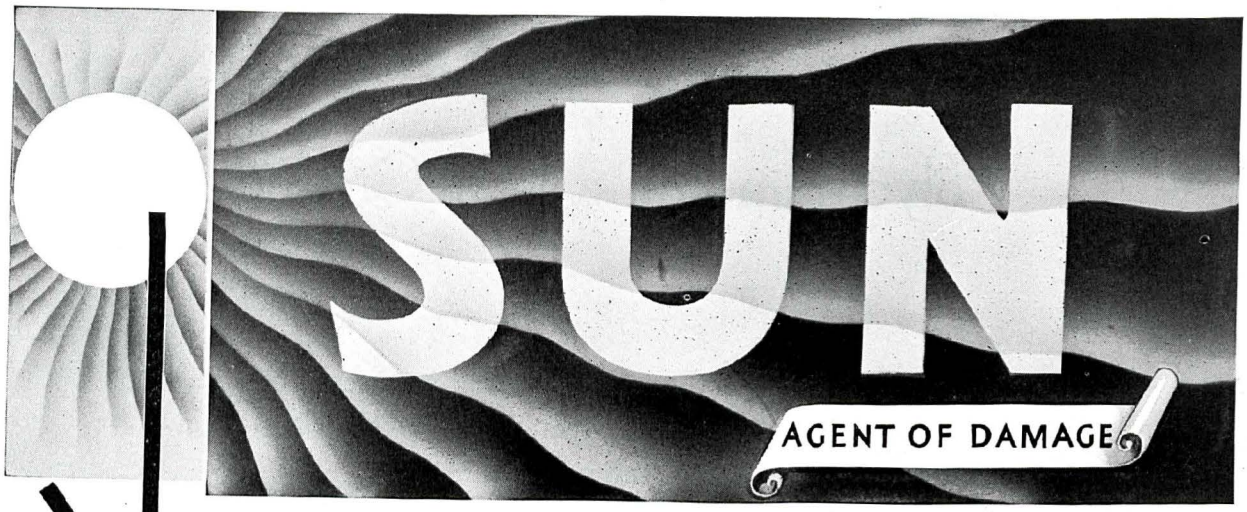
A ground color of Atlantic Terra Cotta in cheerful buff, unglazed and slightly rough in surface for the ashlar fields and plain mouldings, is very interesting with polychrome.

If cool colors are desired, shades of blue and green are at hand.

If warm colors are desired, tan, yellow, brown, red and golden buff are ready.

There are hundreds of colors.

Polychrome on buff is unusual enough to have the attraction of novelty. The combination is less formal than colors on white or gray.



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. . . . THE SELF-HEALING COAL-TAR PITCH *and* FELT

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GRANT BUILDING, PITTSBURGH, PA.
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Armstrong's Corkboard makes roofs so nearly heat-proof that the rooms below are protected from outside temperatures. Such protection is not possible without insulation or with inadequate insulation. Only an adequate thickness of Armstrong's Corkboard assures top-floor tenants saying: "Our rooms are always comfortable."

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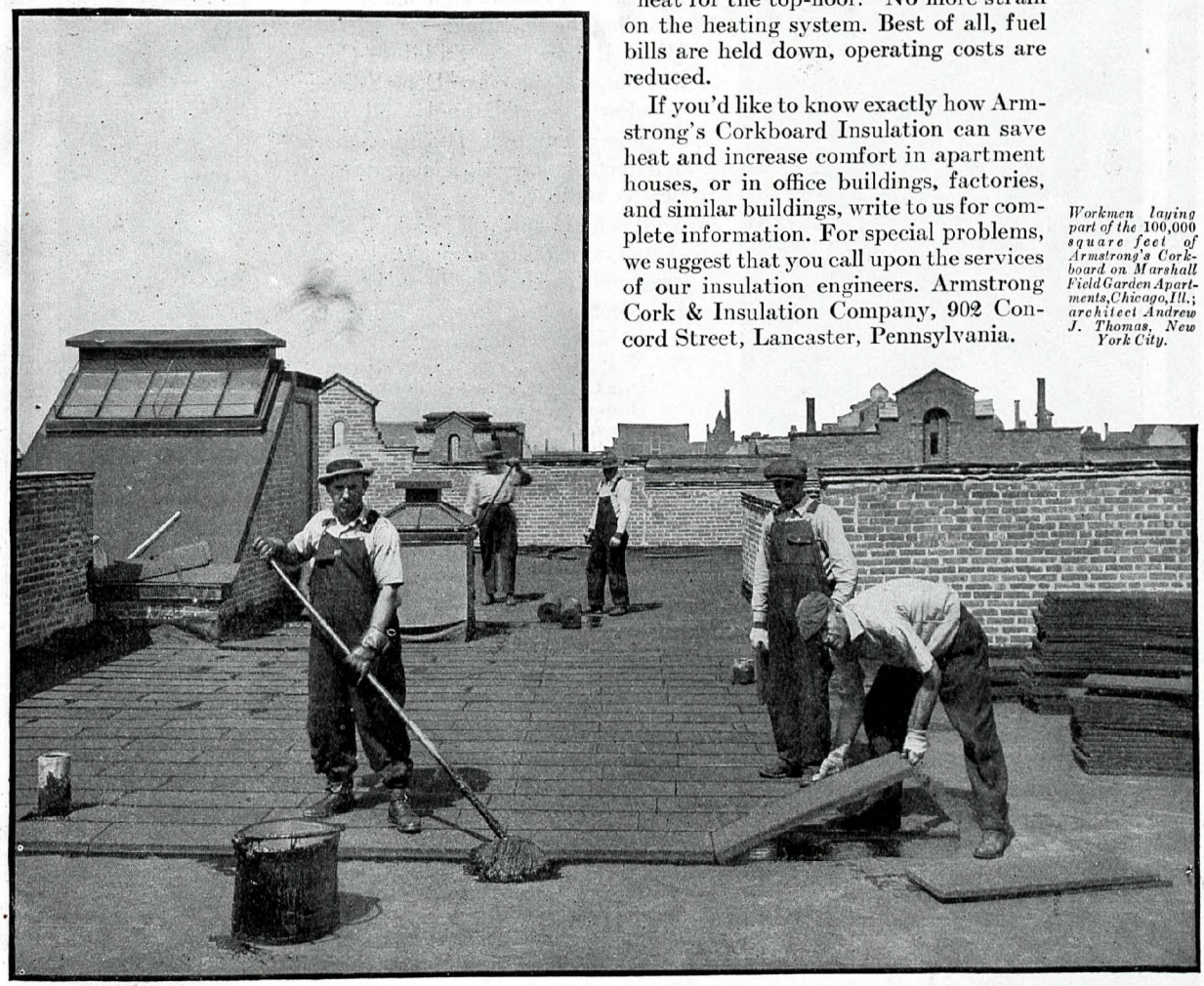

Workmen laying part of the 100,000 square feet of Armstrong's Corkboard on Marshall Field Garden Apartments, Chicago, Ill.; architect Andrew J. Thomas, New York City.

Armstrong's Corkboard Insulation

For the Walls and Roofs of Comfortable Homes

A FORM FOR EVERY PILE—

A PILE FOR EVERY PURPOSE—

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Architect, C. C. HARTMANN *Contractor*, GEORGE A. FULLER CO.

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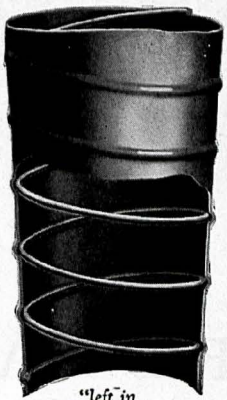
are "insurance" of satisfactory foundations . . . . satisfactory from every viewpoint of Architect, Engineer and Owner . . . . that is why this is one of MANY typically big modern structures that rest upon them. Every pile poured into a spirally reinforced steel shell and every shell left in the ground.



"left in the ground"

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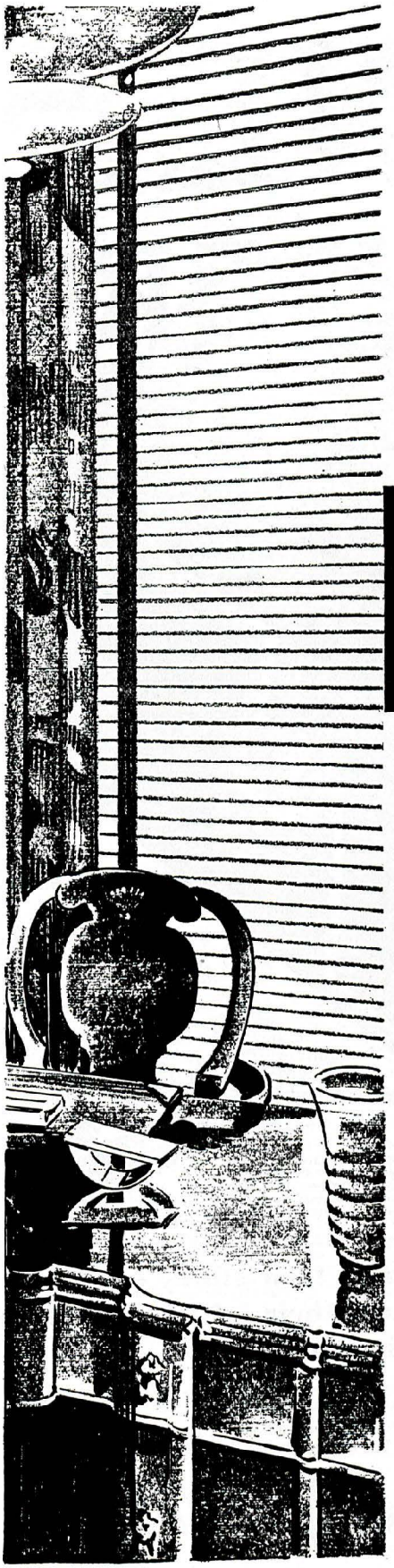

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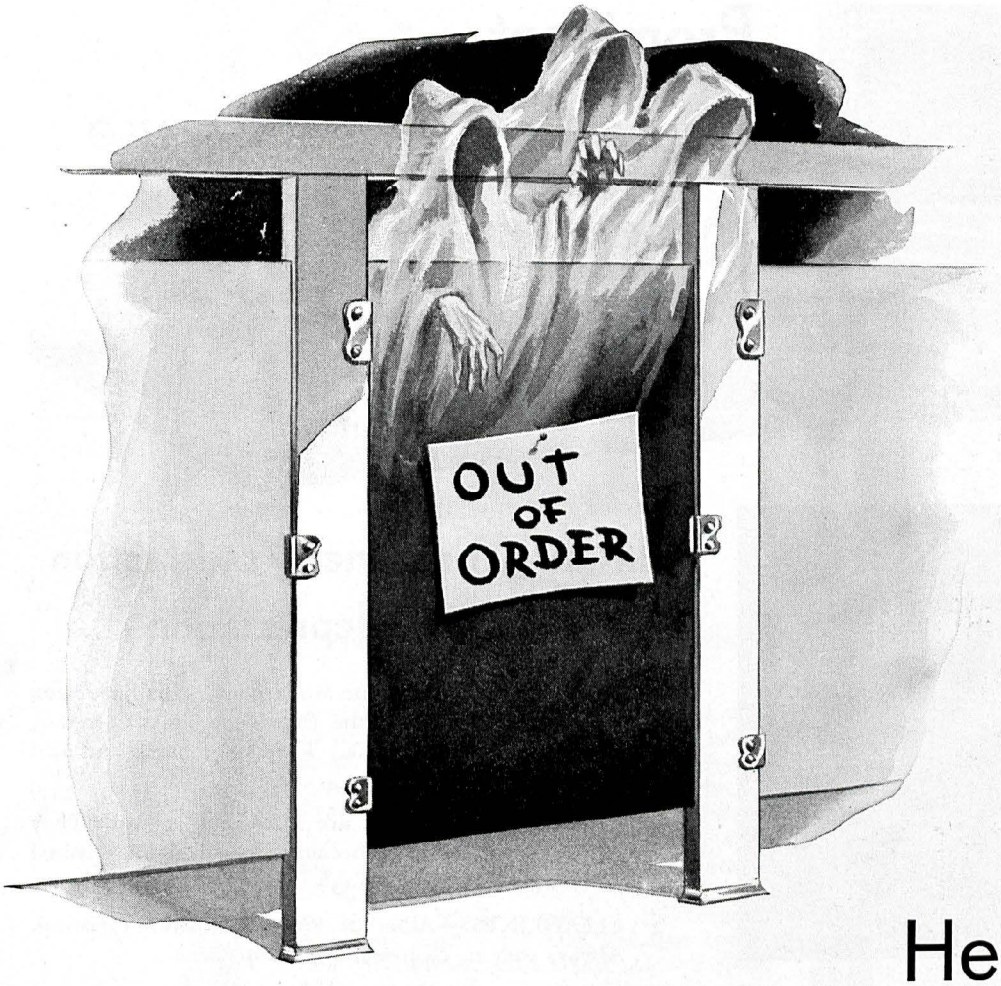

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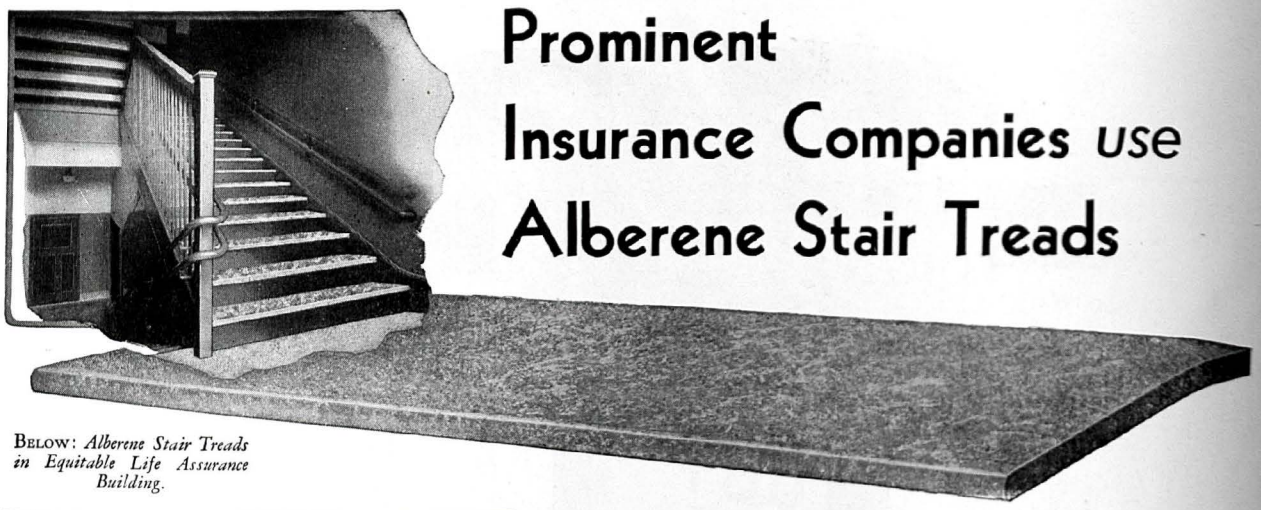
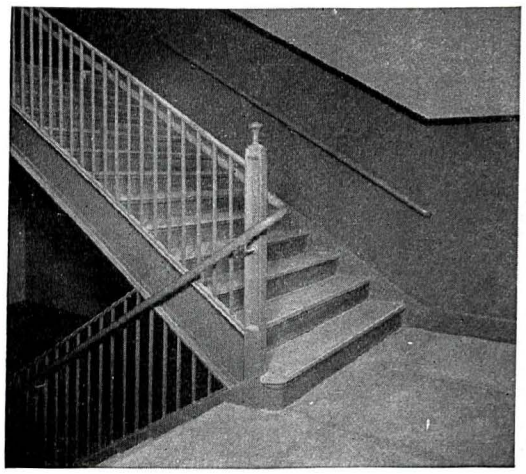


BELOW: *Alberene Stair Treads in Equitable Life Assurance Building.*



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Silvery-White Lustre
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Strong As Steel
Permanent Beauty
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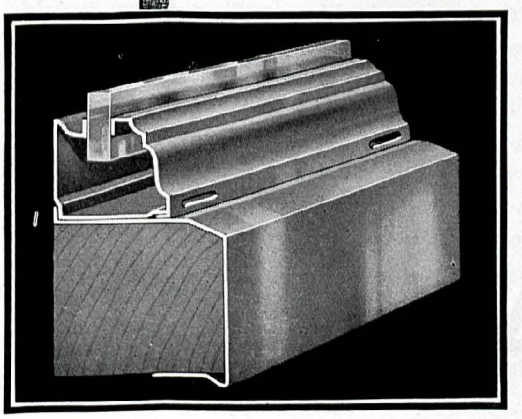

Brasco 606 Sash in Monel Metal. Illustration shows the self-supporting type used in conjunction with sill 640. Gauge of sash face and back members .040"; of sill, .031". All attaching screws also of Monel Metal.

Brasco Store Fronts may be obtained in Monel Metal - Bronze - Copper - PermaWite - Davis Solid Bronze

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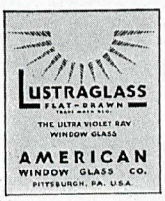

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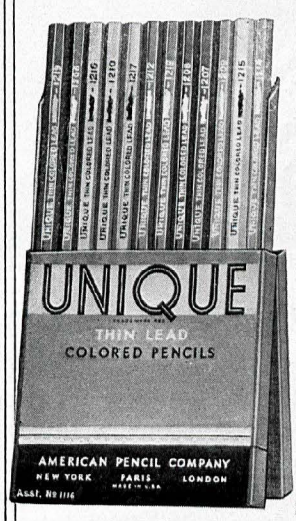

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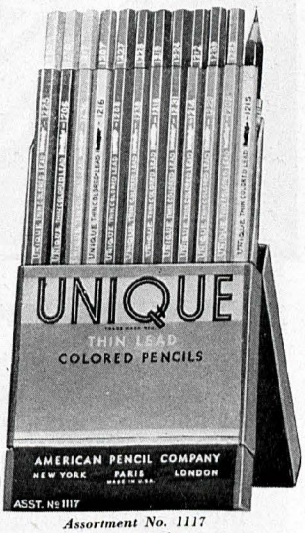

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Yes, I want to try a free Unique thin lead colored pencil.

I should like to have the following Shade.....

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No. 3 *of a series illustrating: "Thoughtful hints to help the architect."*

Two Daughters
welcomed this Architect's Idea

TWO daughters thought alike, wore each other's clothes, shared everything. "Why not plan a room that reflects this happy companionship?" thought the architect. This room resulted. Will they like this room? Will they want to share everything in it? And will the architect, who went a little beyond what *had* to be done, win their gratitude and thanks? Will this thoughtful service help him gain new clients? These questions answer themselves.

One of the striking features of this room is its Armstrong's Linoleum Floor, with inset star. It was planned especially for this room, as the foundation for the entire decorative scheme. It will give years of cheerful service, and keep its charming color to the last.

No matter what interior effect you wish to create, no matter what color scheme you may have in mind, you will find an Armstrong Floor to fit in with it smartly. There are literally scores of acceptable patterns to choose from.

There's a lot of good floor information in our new file-size specification book. Sent, with colorplates and samples of modern linoleum, upon request. We are also represented in Sweet's Architectural Catalog. Armstrong Cork Company, Floor Division, Lancaster, Penna.

Armstrong's Linoleum Floors
for every room in the house

Armstrong's (A) Product

An original touch in this room is the floor of Armstrong's Plain Blue Linoleum with a sixteen-point star inset and a Linostrip border.

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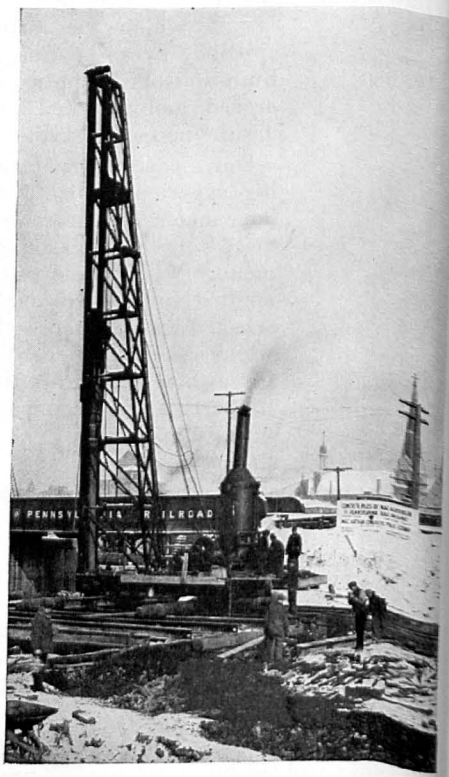
Boston & Maine R.R.	Philadelphia & Reading R.R.
New York Connecting R.R.	Delaware & Hudson Company
Canadian Pacific R.R.	Canadian National R.R.

Oregon & Washington R.R. & Navigation Company



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PRODUCT	*proven*	CLIENTELE	*illustrious*
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PERSONNEL	*capable*	SPEED	*record-breaking*

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CONCRETE PILE CORPORATION

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Branches: Chicago New Orleans Pittsburgh Boston Detroit Philadelphia Cleveland San Francisco

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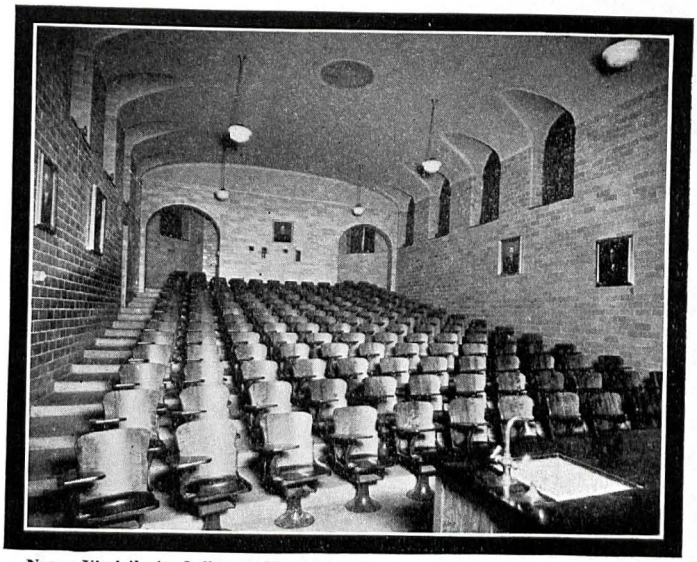
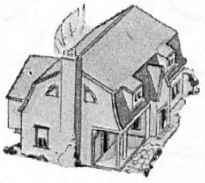
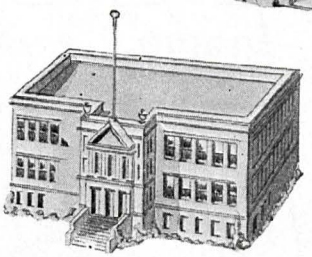
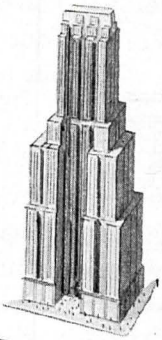
Giles Drilling Corporation (an affiliated company) will welcome the opportunity to submit estimates on core borings or soundings of any description



Natco Vitritile in Jefferson Medical College, Philadelphia, Pa. Horace Trumbauer, Architect; Doyle & Co., Contractors.







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WITH a multiplicity of standard sizes and shapes that suit practically every condition and dimension and a range of beautiful shades to meet wide color-design requirements, Natco Vitritile (glazed and enameled) is a building material of infinite possibilities.

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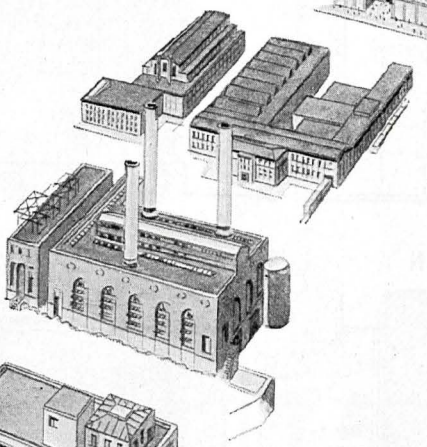
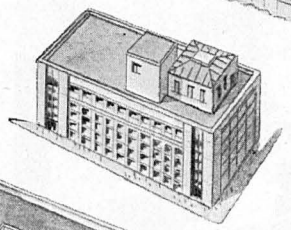
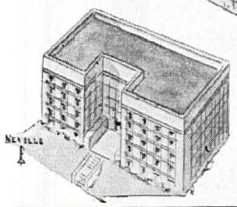
Bullnose closures, sill, and lintel tile; wainscot, cove base, chamfered corner tile; these and numerous other types permit the obtaining of striking and unique effects.

Natco Vitritile brings to designer, builder, and user, immediate and permanent satisfaction.







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The quality of Best Bros. new line of PIONEER White Plasters might well be judged by the 40-year reputation of Best Bros. Keene's Cement. But they need no sponsor. They stand on their own merits!

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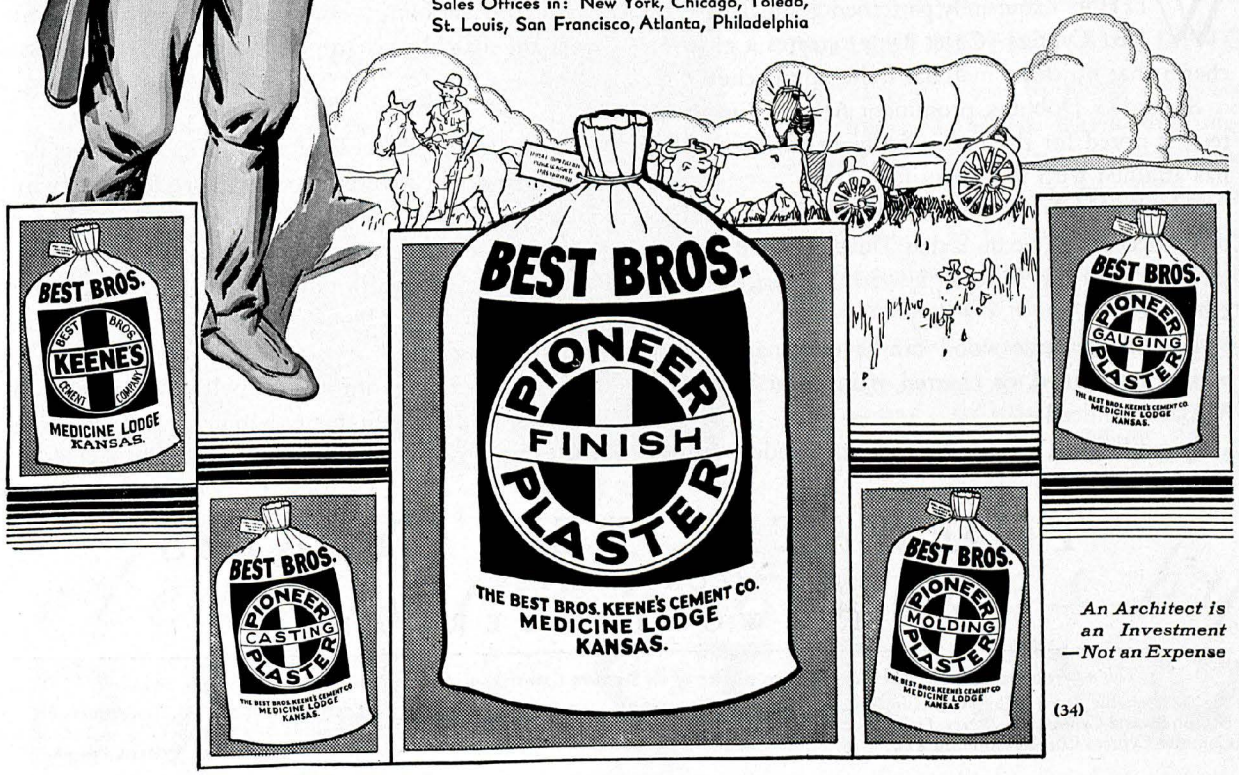

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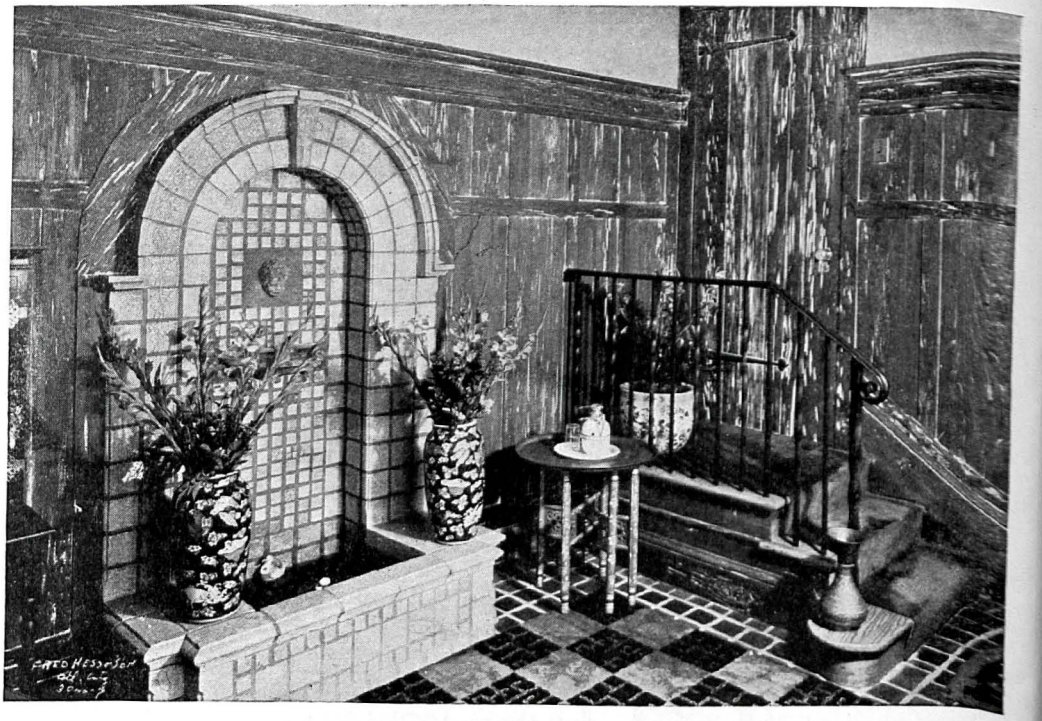

A charming Tidewater Red Cypress Interior designed by Mr. Seward G. Dobbins of Atlantic City, N. J.

SEWARD G. DOBBINS *suggests* natural cypress *for smart interiors*

WITH its exquisitely patterned grain, Tidewater Red Cypress (Coast Type) creates a glowing charm that no other material quite approaches.

Seward G. Dobbins, prominent Atlantic City architect, is noted for the many richly-warm interiors he has attained with this beautiful wood.

Like hundreds of other leading architects and interior decorators, he finds that Tidewater Red Cypress yields a mellow beauty, *wherever* or *however* it is employed.

For this versatile wood can be used naturally, or waxed, or stained, or charred, painted or varnished. Versatile, indeed!

It can be used for paneling, doors, window frames, baseboards, molding — anywhere, in short, where you want the matchless charm of Tidewater Red Cypress.

A Book of Interiors — sent free

In this illustrated book of interesting interiors, designed by noted architects, you will see how and why Tidewater Red Cypress is being used in greater quantities today than ever before.

For your complimentary copy, write to the Southern Cypress Manufacturers' Association, Jacksonville, Florida.

If your dealer is not stocked with Tidewater Red Cypress, he can get it for you quickly — or you can write direct to any of the Associated Mills listed below.

TIDEWATER RED CYPRESS

(COAST TYPE)

THE WOOD ETERNAL

This advertisement is published by the following members of the Southern Cypress Manufacturers' Association, Jacksonville, Florida:

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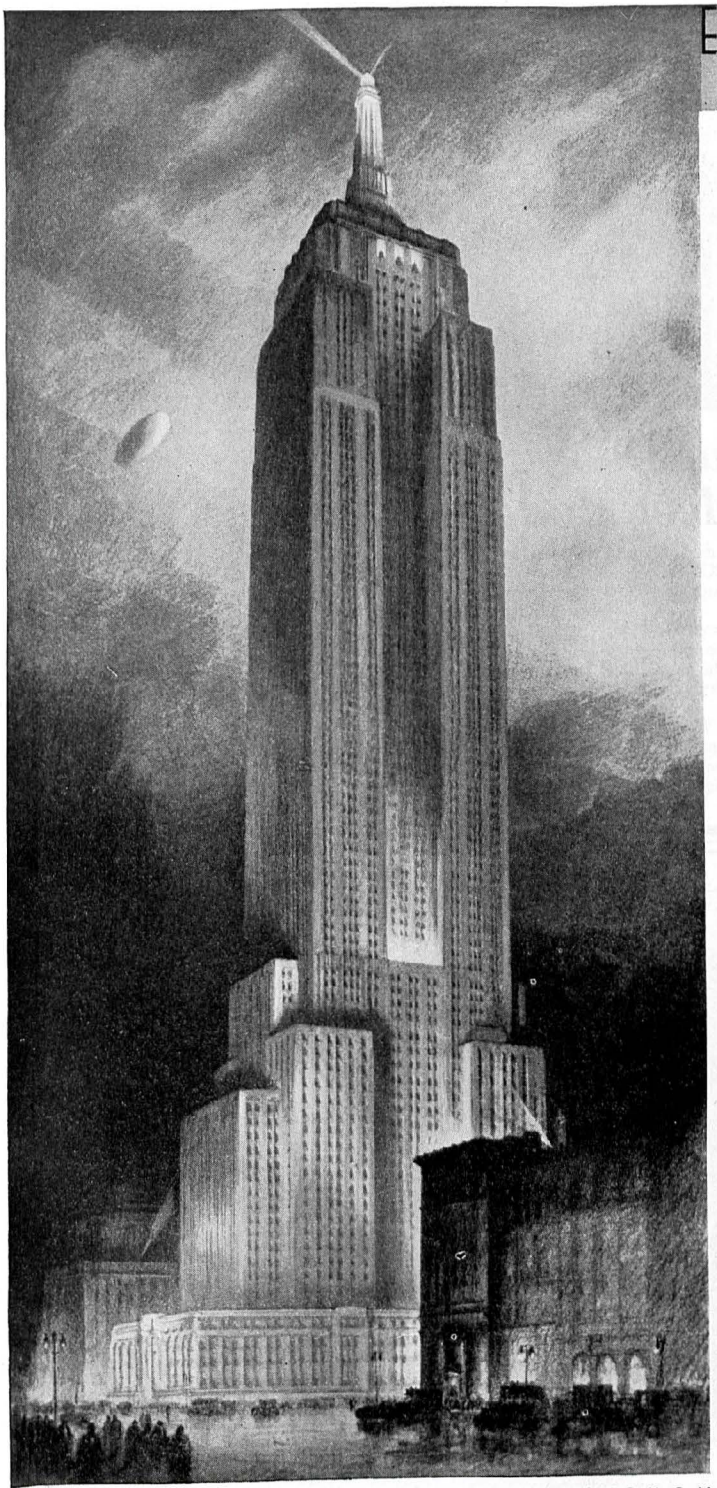

ARCHITECTS: SHREVE, LAMB & HARMON
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Established 1904 ~ 455 Buffalo Street, JAMESTOWN, N.Y.
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elevator entrances by

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SUBJECT TO HIS APPROVAL

Time—That Tough Old Tester of everything in this world—writes the final "Okay" on the materials that make up any structure.

For Time alone can tell whether those materials are worthy—serving faithfully through the years, or causing trouble and expense long before completing their expected life-span.

In the important matter of piping, so vital to permanence, Time has spoken clearly. His verdict—today as eighty years ago—is Genuine Puddled Wrought Iron for lasting pipe economy and satisfaction. No other pipe material has proved so successful in withstanding all the attacks of Time and his destructive henchmen—corrosion, vibration, leaky joints and the rest.

Use only Reading 5-Point Nipples with Reading 5-Point Pipe—you'll know them by the indented spiral band

Reading 5-Point Pipe is made of Genuine Puddled Wrought Iron, that rust-resisting, strain-defying metal of the ages. That is why you can specify Reading 5-Point Pipe with the confidence that it will outlast ordinary pipe two to one, and probably five to one!

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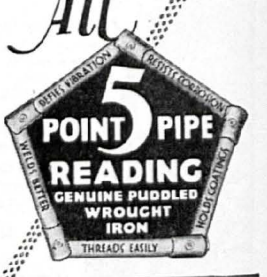

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DIAMETERS RANGING FROM ⅛ TO 20 INCHES

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OIL HEAT CAN BE ECONOMICAL

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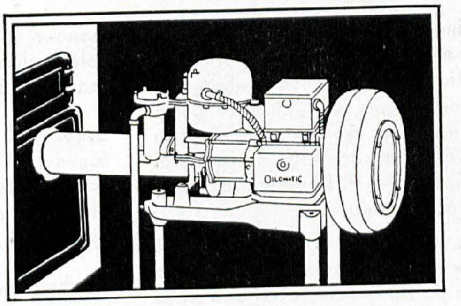
Mail the coupon below for your free copy of Williams revised manual on oil heat. It offers you much convenient and helpful information.



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Gentlemen: Please send me your Architect's Manual for Williams Oil-O-Matic installation.

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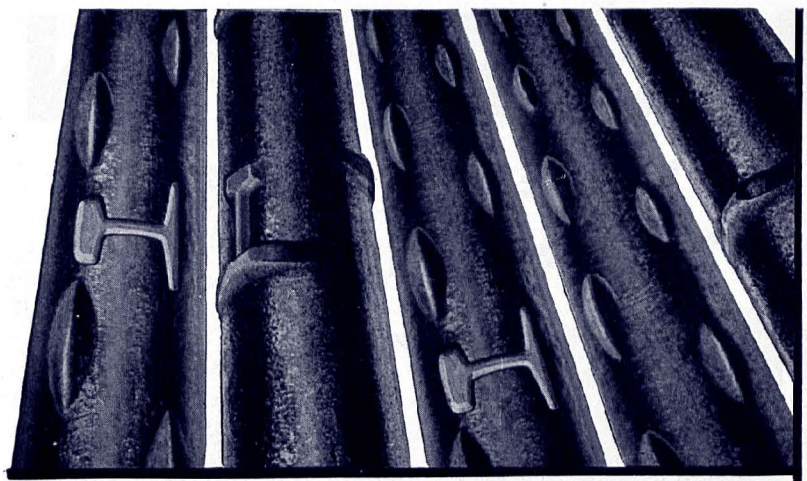

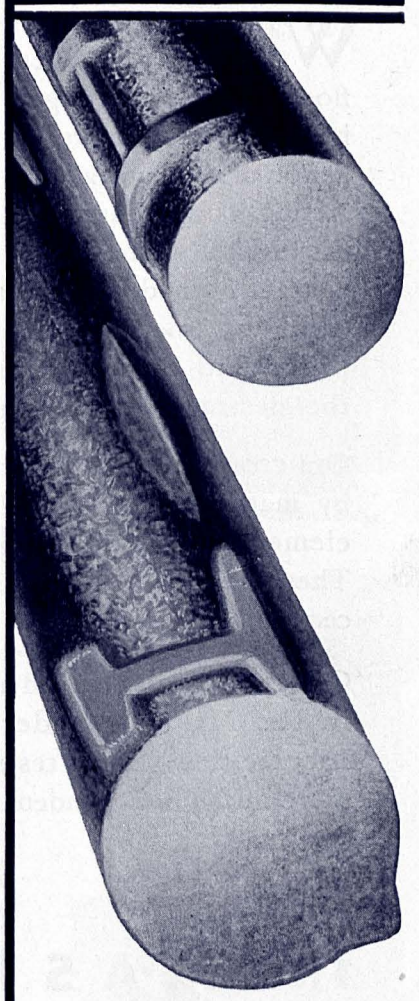

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For information write

Rail Steel Bar Association, Builders Bldg., Chicago

RAIL STEEL
for concrete reinforcing

OMICRON

GUARDS CONCRETE FLOORS AGAINST CORROSION

The corrosive action of lactic acid has shortened the life of this milk products plant floor.

WHEREVER premature failure of concrete floors occurs it can largely be traced to the corrosive action of acids and alkalis. Acting as solvents, they dissolve the waste, soluble content formed in concrete during the hydration process... rendering the mass pitted and porous. This intensifies the destructive action of abrasion.

Omicron definitely checks corrosion by materially reducing the soluble elements formed during hydration. These are replaced by non-soluble cementitious products.

Omicron was discovered and perfected in the Master Builders Research Laboratories. Many tests conducted there, and in independent laboratories, clearly demonstrate the value of Omicron in (1) increasing the strength of concrete, and (2) retarding the corrosive action of acidic moisture, precipitation from smoke or fumes, and acid or alkaline solutions.

The results of those tests are recorded in a booklet that is of direct interest to those responsible for the specification and construction of industrial or commercial floors. A copy will be sent upon your request.

Combined with Master Builders integral concrete hardeners, Omicron greatly increases the effectiveness of those hardeners in prolonging the useful life of concrete floors.

The MASTER BUILDERS Co.

FACTORIES: CLEVELAND
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SALES OFFICES AND STOCKS
IN ALL PRINCIPAL CITIES

Omicron is an exclusive product of the Master Builders Company and is available as a basic ingredient in the following integral concrete floor hardeners only.

FOR INDUSTRIAL FLOORS

METALICRON—an iron floor-finish aggregate, or metallic hardener, highly refined. Contains Omicron. Produces most wear-resisting disintegration-resisting concrete—waterproof, dustproof. For monolithic or topping finish. Also available in colors.

FOR COMMERCIAL FLOORS

MASTERMIX—Omicron-containing liquid paste, mixed with the gauging water. Hardens, waterproofs, dustproofs the entire topping. Meets every commercial floor condition.

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THERE'S A NATIONAL HEATING SYSTEM FOR EVERY BUILDING NEED

Cutaway view National Crimson Flame Boiler. One of 118 types and sizes.

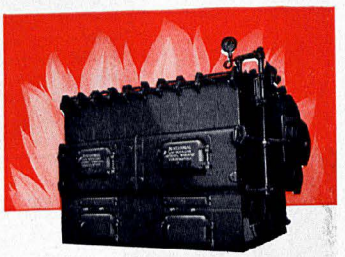
National Novus Boiler

National Bonded Crimson Flame Boiler

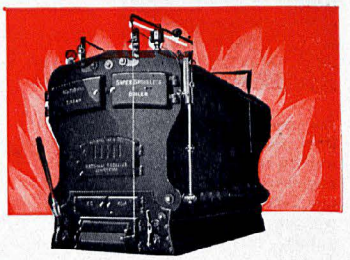
Mushrooms of Flame Bloom Against Each Section

Zig-zagging in and out, the flaming gases take their serpentine way to the stack. They pass through scientifically proportioned, water-surrounded ports, and "mushroom" out over the entire bottom of the section above, before escaping through its ports. The Crimson Flame dependably, efficiently furnishes the flood of friendly warmth which its crimson jacket so vividly promises.

This boiler is designed to perform efficiently with all leading types of fuel; coal, coke, oil and gas. It can be converted on the ground to meet the individual requirements of the fuel selected. Engineering design scientifically coordinates every part to produce economical combustion and thoroughly satisfactory heating. The National Boiler Bond, furnished with each boiler, not only guarantees workmanship, materials, and design, BUT MOST IMPORTANT OF ALL SPECIFIES AND GUARANTEES BOILER PERFORMANCE. We will gladly send additional information.



National Low Water Line Boiler



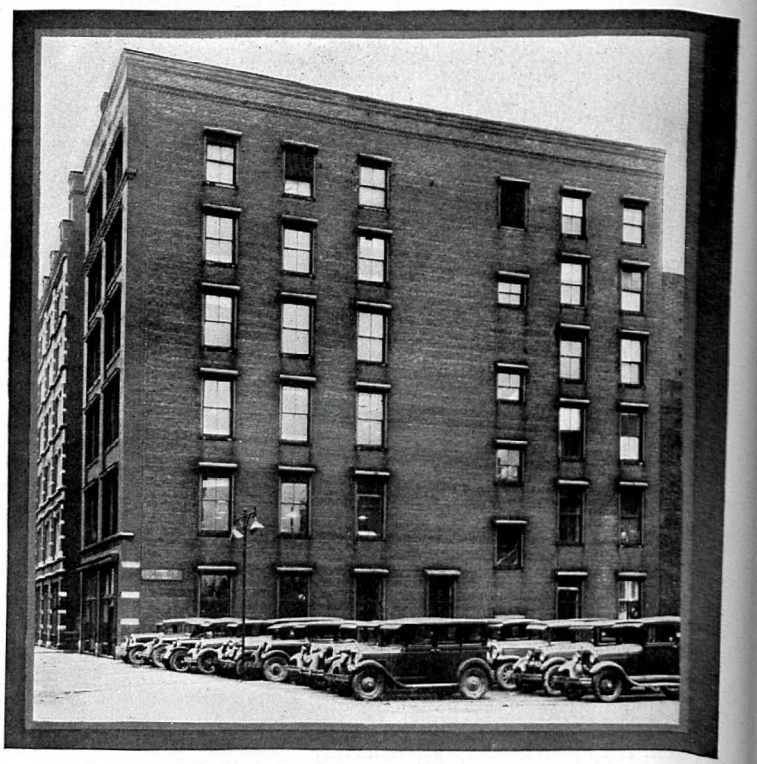
National Super-Smokeless Boiler

NATIONAL RADIATOR CORPORATION
JOHNSTOWN, PENNSYLVANIA

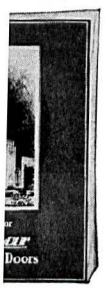
NATIONAL *Made-to-Measure* HEATING SYSTEMS

ter 26 EARS

115 KINNEAR AUTOMATIC FIRE SHUTTERS AS GOOD AS THE DAY THEY WERE INSTALLED



Although intended primarily for fire protection, the doors and shutters on the first floor are lowered every night to prevent unlawful entrance, and those on the wall are used, in the summer, instead of awnings.



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Twenty-six years is quite a spell—a lot of water goes over the miller's wheel in a quarter of a century. Comparatively few mechanical devices made that long ago are in perfect operating condition today. But that's the habit of Kinnear Rolling Doors and Shutters. Ten, twenty, thirty years of perfect, uninterrupted service is the rule, not the exception. They just seem to mellow with age and, if anything, work a little smoother as time goes on.

Such performance doesn't just happen. It's the result of the extra generous factor of safety that is standard in Kinnear Engineering. Naturally, Kinnear Doors cost a little more at the start—but a lot less at the finish.

Kinnear
LING DOORS

THE KINNEAR MANUFACTURING CO.
300-340 Field Avenue, Columbus, Ohio, U. S. A.

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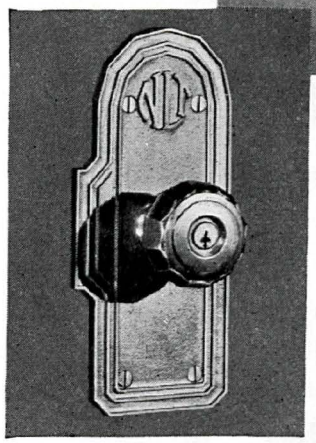

This special design in the Sargent Union Lock was made for the Northern Life Tower in Seattle, Wash. A. H. Albertson, Architect. Joseph W. Wilson, Paul Richardson, Associates.

SARGENT

LOCKS AND HARDWARE

FOR LONGER-WEARING, BETTER-LOOKING FLOORS

LIGNOPHOL FOR WOODEN FLOORS

LAPIDOLITH TRADE MARK FOR CEMENT FLOORS

Floors are the constant problem of architect and contractor. Any trouble here asserts itself more quickly than do hidden defects. Work that has to be done over is embarrassing to the architect and contractor both.

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Sonneborn co-operates with the contractor and gives him the benefit of 25 years experience in helping him select and use the products that will enable him to come up to specifications without reducing his profit. The Sonneborn guarantee applies whether he does the work himself or whether we do it with our own labor. So, select the concern that gives this helpful co-operation.

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—For waterproofing mass concrete, stucco and mortars.

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—an exterior or interior wall coating that stays white and can be washed endlessly.

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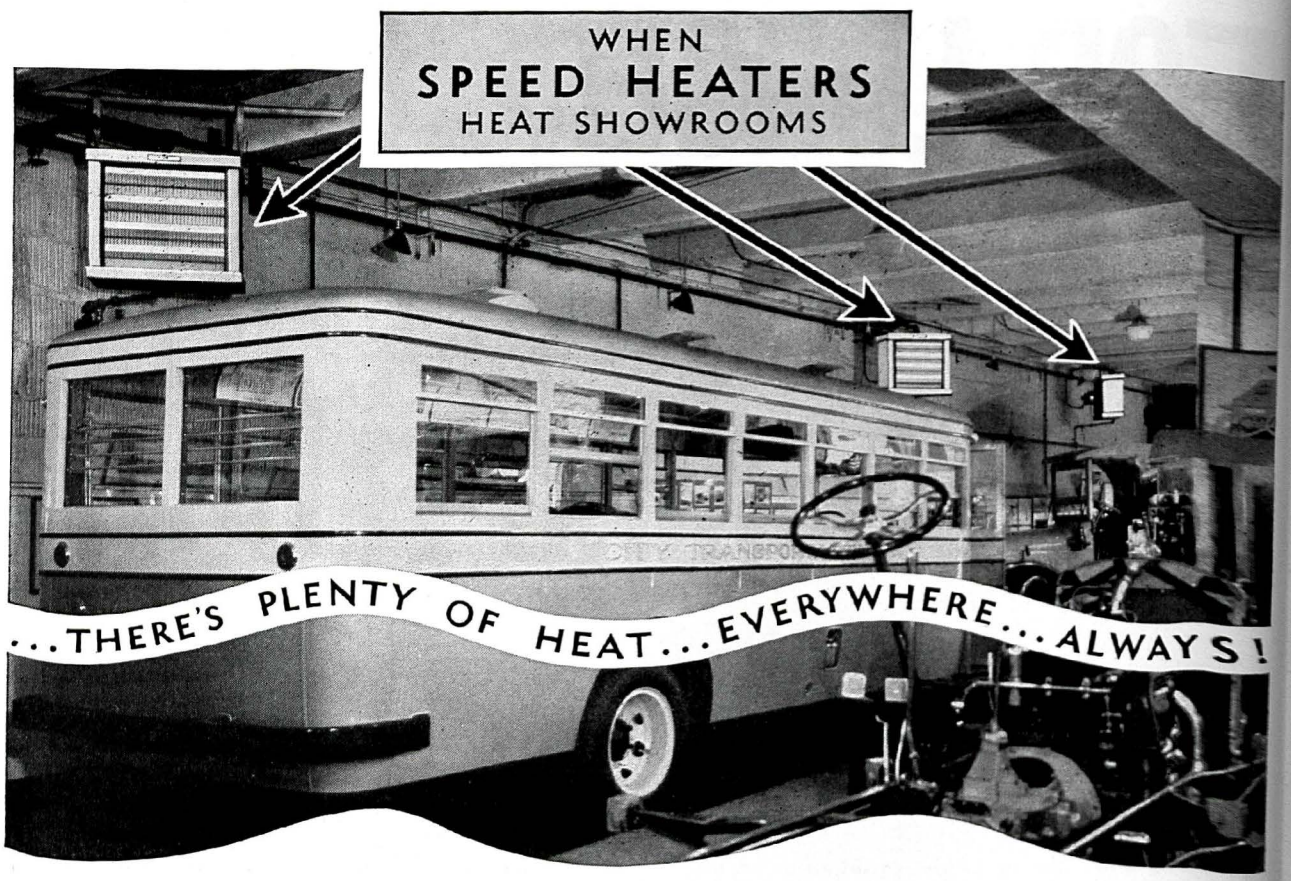
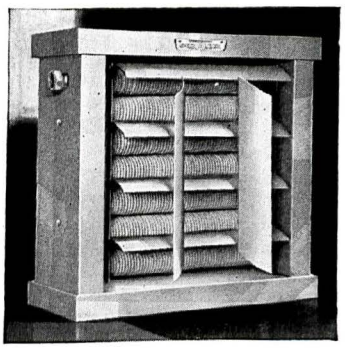


Showroom of Mack Trucks, Inc., 440 Lexington Avenue, N Y C. Equipped with Sturtevant Speed Heaters



THAT'S the beauty of Speed Heaters! Heat in abundance ... *thoroughly distributed!*

No job is too tough for them. Ceilings may be 30 feet high... floor area as large as a farm... and swept by drafts. But Speed Heaters will kill the cold... get heat to where it's needed .. efficiently... with speed!

Showrooms, auditoriums, large stores, factories, warehouses, garages, gymnasiums and other large areas... all are now being heated by Speed Heaters instead of by ordinary radiators. For Speed Heaters mean better heating... and a worth while saving of steam in the bargain.

Why not get all the interesting facts about this equipment *now?* Send for these two bulletins: (1) The Speed Heater... A short talk on a radically new development in heating apparatus; (2) Complete Data on Speed Heaters for architects.

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SPEED HEATERS

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Mr. Architect, as we have discussed door problems I have stressed the fact that every worthwhile cold storage door improvement for over forty years past has been put on the market by either the Jamison or Stevenson Companies. *But the need for those improvements came from our study of the user's problems* ¢ ¢ ¢ Take the Stevenson "Door that Cannot Stand Open" as an example ¢ ¢ ¢ Users of cold storage realized that workmen could leave any regular door wastefully open. The vestibule-air-lock doubled the door closing labor, used costly space and failed to solve the problem ¢ ¢ ¢ The illustration shows the only way to be sure that the opening is always closed unless filled with passing goods or man. The batten doors can't stand open; from within they open the regular door when truck is pushed against them ¢ ¢ ¢ So perfect in action that it has been adopted on busy doorways in all types of plants; and was "paid the compliment of imitation in all essential features". This door, infringements of which have been enjoined by the U. S. Court, is priced so moderately that the use of one at every busy doorway will actually show a profit on the investment in a few short years.

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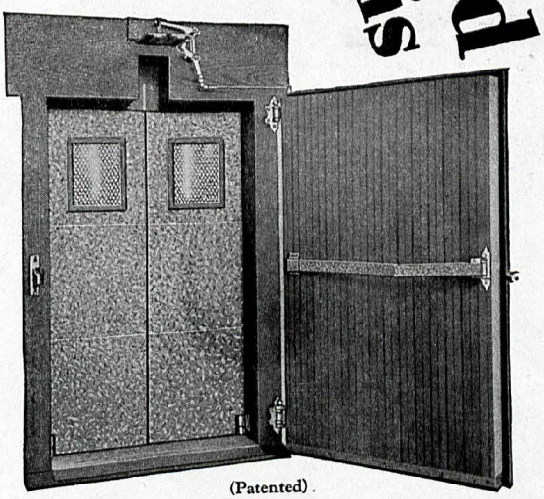

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STEVENSON
"DOOR THAT CANNOT STAND OPEN"

Combines a standard cold storage outer door with two cam-actuated, armored batten doors that keep themselves constantly closed except when traffic is actually passing through. Just as easy to operate from the outside as a single regular door. Easier from the inside because the batten doors themselves throw open the outer door. » » » Is replacing regular doors of all makes, on busy doorways in large and small plants. » » » Write for complete description. » » » Protected by patents No, 1,099,626 and 1,208,042—fully sustained by court decree March 4, 1930—copy of which will be sent on request.

NO INFRINGEMENTS WILL BE TOLERATED

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Cold Storage Doors

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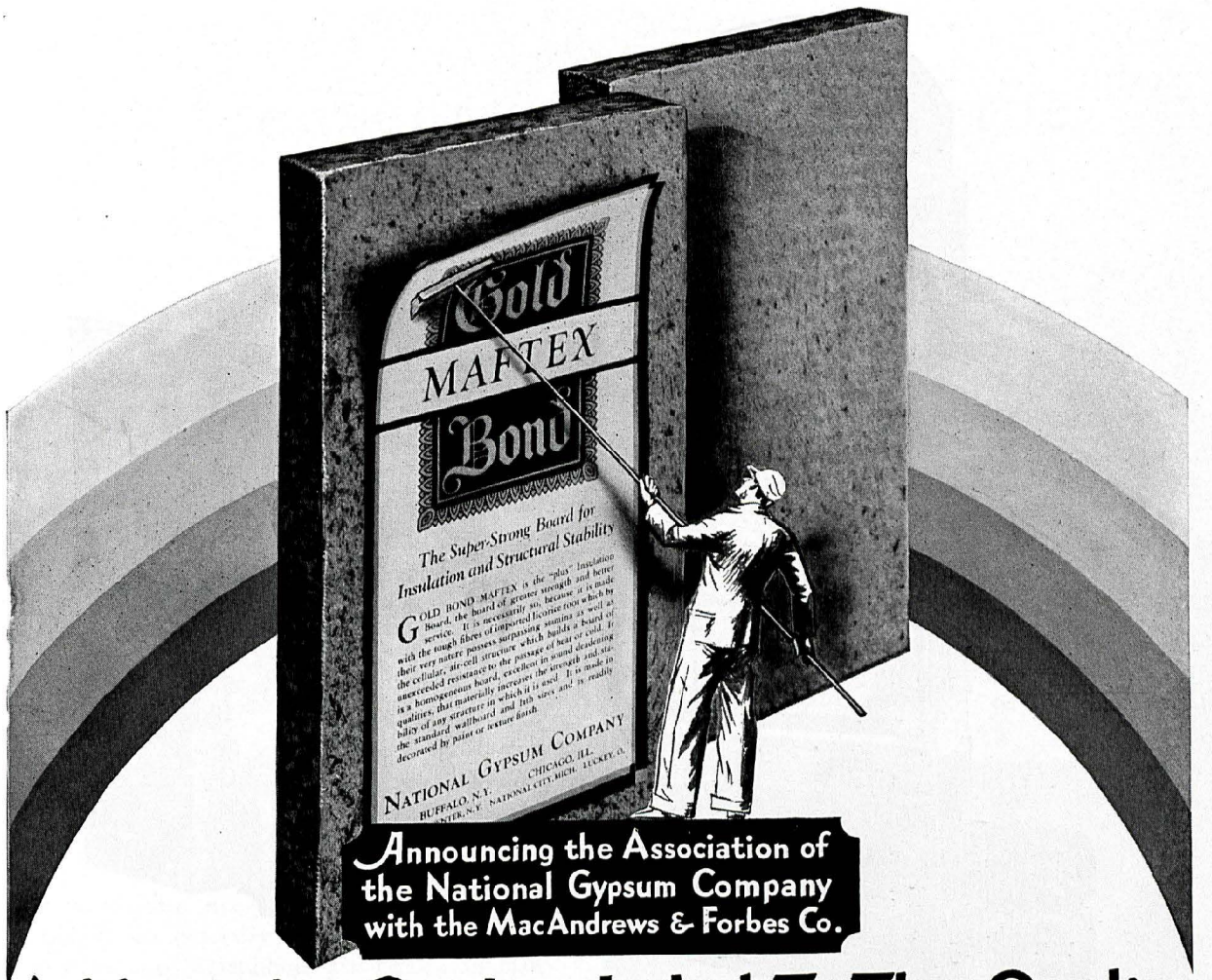

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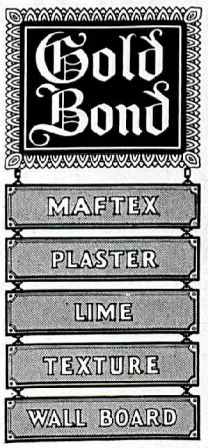
the sale of Maftex—the insulation board of "plus" service—with the Gold Bond line of gypsum and lime products, is one of the most progressive steps ever taken in the field of wall materials.

» » In the association of effort now perfected between the National Gypsum Company and the MacAndrews & Forbes Company a new standard of service is assured in the sale and merchandising of insulation board.

» » Maftex brings to the Gold Bond line of wall materials a name and product of proven merit. In the three years that Maftex has been on the market it has won a distinctive rating among insulation materials, because (1) it is the only board made with the tough, undersoil fibers of imported licorice roots (2) it performs maximum insulation service, having the low rating of .337 b.t.u., (3) it adds structural strength to every building where used (4) it has superior nail-holding power and a natural bond with gypsum plaster (5) it is vermin-proof (6) it is sound-deadening and (7) it renders excellent acoustical service.

» » Gold Bond Maftex is the type of product that once used becomes the first choice of architects and builders alike. No matter how well you have known Maftex in the past, you should know it better now. Let us place the complete Gold Bond Maftex program in your hands.



NATIONAL GYPSUM COMPANY

BUFFALO, N. Y. CAMDEN, N. J. CHICAGO, ILL. CLARENCE CENTER, N. Y.
NATIONAL CITY, MICH. LUCKEY, O.

"PRODUCTS THAT ARE USED TOGETHER, SHOULD BE SOLD TOGETHER"

There...that's where to put the radiator!

Clinton, Mass., Savings Bank, Hutchins & French, Archts., J. E. Chatman, Engr., Lynch & Woodward, Heating Contrs.

The old question of where to put that radiator almost answers itself—when the radiators are Robras 20-20. They fit in the most convenient place of all—in the wall, out of the way and out of sight.

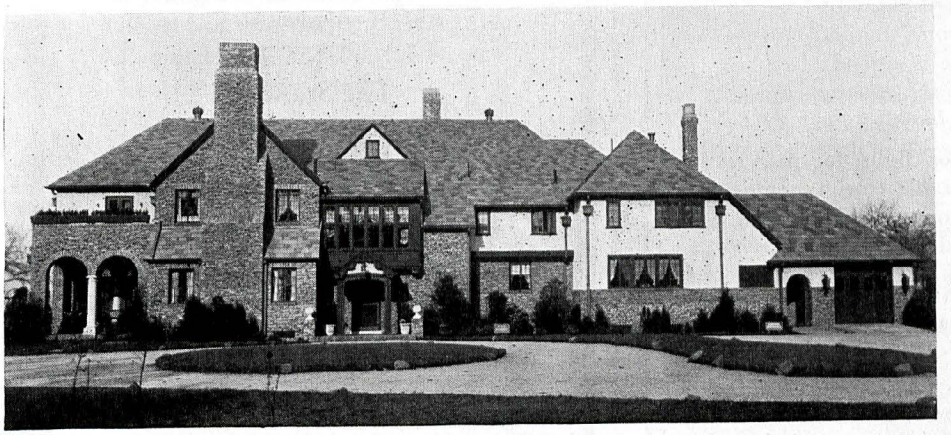
Instead of destroying the effect of the fine windows in this unique New England savings bank interior, Robras 20-20 Radiators fitted neatly under the sills..."Fitting neatly" into the most inconceivable places, is the history of these radiators in thousands of installations...in the studding of walls...in fact, in *any* space 4 inches or more deep.

You will want to know more about this surprisingly flexible, electrically-welded brass radiator. Why not investigate — through one of our offices, Sweet's catalogue, or your A.I.A. file?

ROBRAS 20-20

ROME BRASS RADIATOR CORPORATION, ONE EAST FORTY-SECOND STREET, NEW YORK, N. Y.

A Convenience feature of the modern Residence



On the estate of Mr. Monroe Eisner, Red Bank, N. J., are fourteen telephone outlets: eleven in the residence, and one each in the superintendent's cottage, the stables and a detached garage. Built-in conduit connects these outlets and carries the wiring for the telephone system which includes intercommunicating features. The dining-room and breakfast-room outlets are served with a portable telephone.

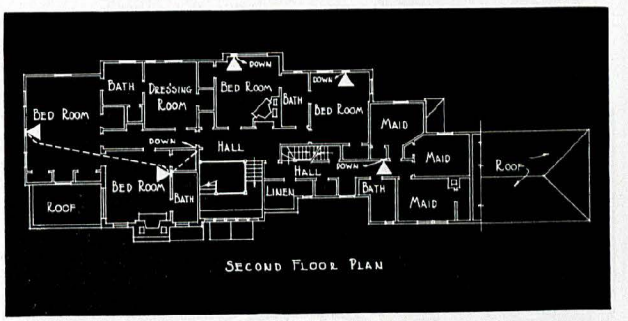
FRED M. TRUEX, Architect, *New York City.*

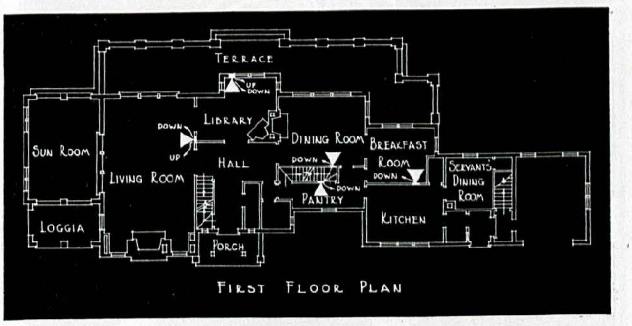
Telephone outlets *throughout* the house

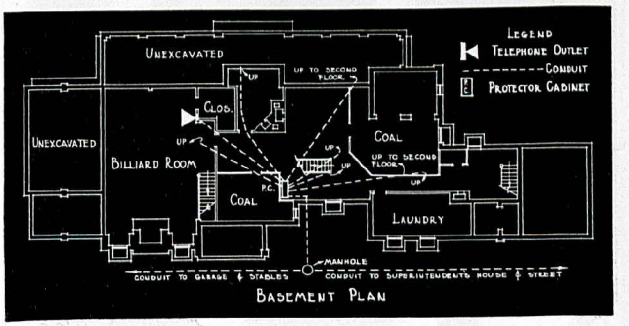
THE TELEPHONE REQUIREMENTS of the modern household are radically different from those of a few years ago. Telephones are needed in many locations . . . living-room, library, dining-room, kitchen or pantry, breakfast nook, garage, game room, bedrooms, servants' quarters . . . wherever, in fact, they will save steps and time, and add to comfort and convenience.

Many architects are meeting this demand for complete telephone convenience by specifying conduit for the telephone wiring in their plans for new and remodeled residences. In this way they provide for telephone outlets in all of the important rooms. The home owner can use just those he desires, and he can readily expand or rearrange the service to meet changing needs. In addition, he can enjoy the improved appearance that results from concealed wiring.

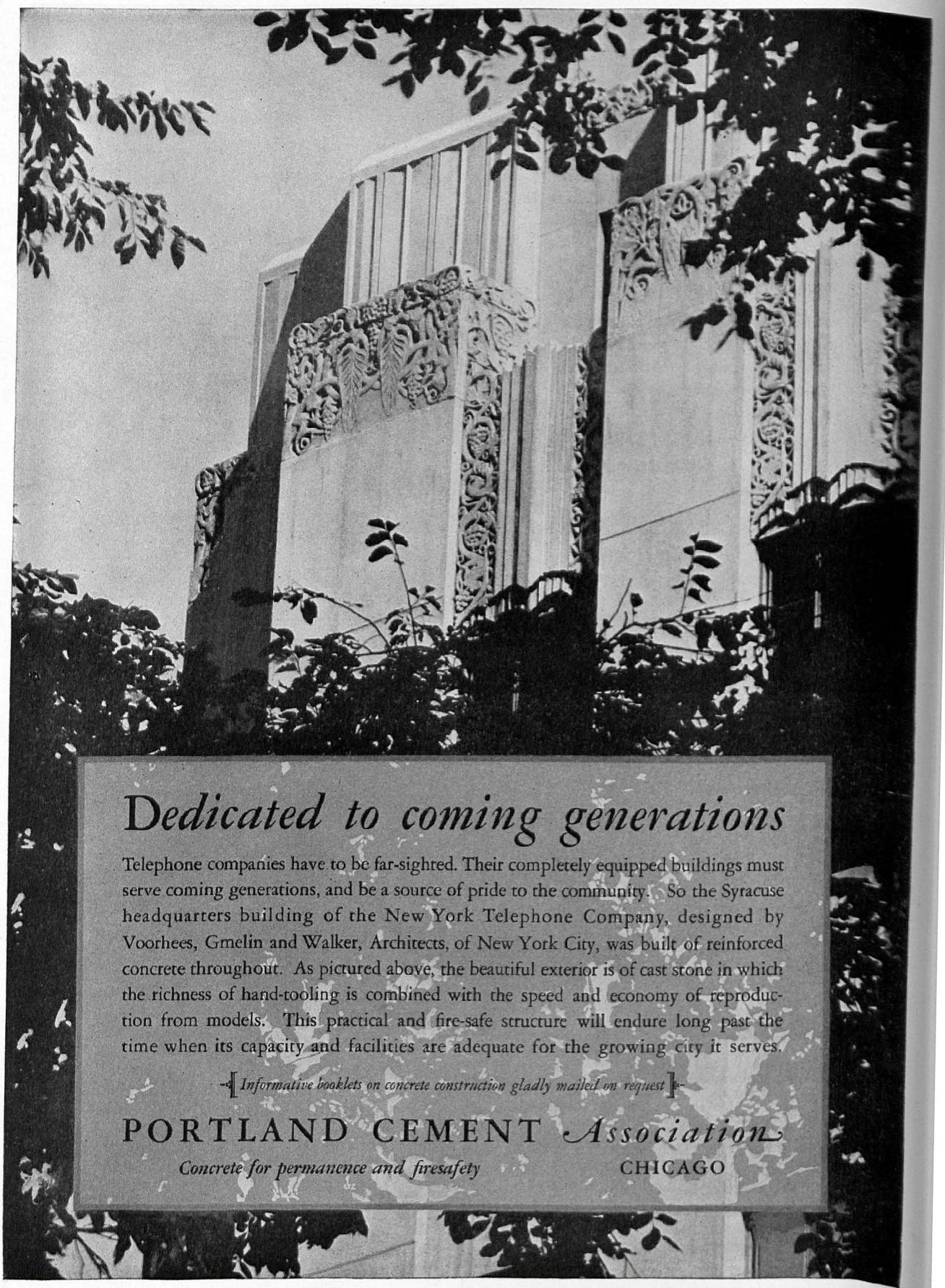
Your local Bell Company will gladly confer with you and your clients in planning the telephone arrangements for all your building projects. There is no charge. Just call the Business Office.







AMERICAN TELEPHONE & TELEGRAPH CO. AND ASSOCIATED COMPANIES — BELL SYSTEM



Dedicated to coming generations

Telephone companies have to be far-sighted. Their completely equipped buildings must serve coming generations, and be a source of pride to the community. So the Syracuse headquarters building of the New York Telephone Company, designed by Voorhees, Gmelin and Walker, Architects, of New York City, was built of reinforced concrete throughout. As pictured above, the beautiful exterior is of cast stone in which the richness of hand-tooling is combined with the speed and economy of reproduction from models. This practical and fire-safe structure will endure long past the time when its capacity and facilities are adequate for the growing city it serves.

Informative booklets on concrete construction gladly mailed on request

PORTLAND CEMENT *Association*

Concrete for permanence and firesafety CHICAGO

WATERPROOFINGS **HORN** PRODUCT FLOOR-TREATMENTS

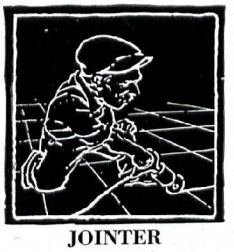
COLORUNDUM

For Coloring

Armor Plating

Cement Floors

When the Floor Is Laid



JOINTER
Horn's rubber-carborundum wheel on a power hand saw will quickly score a cement floor to give a tile joint effect.

NON-SLIP
The finished surface looks glass-smooth. But try and slide on it and see how you are brought up short.

Made in 4 Colors

Red, Brown, Green and French Grey. Furthermore, all colors cost the same, not even excepting the green.

Its Armor Plating

FUSED aggregates do it. Aggregates that have a diamond-like hardness. Aggregates with a crystalline formation that causes it to lock itself for all time into the surface finish. Does not loosen up and kick out like other wear resisting aggregates. In addition to armor plating the surface, Colorundum colors, waterproofs, dustproofs, and slipproofs.

Its Non-Slipness

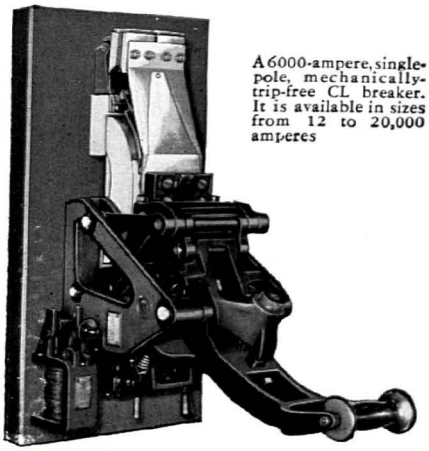
THE very aggregates that armor plate the surface against wear, slipproof it. The smoothness of its glass-like surface deceives you. You would say it was "slippy". But the countless points of the diamond hard aggregates give grip, preventing slip. Unlike some non-slip integral surfacings, Colorundum aggregates do not kick out. Colorundumed floors grow increasingly more slipproof. Not less.

A. C. HORN COMPANY

GENERAL SALES OFFICE.
New York: 101 Park Ave.

Branch Offices in All Principal Cities

WORKS:
Long Island City, N. Y.



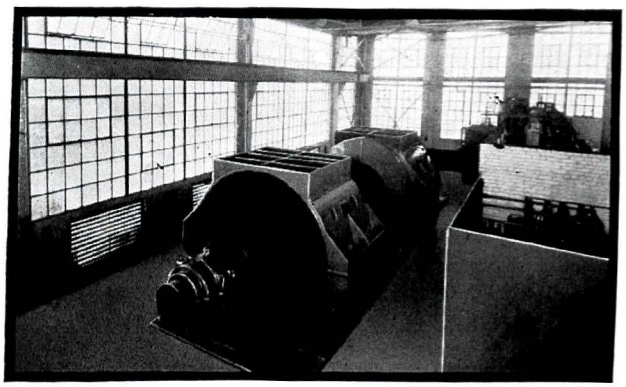
A 6000-ampere, single-pole, mechanically-trip-free CL breaker. It is available in sizes from 12 to 20,000 amperes

Modern

BUILDING PROTECTION

with Modern Circuit Breakers . . .

THE same painstaking, scientific research that has characterized the architectural development of today's towering buildings, has created the Westinghouse CL carbon circuit breaker.



Interior view of one of four Westinghouse high-power laboratories. Such facilities are necessary in the development of modern electrical equipment

Developed in the Westinghouse high-power laboratories by men of extensive practical knowledge and long experience in circuit breaker problems, the CL breaker represents the latest advancement in the protection of the almost endless electrical circuits which give these giant structures life.

The CL breaker retains its appearance of newness indefinitely because of the velvety finish of copper parts and glossy baked enamel of other metal parts. It retains all adjustments made by experts at the factory because of its solid one-piece frame. Its unbreakable carbon contacts will withstand the most severe service for many years. These and many other qualities are all exclusive Westinghouse features, providing a better product to meet modern service conditions. Write our nearest office for copy of circular 1705-B. It describes fully the CL breaker.

Service, prompt and efficient, by a coast-to-coast chain of well-equipped shops

Westinghouse

T 31301

TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY EVENING.

American architects are constantly striving to build better homes. The National Lumber Manufacturers Association is helping by giving them Tree Mark lumber which guarantees specifications.

The creative ability and painstaking care of architects is safeguarded when Tree Mark—grade- and trade-marked lumber—is specified.

For All Homes of Wood

Specify Tree Mark—the guaranteed lumber

CAREFULLY you specify the materials which go into a home. Upon the rigid filling of these specifications depends the beauty, the worthiness, the value of the completed structure.

Now you can specify any size or quality of lumber—and *be sure your specifications will be met.* The National Lumber Manufacturers Association guarantees that all lumber bearing its identifying symbol, the Tree Mark, is exactly as branded by the expert grader.

Now that building and loan associations are sponsoring the movement that all homes must be constructed with materials of known value, Tree Mark lumber is more popular than ever.

If you are faced with any lumber problem, let the National Lumber Manufacturers Association help you. Expert in every phase of lumber technology and engineering methods, assistance is offered you free of charge or obligation.

Mail the coupon for a copy of free booklet that contains the complete story of grade- and trade-marked lumber.

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This Tree symbol stamped on a piece of lumber is your guarantee that the lumber is carefully manufactured "American Standard Lumber from America's best Mills."

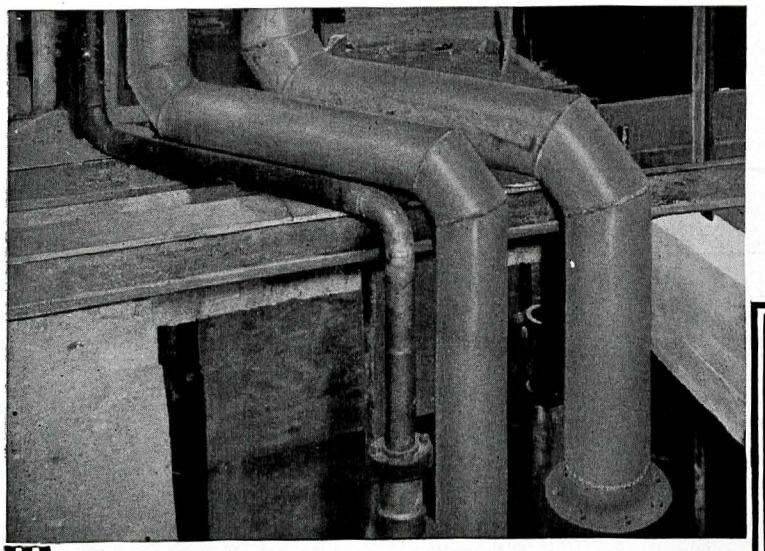
National Lumber Manufacturers Association
Dept. 596, Transportation Bldg., Washington, D. C.
Send me a free copy of "For Home Lovers" and "Taking the Mystery Out of Lumber Buying."

Please send me special information on_____

Name_____

Address_____

City_____ State_____



Oxwelding
REDUCES COSTS

Oxwelding has revolutionized pipe installation practice. It is a new and better method in the hands of the pipe fitter. Oxwelded joints develop the full strength of the pipe itself and consequently lighter-walled pipe can be used for the entire system of piping. Oxwelded joints, once tested and found tight, always remain so, thus eliminating maintenance costs. Costly cast or forged fittings and special bends are also eliminated, except where flanged or screwed couplings are required to connect to valves. The most complicated fittings are neatly and compactly fabricated by oxwelding from standard sizes of pipe.

Welded piping construction may be undertaken with the same confidence in a satisfactory result as older methods and with further assurance of increased economy and serviceability.

THE LINDE AIR PRODUCTS COMPANY . . . THE PREST-O-LITE COMPANY, INC. . . OXWELD ACETYLENE COMPANY

UNION CARBIDE SALES COMPANY . . . UNITS OF

UNION CARBIDE AND CARBON CORPORATION

General Offices . . . . . New York UCC Sales Offices . . in Principal Cities

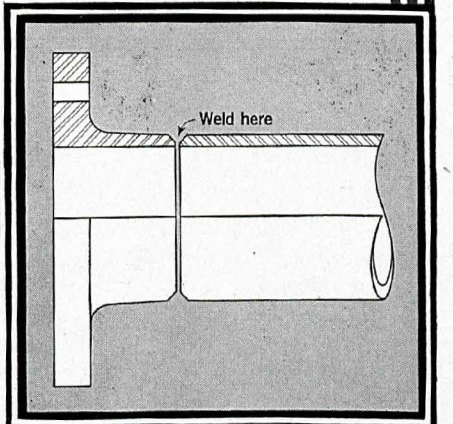
DESIGN STANDARDS FOR OXWELDED PIPING

Any welded piping system, even in its most complicated form, is a combination of a few fundamental welding design details.

PIPE FLANGES
Standard Flange for Welding

Explanation:

A type of flange especially designed for welded piping construction is illustrated. It is supplied by leading manufacturers of pipe fittings in both forged and cast steel. Either flat or tongue and groove



faces can be obtained to meet service requirements. It is provided with an extra long hub for butt welding into the line.

Uses:

The Standard Flange for Welding is recommended to replace by welded construction other types of American Standard flanges for all sizes, pressures and services.

Specification:

When the Standard Flange for Welding is specified the following features should be included in the specification:

1. The flange shall be carefully tacked before welding, with tack welds not more than 6 in. apart, to facilitate and maintain alignment.
2. Bolt holes shall straddle natural center lines except when specified otherwise.
3. Other features to be included in the specification are the same as for the Open Single Vee Butt Weld given on page 10, "Design Standards for Oxwelded Piping," except that in all cases the weld shall be built up to a height in excess of the thickness of the welding end of the flange hub.

The above is excerpted from a handbook on fundamental designs, titled, "Design Standards for Oxwelded Steel and Wrought Iron Piping," published by The Linde Air Products Company. A copy of this handbook should be in every architectural drafting room. It is yours for the asking. Just fill in and mail the coupon.

Technical Publicity Dept., 12th Floor
205 East 42nd St., New York, N. Y.

Please send me a copy of your new book, "Design Standards for Oxwelded Steel and Wrought Iron Piping." P.P.-6-30

Name .....

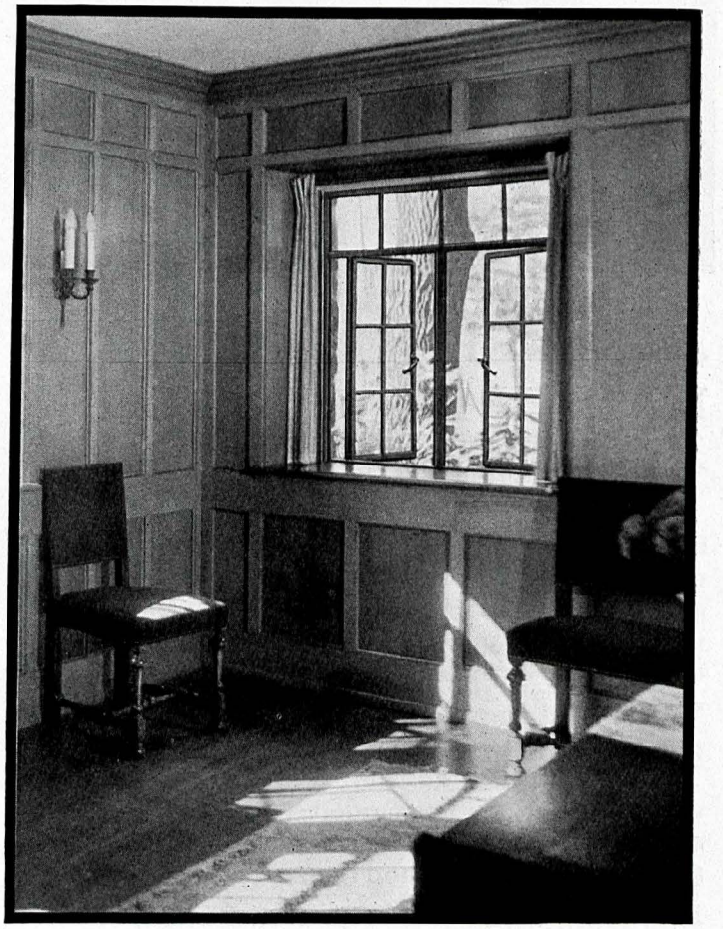
Company ..... *Position* .....

Street Address .....

City ..... *State* .....

THEY OVERLOOK NOTHING . . . BUT THE LANDSCAPE!

AT LAST, a casement that provides everything . . . screens, drapery-attachments, beauty of line, practical usefulness over the years. Lupton Casements give an invitation to vagabond breezes, and a definite snub to cruising mosquitoes, flies, and moths.



Here is a casement that will serve and satisfy your clients long after the residence has been occupied. The screens are marvels of convenience. Spring pivots allow them to be attached to the window in 15 seconds. Frames are drilled for both screen and drapery-attachments.

We recommend the use of plate glass.

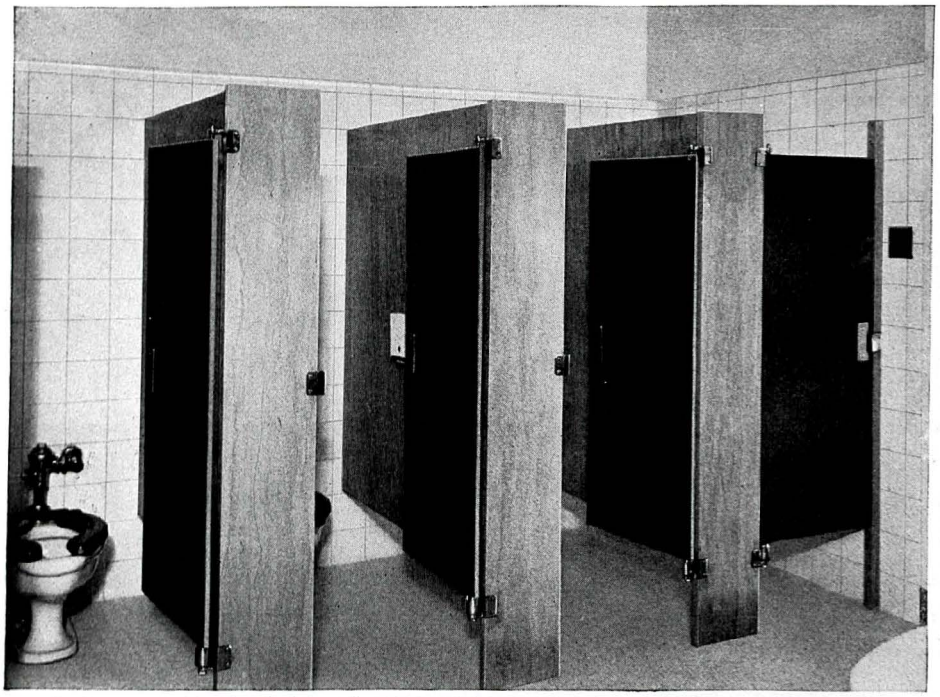
We have arranged with all our sales-representatives to have them furnish screens, drapery and shade-brackets, and plate glass at the time the windows are purchased. All at minimum cost.

Years of consistent advertising have identified the Lupton name with quality steel windows. It is a reputation which we regard highly, one which we back with the utmost sincerity of craftsman and executive at the Lupton plant.

The cost of these new casements is very little more than that of an old-fashioned window. Made in standard sizes to suit a wide variety of architectural treatments. Consult your current edition of Sweets' catalog for complete details. David Lupton's Sons Co., 2229 E. Allegheny Ave., Philadelphia, Pa.

LUPTON

where steel is fused with sincerity



By Permission of the New York Stock Exchange Building Company

Veneer-Steel
TRADE MARK REG.

IN OFFICE STRUCTURES PARTICULARLY

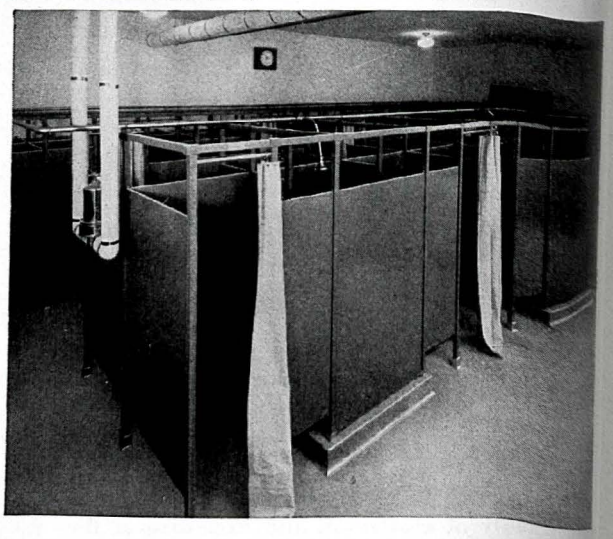
Veneer-Steel sound-proof doors on partitions of marble, structural glass, etc., have found great acceptance in office structures. The hinge used is the famous Hart & Hutchinson ball-bearing gravity type—proved insurance of trouble-proof performance.

. . . DEPENDABILITY HAS BEEN PROVED

VENEER-STEEL Partitions for toilets, showers, dressing rooms—for ward screens and dwarf partitions in hospitals—have thoroughly established their dependability. Here are partitions that will stand up against rough use, time, hot and cold water, and excessive temperature changes.

Veneer-Steel Partitions and Doors are rust-proof, noiseless, non-absorbent and flush-type. They are built of *galvanized* sheets overlaid on a fibre core and cemented thereto with all edges soldered. All posts and wall attachments are sherardized inside and out after fabrication.

Hardware solid white brass buffed bright or pressed brass chromium plated. Because Veneer-Steel Doors and Partitions are solder sealed they are impervious to moisture and cannot absorb or retain odors. Standard finishes for Veneer-Steel Partitions and Doors are olive green and grey. Special finishes and wood grains can also be supplied.



CONCERNING GALVANIZING

W. T. *Flanders of the Malleable Iron Fittings Co. says in his book:* "GALVANIZING and TINNING"

"IT has not yet been discovered how to regenerate steel. Until such a discovery is made we are compelled to resort to embalming.

"The metallic method of embalming consists of coating the steel with some other metal, and zinc is without doubt, the best protective coating for iron and steel."

Veneer-steel Partitions and Doors are galvanized.

Complete details found in Sweet's or send for bulletins

THE HART & HUTCHINSON COMPANY

BRANCHES IN NEW YORK CITY, PHILADELPHIA AND BOSTON
FACTORY—NEW BRITAIN, CONN. . . AGENTS IN OTHER PRINCIPAL CITIES

GEORGIA MARBLE

THE WARREN G. HARDING MEMORIAL
Henry Hornbostel and Eric Fisher Wood, Archts., E. P. Mellon, Professional Adviser

PERMANENCE

This memorial was erected to stand for generations. After the most careful consideration of several building stones, Georgia Marble was chosen as the best material. All Georgia Marble is of compact structure,—tough and practically non-absorbent . . . This means that Georgia Marble is a wise choice for any structure where beauty and freedom from upkeep expense are factors.

THE GEORGIA MARBLE COMPANY · TATE · GEORGIA

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PENCIL POINTS

An Illustrated Monthly JOURNAL for the DRAFTING ROOM *Edited by* RUSSELL F. WHITEHEAD KENNETH REID & E. L. CLEAVER *Published by* THE PENCIL POINTS PRESS, INC.

Ralph Reinhold, *President*, L. F. Nellis, *Vice-President*, William V. Montgomery, *Secretary*

BEFORE THE JUDGMENT

AS THIS ISSUE GOES to press we are about to depart for Washington to attend the convention of the American Institute of Architects which is being held May 21, 22, and 23. We are going to attend the meeting of the Producers' Council the day before the opening of the Convention and are looking forward to a very busy and pleasant week.

We are gratified to know, before leaving, that the PENCIL POINTS ARCHITECTURAL COMPETITION for 1930 bids fair to be a complete success. Already there have been over six hundred designs submitted and there will undoubtedly still be others to come in, mailed last week from distant points. The total will be more than twice as great as in our last competition for the sort held in 1927!

The jury will meet to select the prize winning designs and the honorable mentions on June 6, 7, and 8, and from what we have seen of the designs as they have been opened in this office we are sure that the judges will have plenty of work to keep them busy for the entire three days. All types of house are represented, to be built of all varieties of material—wood, stone, brick, stucco, and combinations of these. They are designed to be built in practically every section of the country. The architectural styles range from the conventional period types to the most modern 1930 concrete "battleship" forms which we have seen pictured in recent architectural publications from abroad. There are good and bad of all these styles. Some of the more modern designs strike us as excellent—but of course it is up to the jury to decide which manner is preferable. Many of the plans are most ingenious solutions of the problem, which was not an easy one. We will watch for the results with extreme interest.

The jury will include, unless unforeseen circumstances prevent, Thomas E. Tallmadge of Chicago, Benno Janssen of Pittsburgh, Robert P. Bellows of Boston, Paul Cret of Philadelphia, and Dwight James Baum of New York. Their report will, we expect, be ready in time for publication in the July issue of PENCIL POINTS along with reproductions of the winning and mention designs.

We wish to take this opportunity to thank each and every competitor for participating in this competition and for helping to make it a success. We wish it were possible to award every one a prize but since that is not the way of competitions we will have to confine ourselves to wishing them all success and hoping that, win or lose, they will feel that the game was worth the candle and that they have profited by the work they have done.

Drawings not premiated will be returned to their respective owners as soon after the judgment as it is possible for our shipping department to handle such a large order. An effort has been made to mark the mailing tubes so that each design may be returned in its original container.

Contents

PENCIL POINTS—*Yearly subscription, payable in advance, $3.00 to the U. S. A., U. S. Possessions, Cuba, and Mexico. Foreign subscriptions in the Postal Union, $1.00 additional for postage; Canadian subscriptions, 50 cents additional. Remittances by International or American Express Money Order or by Draft on a bank in the U. S. Payable in United States Funds. Subscribers are requested to state profession or occupation. TO SUBSCRIBERS: Instructions for change of address should reach us before the twentieth of the month to assure delivery of the forthcoming issue. Please give both old and new addresses. TO CONTRIBUTORS: We are always glad to receive manuscripts, drawings, etc. We will use due care with material in our hands, but cannot be responsible for damages.* *EDITORIAL AND BUSINESS OFFICES, 419 FOURTH AVENUE, NEW YORK.*

THE PENCIL POINTS EDUCATIONAL FUND

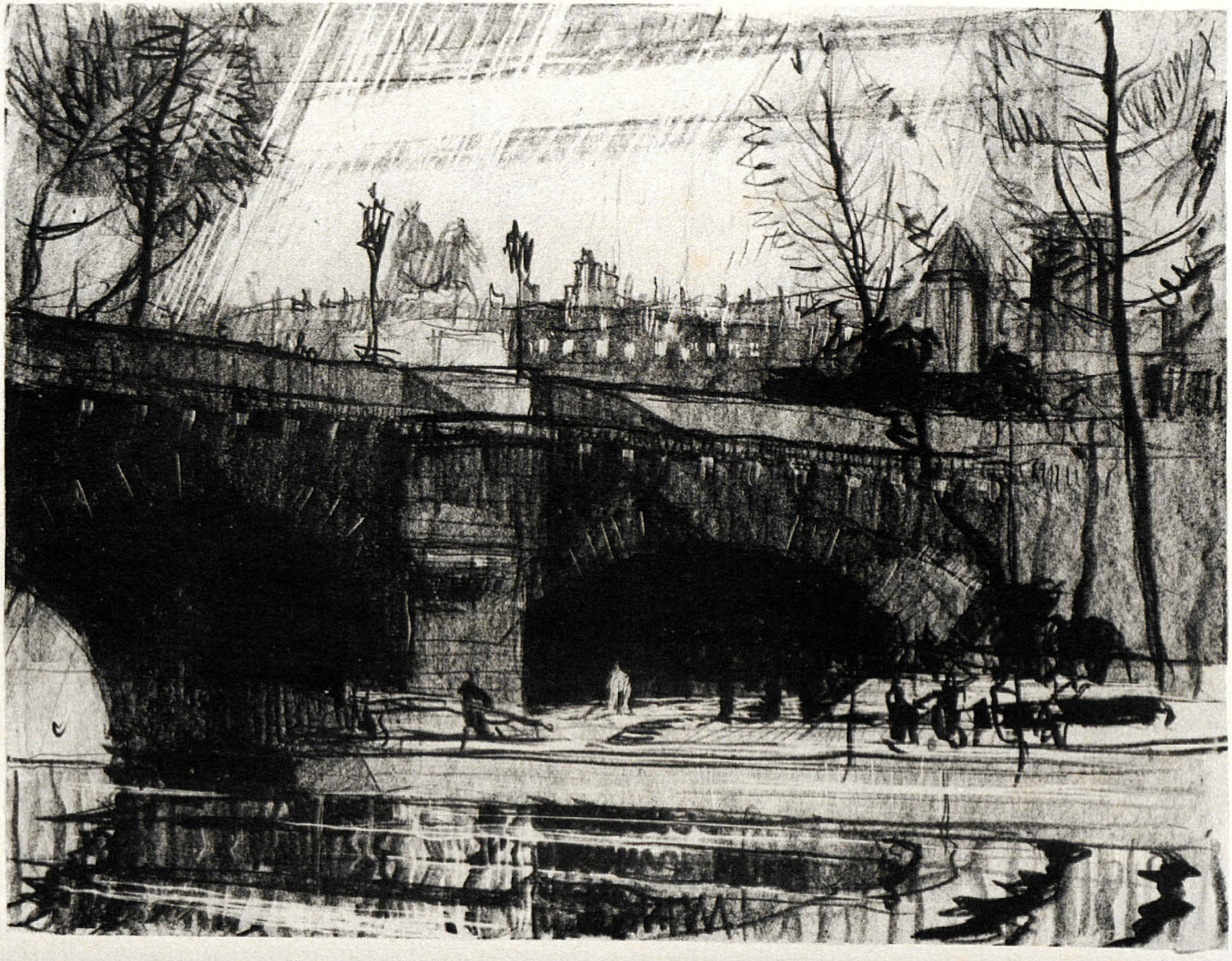
THIRD MONTHLY REPORT

THIS MONTH WE PRESENT the contributions to the fund arranged by states instead of in the order of their receipt, as formerly. This is following a suggestion made by one of our architect friends who thought this would be more convenient for reference than the arrangement we have previously used.

It will be seen that we are not being flooded with money to expend for the noble purposes previously outlined, but it is good to know that some architects and draftsmen believe in our plans and are able to find a few dollars around the place to send in for the fund.

Previously acknowledged	$12,795.00
RECEIVED BETWEEN APRIL 16TH TO MAY 15TH, INCLUSIVE	
Earl T. Heitschmidt, Los Angeles, California	25.00
Fred S. Yoenig, Los Angeles, California	5.00
Soule, Murphy & Hastings, Santa Barbara, California	25.00
Joseph Holton Jones, Wilmington, Delaware	5.00
Russell T. Pancoast, Miami Beach, Florida	25.00
Johnson, Miller, Miller, & Yeager, Terre Haute, Indiana	25.00
Theard & Matthews, New Orleans, Louisiana	25.00
Taylor & Fisher, Baltimore, Maryland	25.00
Lucius R. White, Jr., Baltimore, Maryland	25.00
Frank Irving Cooper, Boston, Massachusetts	25.00
Cram and Ferguson, Boston, Massachusetts	25.00
Charles G. Loring, Boston, Massachusetts	5.00
Woodworth & Loree, Ann Arbor, Michigan	25.00
Henry H. Turner, Grand Rapids, Michigan	25.00
Kenneth W. Dalzell, East Orange, New Jersey	25.00
Walter S. Slifer, Morristown, New Jersey	25.00
B. Francis McGuire, Teaneck, New Jersey	25.00
R. H. Scannell, Bronxville, New York	25.00
D. D. Streeter, Brooklyn, New York	3.00
Anonymous, New York, New York	50.00
Philip A. Cusachs, New York, New York	25.00
Edwin H. Denby, New York, New York	25.00
Alfred F. Evans, New York, New York	25.00
William Gehron, New York, New York	25.00
Schwartz & Gross, New York, New York	25.00
F. P. Sutton, New York, New York	5.00
William I. LaFon, Jr., Southampton, New York	25.00
Earl Hallenbeck, Syracuse, New York	25.00
Bagg & Newkirk, Utica, New York	25.00
Harry Barton, Greensboro, North Carolina	25.00
J. W. Everhard, Cleveland, Ohio	10.00
Philip G. Knobloch, Hazleton, Pennsylvania	25.00
Samuel Abramson, Philadelphia, Pennsylvania	25.00
Norman Hulme, Philadelphia, Pennsylvania	25.00
Stephen V. D'Amico, Pittsburgh, Pennsylvania	25.00
Edward B. Lee, Pittsburgh, Pennsylvania	25.00
Strong, Kaiser & Neal, Pittsburgh, Pennsylvania	25.00
Frederick H. Muhlenberg, Reading, Pennsylvania	25.00
Stanley Shaw, Tacoma, Washington	5.00
Meade Bolton, Balboa Heights, Canal Zone	25.00
Total to May 15th	$13,683.00

This month we are especially interested in three contributions. We admire the man who wanted to contribute to the fund but only had three dollars available. That certainly shows the right spirit. The fifty dollar contribution marked anonymous under New York City comes from a manufacturer. Such modesty is quite unique in our experience. And then we salute Meade Bolton who sends in his twenty-five dollars all the way from the Canal Zone. He probably doesn't expect that any educational campaign will help the situation in the Canal Zone at all but he evidently wants to do his bit for the profession. If fifty per cent. of the architects right here in the States would do the same the fund would go over the top in short order. In addition to actual contributions as shown above we now have pledges amounting to $4,375.00 more. So things are looking better.



PONT NEUF, PARIS

FROM A LITHOGRAPH BY ERNEST BORN

Original printed by Gaston Dorfinant

PENCIL POINTS

Volume XI June, 1930 Number 6

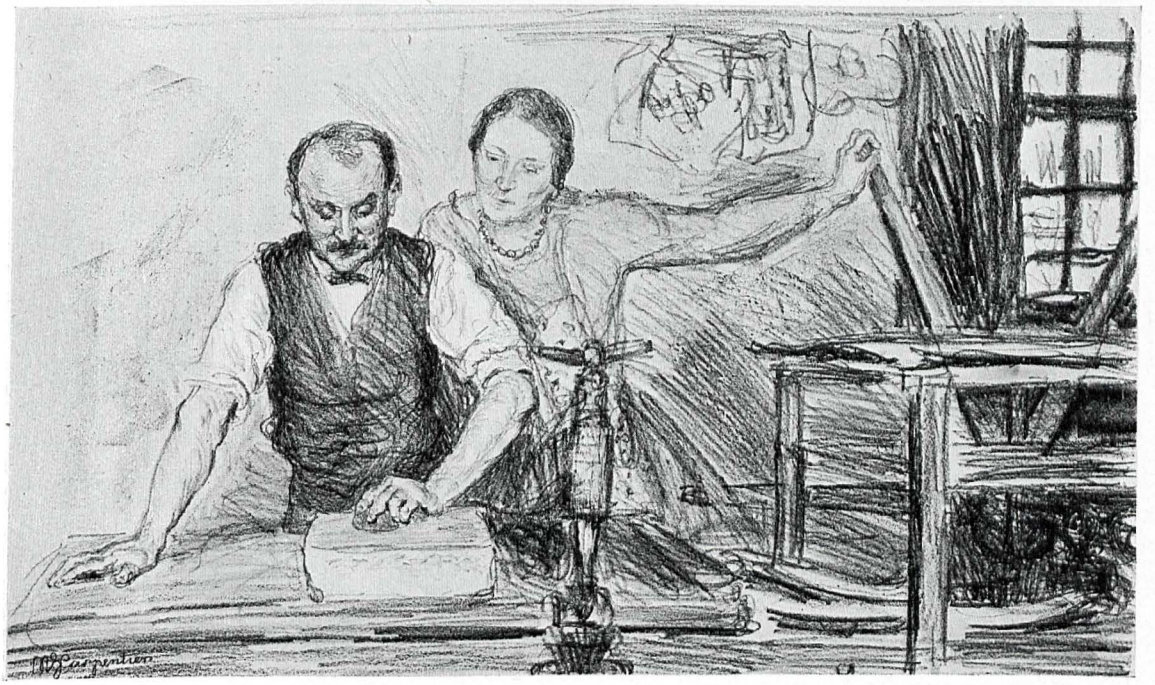
GASTON DORFINANT

ONE OF THE SURVIVING MASTER LITHOGRAPHERS

By Samuel Chamberlain

EDITOR'S NOTE:—*The illustrations for this article were reproduced from recent lithographs printed in Paris on the Dorfinant Press.*

IT HAS BEEN nearly a decade since I pushed my way through two cluttered courtyards to the picturesque shrine of Gaston Dorfinant. A hasty jotting on the back of an envelope had led me to a two-story house on the banks of the Seine at Number 12 rue Chanoinesse. A jovial little man with bright crimson cheeks, sparkling eyes, and a broad Parisian accent welcomed me and ushered me into his studio. Through the dusty windowpanes the ornate Hôtel-de-Ville and the Church of St. Gervais silhouetted themselves against a lavender-grey Paris sky. Outside, tugboats churned laboriously upstream, towing loaded barges and emitting a maritime squeal now and then. The studio contained a half dozen stocky drawing tables, reinforced to carry the weight of heavy lithographic stones. At each of these sat a commercial artist, copying poster designs for *pâté de foie gras*, coal stoves, windshield wipers, or outboard motors. There were old doddering draftsmen and fresh young apprentices who were marvellously agile at copying things. In the choicest corner was a grizzled old lettering expert whose passions were horse racing and *la boxe*. Next to him was the venerable Monsieur Paul, smooth-shaven and sophisticated, gurgling a rich meridional brogue. He knew a dozen operas by heart, and had a habit of singing one from end to end as he worked. It used to take him two weeks to run through his repertoire. Then there was the enormous, smiling Monsieur Nicolas, whose muscular arms turned the hand press ten hours a day. A perpetual *rigolade* reigned in the place, a subtle and well perfected badinage which killed the monotony of copying dull things in reverse. The Atelier Dorfinant was a busy place at that time, but even then one could sense the beginning of a slump, for the electrotype process was making insidious intrusions into the lithographic



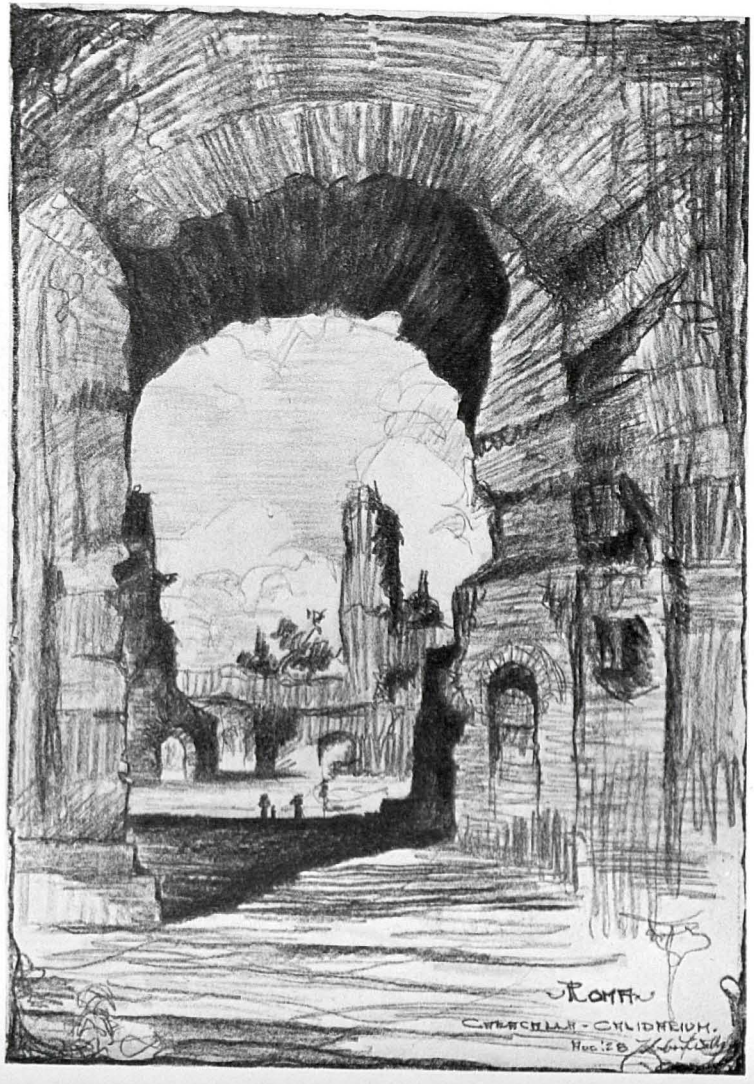
PORTRAIT OF MONSIEUR ET MADAME GASTON DORFINANT—BY M. G. CARPENTIER

Size of original, 17¾" x 10½"

STREET IN FRANKFURT, GERMANY—BY MILLARD SHEETS
Size of original, 9½" x 13¾"

THE BRIDGE AT RONDA—BY GEORGE NAKASHIMA
Size of original, 9½" x 13½"

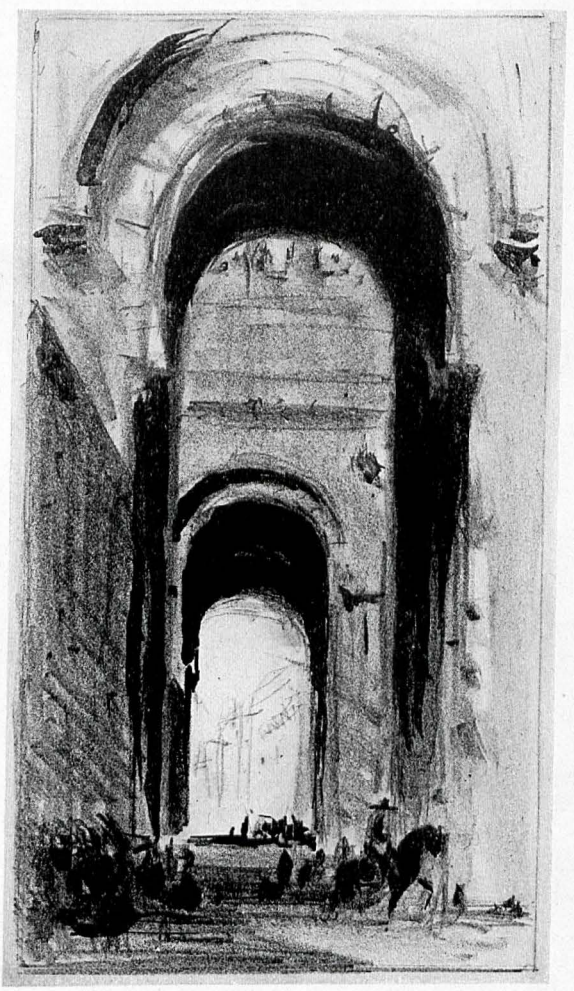
IMAGINATIVE COMPOSITION—BY DONALD NELSON



BATHS OF CARACALLA—BY HERBERT WATTS

The print at the left measured, in the original, 13" x 16½"—that at the right, 11" x 16"

domain. When Gaston began his career with his father, who was a lithographer before him, most of the fine color printing in France was done from stone. Everything from huge bill posters to soap wrappers was pulled by hand in the Atelier Dorfinant. The gradual triumph of mechanical reproduction and speedy machine printing was but a mere repetition of the same story one encounters in this mechanical age. Gaston Dorfinant did not view the situation with alarm, however. He saw instead an opportunity to concentrate on artist's proofs, and to escape the tedium of candy box covers. His artist clients began to increase as his commercial artists were let loose for their military duty or merely from lack of work. He began to print illustrations for de luxe books of limited edition, to prepare albums for ambitious debutants at the lithographer's art. Finally the last commercial artist took leave. Now only the capable Monsieur Nicolas remains to aid Gaston in turning his presses. Some of the most noted graphic artists in France now use Gaston's tables to retouch their stones. Luc-Albert Moreau and Boussaingault, two of the most famed of the modernists, spend much of their time there. The artist-grandson of Victor Hugo, the exotic Vertés, the venerable Pissaro all are found there at least once a week. The list could be carried to a tiresome length. Most of the American students at the Ecole des Beaux Arts know Gaston. He has pulled large proofs or solved the Christmas Card question for most of them.



PORTE DE CARMONA, SPAIN
BY JEAN LABATUT
Original, 7½" x 13½"

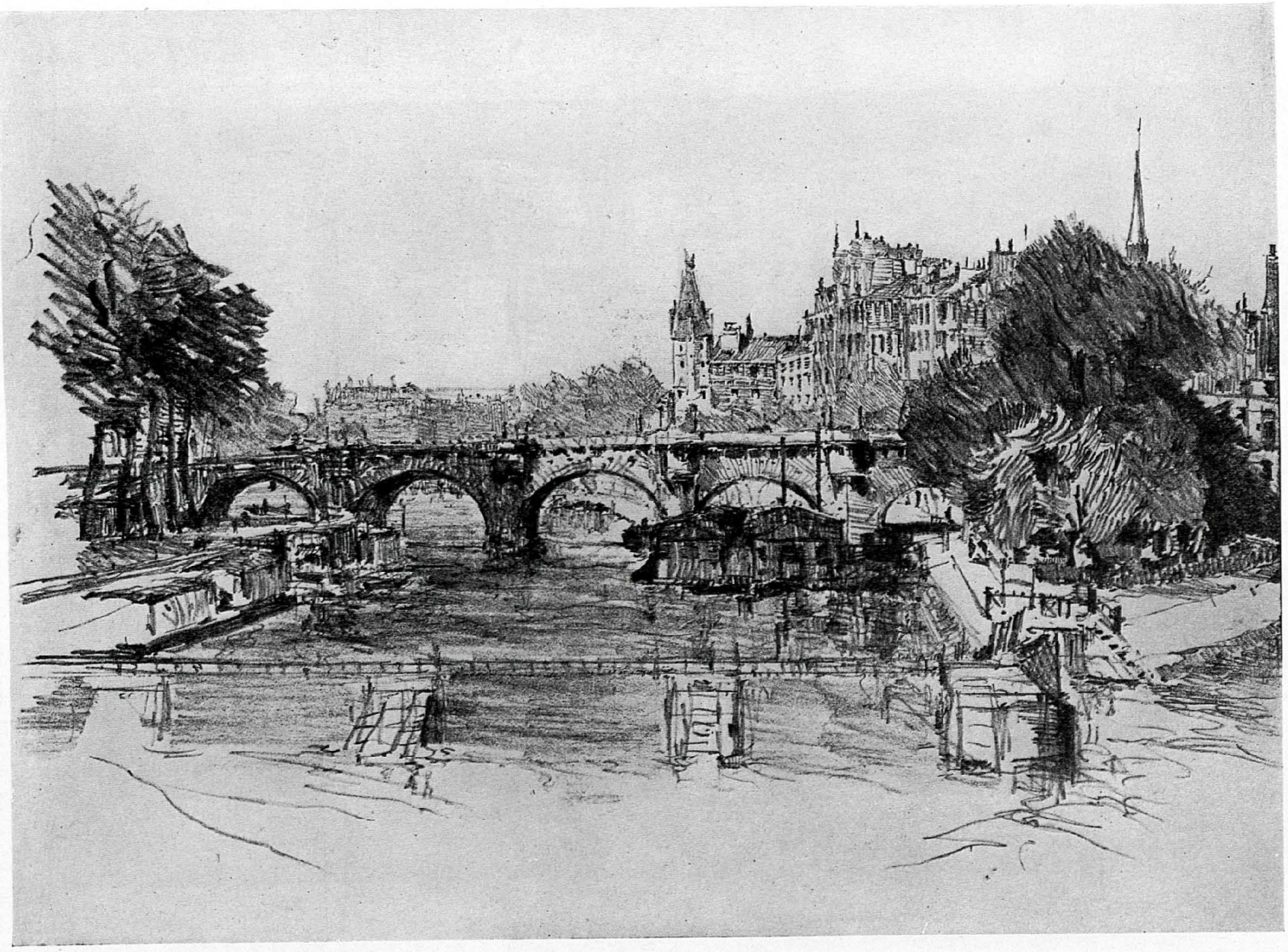
The exterior of Gaston's setting has undergone many transformations also. A greedy landlord has made many an attempt to oust the little lithographer from his choice diggings, for which he pays a microscopic rent. All of the other tenants of the property have been forced out, and their modest apartments have been enlarged and re-antiqued, if such an expression can be tolerated. Timbered galleries have suddenly appeared; stained glass windows and old stone detail have been inserted with an expert hand, and (this is a naïve touch) a half-timbered elevator shaft has been incorporated in the plant. The result is an unbelievably "de luxe" apartment house, inhabited by three fastidious families of fabulous fortune. The quaint old 17th Century courtyard on almost any morning is embellished with a shimmering Rolls Royce, a colossal Farman, and an Isotta of almost insolent magnificence. Once beyond all of this semi-spurious antiquity you will still find the old house of Monsieur Dorfinant, unchanged and genuinely ancient. The landlord's various devices have all failed, even the ungallant expedient of removing some of the roof tiles so that Gaston's kitchen would become drenched on a rainy day. The law is on the side of the *locataire*, particularly if he be a craftsman working at home. So Gaston has held on.

Dorfinant is a lithographer of the old school, but he knows all of the newest tricks of the craft. I only regret that my limitations as a technical writer force me to omit a summary of his talents. He can make a transfer to stone from almost any kind of paper, but he doesn't like to, because only a fresh sheet of genuine transfer paper gives a good quality of impression. He is almost a fanatic on the question of lithographic quality, of richness of blacks and integrity of waxed lines. He advises, almost implores his clients to work directly on the stone or zinc.

One of Gaston's most successful tricks consists of reducing or enlarging a lithograph. This he does by printing the image on a stretched sheet of rubber, in case a reduction is desired, then allowing the rubber to contract and transferring it to another stone. It works perfectly. To enlarge a lithograph, he merely reverses the process, printing it on a relaxed sheet of rubber and stretching it evenly for a transfer. He can make mysterious looking prints which resemble photographic negatives, or ones that are dead ringers for pen and ink drawings. He has experimented and brought forth prints which are a combination of etching and lithography. Prints in many colors are, of course,

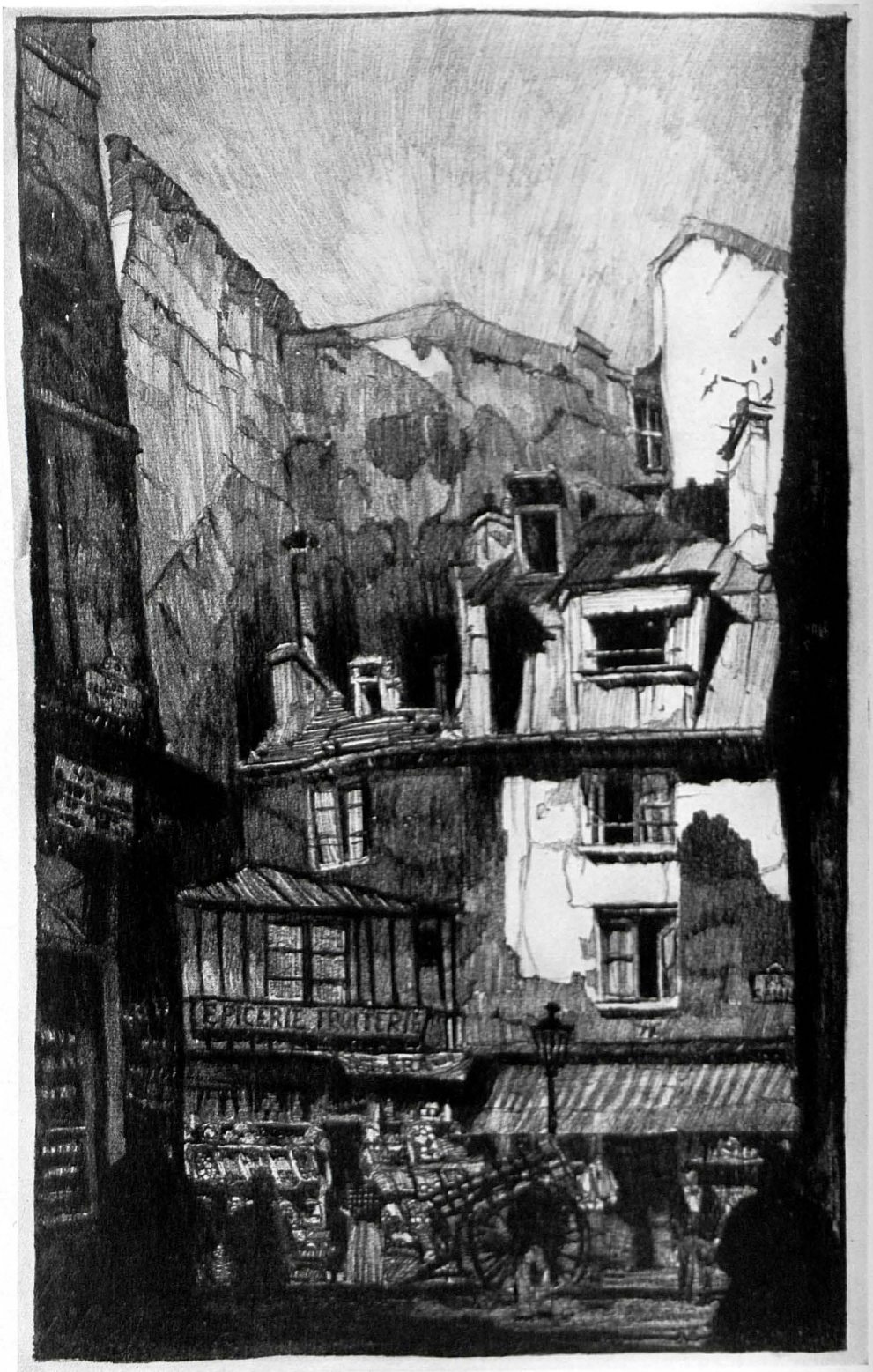
OLD BRIDGE AT SOSPEL—BY M. H. ALBEE

Size of original, 17" x 12¾"

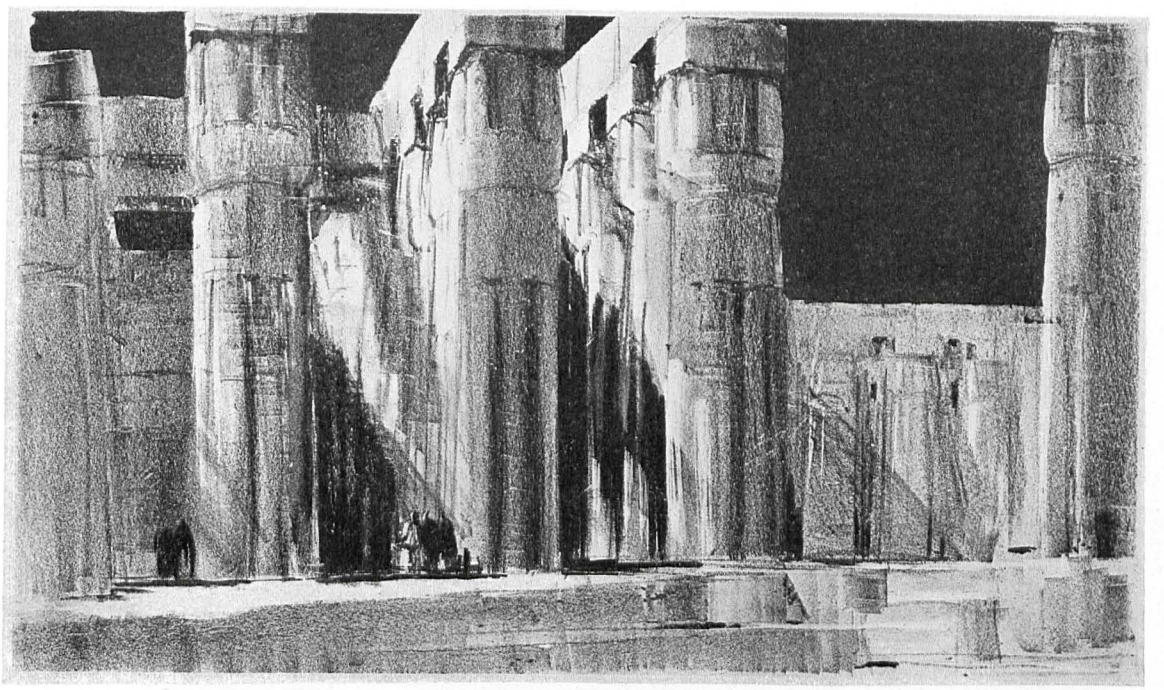


"LE PONT NEUF, PARIS"—BY JOSÉ PEDRO GIL

Size of original, 10½" x 7¾"



RUE GALANDE, PARIS—BY SAMUEL CHAMBERLAIN
Size of original, 11" x 17½"



"LUXOR"—BY DONALD NELSON
Size of original, 18" x 10½"

easy to pull in lithography, and Gaston has printed many a book illustration in ten and twelve colors.

An interesting, semi-woodcut technique can be obtained also. A smoothly grained stone is covered black with lithographer's ink, and the image is merely scraped out with a variety of burins and scrapers. Brilliant black and white effects and a multitude of rich, unique greys can be obtained from this method.

Luckily, the lithographic stone prints well on almost any kind of paper, save a heavily sized or extremely coarse and hard grained stock. Dorfinant has experimented widely with sturdy Holland papers, with frail and fragile stocks from China, with satin-surfaced sheets from Japan, and the whole gamut of French papers from the old houses of Rives, Canson, Arches, and Navarre. One of his most successful innovations is the *épreuve contre-collée*. This is a proof pulled on a very thin, faintly tinted Chinese paper which adheres to the backing of a heavily sized white paper as it passes under the press. This gives the effect of a slight tone over the body of the drawing, leaving the edge of the proof white. It bears some resemblance to a proof pulled from a copper plate, and seems more like a "print" and less like a poster. Here, incidentally, is one of the reasons why lithography lacks the enthusiasts and collectors enjoyed by drypoint and etching. Lithographs do not look enough like "prints" to the unpracticed eye. The fact that circus posters are made by lithography seems to linger in the minds of collectors. Quite as much talent or effort can be squandered on a lithograph—quite as much can be indicated with a few swift lines on stone as on copper—still the prejudice persists.

Gaston has two old-fashioned hand presses, both of them more than half a century old. One of them he obtained from a bankrupt artist who offered it in payment of a stack of bad debts. Gaston is convinced that nothing can rival the sturdy suppleness of these old presses, but he has tried all of the new ones to be sure of the fact. Most of his stones boast a venerable antiquity. Some of them are centenarians and are now not much thicker than a prayer book. Only a reckless statistician would hazard a guess on how many different lithographs have been drawn and effaced on one of these creamy veterans. Gaston says that one of the most ticklish problems in printing with the hand press is the matter of pressure to put on the stone. Just a bit too much force will snap the stone in two as neatly as a wafer. There are many other perils and pitfalls which lie about to keep lithography from being TOO easy, but a discussion of them would lead me to an explanation of the entire lithographic process. And an account of that has already appeared in the pages of PENCIL POINTS (April, 1926).

Gaston Dorfinant's war record is of more than ordinary interest. For two years he was a *fantassin* in the trenches, getting fairly well knicked up by stray shell fire, before the army discovered that he could be of immense value in its topographical section. War maps of the trenches were corrected daily, following new information brought in by observation planes. But the lithographic stones, on which the maps were drawn, were far off in Paris, and there was a clumsy delay in delivering the revised maps. At Gaston's suggestion, his faithful old hand press was brought out to the Front, installed in a closed truck and put to work.

"PAYSAGE ESPAGNOLE"—BY RUSSELL LIMBACH
Size of original, 9¼" x 12½"

Thus the aviators would bring in their photographic plates, the photographers would rush proofs of them, the draftsmen would make corrections on the stones in Gaston's truck, and by midnight the little lithographer would be pulling proofs which would be in every general's hands by dawn. Many a "big vegetable" in the French Army has waited patiently outside of Gaston's portable studio, or crowded over his elbow. Several of the most noted graphic artists in France were Gaston's companions in the truck, and he has many a *poilu* portrait of himself done by artistic celebrities whose present fee for a similar service would be prodigious. One of his treasures is a portrait of himself by Icart, that fashionable color-print artist whose languid ladies, with or without wolf hound, are known to every frequenter of Arte Shoppes.

This is by no means the Golden Age of lithography. It has lost its place in the newspapers and magazines, where once it played such an important role. Nothing so trenchant as the "Assiette au Beurre," often printed in lithography, can be found in the kiosks nowadays. No newspaper cartoons of the moment have the prestige of the old lithographic drawings in the "Figaro." Nor is there any contemporary lithographic illustrator of the stature of Daumier or Gavarni, of Willette or Vallaton. The glorious irony and dazzling color technique of Toulouse-Lautrec finds a faint echo in the brilliant bits of satire by Marcel Vertés, though technically he falls far short of the warped little master. The prince of publicity-getters, Foujita, and the pale and insipid Marie Laurencin hold two of the most conspicuous niches among French lithographers of today, a fact which pays nobody any great compliment.

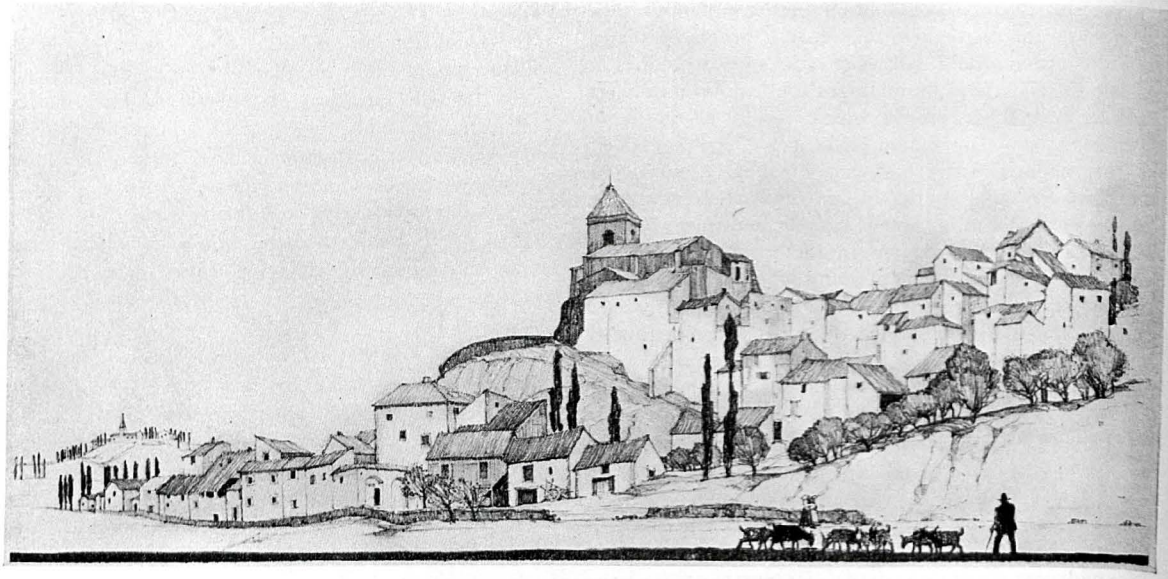
Despite all of this, the pendulum of favor and interest is unquestionably swinging back again, and the next decade should see a healthy revival of the lithograph.

Fortunate it is that a few faithful exponents of good lithography have stuck by the ship. Gaston Dorfinant and his rare colleagues are sure to have an influence on the lithography of the near future, just as the "*père* Delâttre," etching printer extraordinary, influenced that remarkable band of etchers of the last century which included Meryon, Whistler, Lepère, and Legros.

I don't believe that anyone could know Gaston Dorfinant and the charming Burgundian Madame Dorfinant, and not be a Francophile for life. Every admirable trait of the French he seems to possess. He

"THE TOWN CRIER, CHANTILLY"—BY CLARK FAY

Size of original, 16¾" x 13"



DECORATION BY MILLARD SHEETS
Size of original, 15½" x 8"

is jovial, hospitable, appreciative, a master craftsman who loves his craft, and a true philosopher possessed of the keenest of intellects and sensibilities. I can only join dozens of itinerant American pencil pushers in stating, with considerable emphasis, that many of my happiest days in Paris have been spent working in a little studio on the banks of the Seine, while in the corner a red-cheeked little man wields ink rollers and press wheels—and asks incessant questions about sky-scrapers and express elevators!

Detail of figure by Arthur Buttner for center of sounding board of Oriental Theatre, Chicago—C. W. and George L. Rapp, Architects.

TO EACH MAN HIS BEAUTIFUL

By William Williams

A HEAVY LUNCH is something I was advised to keep away from, long ago. Prudence told me that there are limits to what a draftsman can do with what he earns. If he wants to make ends meet, there's got to be a compromise. Draftsmen, as a class, are known for their sartorial elegance, and I found it wise to make my concession to respectability. If I must give up something for the sake of something else I would give up my heavy meals and be done with it. My compromise is a compromise between an empty stomach and a shabby front—a quick lunch. And having an aversion to traipsing the streets, the main business of the noon hour soon over, I find myself, more often than not, back in the office while the place is still deserted.

At one of these times, I was standing in the office library musing over the incoherent state to which the art of architecture has fallen. The whole business, I thought, seems to be topsy-turvy. Granting that architects are in their right minds, granting that they are rational human beings, how can one account for any of them sitting down in cool, steady deliberation, wracking their brains to produce that fledgling of the imagination that I had, only a few minutes before, been looking at; had they never learnt their craft, or has the craft no principles? But this, very plainly, was an absurd idea; no principles! there must be principles; how else could a thing be taught without a fundamental set of rules, a range of limitations to bind the creative will? And yet, what are these rules? One soon forgets in the drum of office practice what when he was young he might have known!

And so I stood, pondering the architectural enigma. If architecture can be taught, the documents are here, in these shelves of books. All of the architecture of the grim past is here. All that needs to be done is to take the stuff and evaluate it; sort it out, sift it, find out what is good and what is bad, wring from these buildings the essence of them, adduce by comparison those principles which are the fabric of the art.

Not a new idea, by any means. Here, for instance, was a book above my head, that held these principles apparently rendered from the fat of time. I took the thin red volume in my hands—*Essentials of Architecture*, by John Belcher—and gave it a sharp rap, and the thick of the dust went rising in that firelit room; herein were set down those things that make a building fine, those things that give to a building the metamorphic quality of art. Now we shall see! I looked and saw that the author required two principles of architecture; truth and beauty. Not many, to be sure; two of Ruskin's lamps, I thought, unless my memory, like my hair, is fallen out. But this gentleman, Mr. Belcher, says that truth is paramount, truth is the first essential principle and beauty is the second.

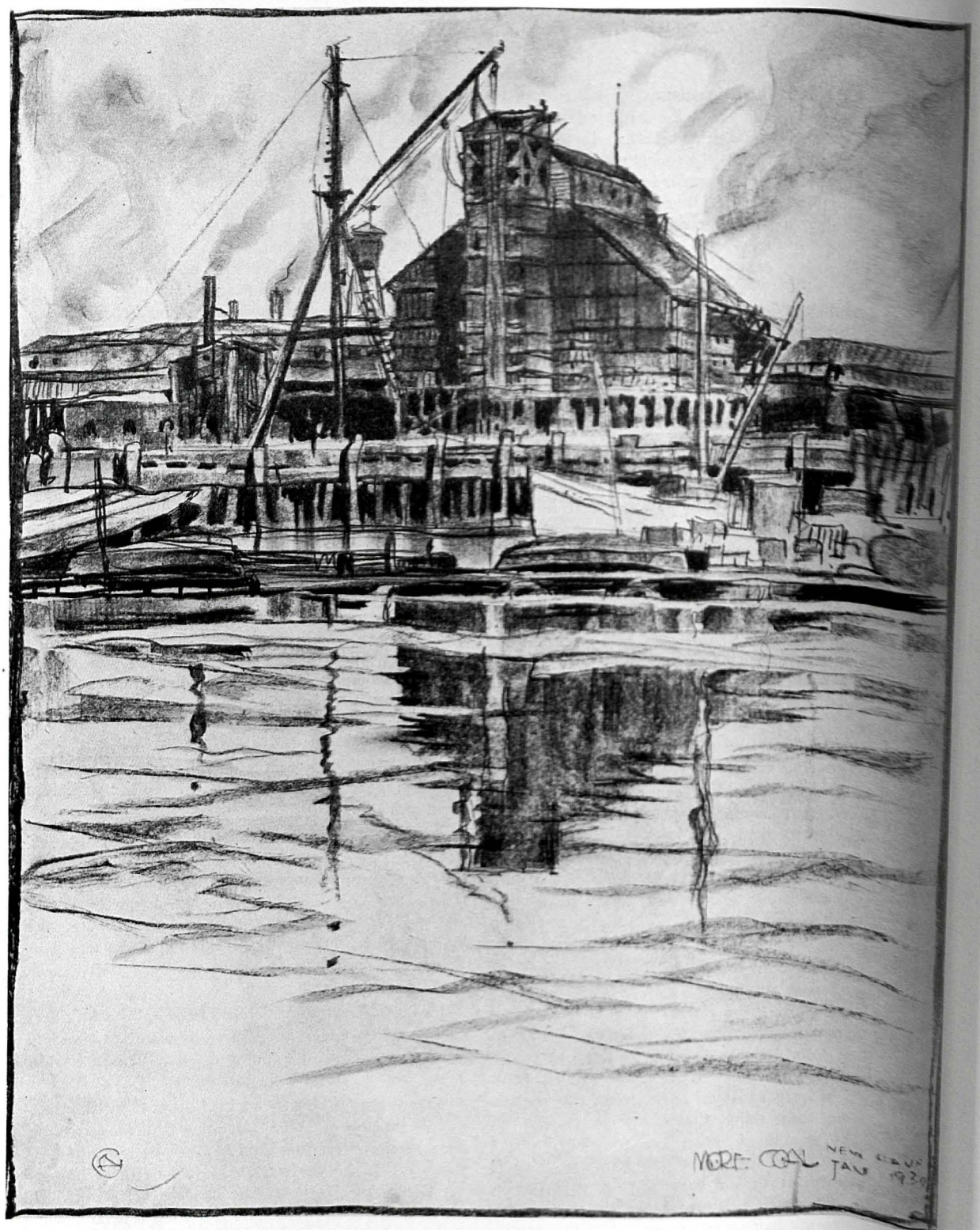
J—, who had just come into the library, came across the room. Indicating the book in my hands, he asked if this were something new, and when I told him that it was written over twenty years ago, he asked me what the thunder I was reading it for. "I'm doing my fifteen minutes a day, if you'd like to know," I said. "And what is more, I've just discovered that truth is the most important element in architecture; that's something worth knowing isn't it?" And J—, who'd sooner talk than check a shop drawing, said: "It's a good story, but there's no plot to it, as the critics say. Queer as it may seem, no two people have ever come together who could quite agree as to what truth is. The truth that Mr. Ruskin saw—good old crusader for the cause that he was—is not the truth that M. LeCorbusier is working himself up to a frenzy over. And this old fossil, what's-his-name there, what has he to say about it?"

I handed him the book where it was open and he scanned the page with a dubious smile. "This chap's dead," he said. "*Passé* as a Chelsea cupid! Listen to this: 'It is quite evident that the conditions are untruthful which make a building appear to be standing on a sheet of plate glass, as if it were suspended in the air.' And look, if you please, what he shows to illustrate the point! The best part of the thing's the very part that he condemns. See, the trouble doesn't start until you get above the plate glass—if the rest of the structure were as unpretentious as the first two stories, the thing would be a gem. And what is this? '—Good architecture never deceives the eye for a minute—'; and look at the illustrations, ninety per cent Renaissance! Never deceives the eye for a minute," he scoffed. "Here, chuck the book away! Throw it in the fire! Read something worth while. Here's a copy of PENCIL POINTS!"

He had turned to the table and was offering me the magazine, which I refused to take; but I opened up the book again to follow through my good intentions, to discover if I could what precisely *are* the essentials of architecture. Truth and beauty, this author had it. Things must look like what they are; there must be no deception of the eye. Very good. But there's something awry here!

"I think you're right," I said to J—, "this isn't very clear, this 'standing on a sheet of plate glass as if it were suspended,' a bit confusing—but I think I know what the beggar means."

"He means he'd sooner trust his eye than his intelligence," said J—. "He condemns that 'modern shop' because the upper stories appear to be supported on the glass windows—but what could be more honest? He doubts the truth because he does not see it. He insists that a thing must look like what it is, and when it does, he doesn't want it; 'Out with it,' he says, 'it's false!' And anyway, whoever said the eye could see the truth? The eye can only see what the mind is ready to allow it. The truth is usually what is accepted —and so is variable. It is all a matter of habit, what



FROM A CONTÉ CRAYON DRAWING BY GEORGE NELSON

ON THE WATER FRONT AT NEW HAVEN

one is used to. If I remember right, Vitruvius did not mention truth among his fundamental principles; it was never questioned! A thing is always true of itself, however short it falls of one's ideal. Only when the eye mistakes it for something else is it false; and then the error lies in the eye and not in the thing that the eye sees. The truth, Williams, is what one believes; and what one believes has nothing whatever to do with that immutable quality inherent in a work of art. If Mr. Belcher believes that even the best British plate glass can hold those upper stories, he ought to be the chairman of the Board of Trade."

I laughed as I turned the pages. Then beauty too, I wondered, as I came across the word, how can that be a principle, when it is a result, a quality, the outcome of principles; principles that I had hoped to find in this book when I took it from the shelf? "Beauty," said this author, "is a very illusive principle, and despite the many efforts that have been made to determine its essential nature it still remains dearer for its mystery." I read the passage out to J—.

"Sounds as though he has his doubts," said J—, who now had his feet on the library table. "But speaking of beauty, do you remember what Mr. Roger Fry said about the beauty of a building? He said that there are two possible kinds of beauty. The first, which he called natural beauty, such as the beauty of a locomotive or a panther, results, he said, from a clear expression of function; and the second, æsthetic beauty, results from the clear expression of an idea. Now if Mr. Fry can be depended on, we've got something to look forward to, something to encourage us; it means that we can have a vital architecture without its necessarily being fine art, in the sense, say, that Rheims is fine. This type of beauty—the beauty of Rheims, I mean—depends upon what Mr. Fry calls 'plastic form,' which is probably what another writer means when he speaks of 'significant form.' In any case you don't bump into this type of beauty every day. It's rare, and isn't to be got by a theory. Architecture has suffered too long from art consciousness. Too many conceited asses 'feeling' this and 'feeling' that, when there isn't an honest-to-God feeling in a car load of them."

"But what," I asked, "is this plastic beauty? It's nearly as clear as the New York building code to me."

"Well plastic form, as far as I can understand," continued J—, "is a shaping of a thing by the intellect, so that the thing seen is capable of arousing ecstatic emotions not in any way caused by the function of the thing."

"You mean the 'clear expression of an idea,' " suggested A—, who had come into the room and was warming his rumps at the hearth. "But isn't there an idea behind the 'clear expression of function'? I fail to see where the difference lies."

"It lies here," said J—; "an aeroplane is an example of a clear expression of function; the—well the Parthenon, for instance, is an example of the clear expression of an idea."

"But the function of the Parthenon was just as essential in its way as the function of an aeroplane," said A—.

"True, my dear Alphonse!—but without function an aeroplane is nothing; its power to satisfy lies in our appreciation of its suitability for its job—probably the remnants of our craft pride. It's only a tool, after all. But the Parthenon, without affiliation with the gods of Greece would still evoke exclamations of wonder, would still send those sensitive souls, that discriminating, privileged handful capable of the supreme joy, dancing with æsthetic delight. Simply a case of plastic form or significant form, or what you will, the essential requirement of art in the æsthetic sense."

"Is it not possible," suggested a voice—for the men, by this time, were dribbling back from lunch—"that significant form might be arrived at accidentally? Mechanics, working on your aeroplane, produce something you admitted to be beautiful, yet rarely will they think of shaping the thing to please the eye. The machine is pared into shape by the pure mathematics of aeronautics, and when it is finished, presto! a work of art. Why not treat our buildings that way, skin them clean of everything, cut away all irrelevancies, let them stand in their naked austerity, make, in short, machines of them? Then perhaps we'll find—who can tell?—a short cut to beauty, a solution to our quandary."

J— answered, "No, the true æsthetic quality in a building can not be got that way; for as much as you might admire a machine and sense its beauty it could never transport you to the empyrean heights of art. The machine is only a record of man's ability to shape things to his use—quite a material end, which is to say, quite the antithesis of art."

But as I could see that the matter would soon be out of bounds, as far as my enquiry was concerned, I pointed to the book still in my hands and asked J—, "What of these—these principles, qualities, and factors? The first of this man's principles of architecture, truth, you dismissed as a simple word with a composite meaning; beauty, it seems, is not a principle at all; but what about these other things this Johnny talks about—strength, vitality, restraint, refinement, and all these?"

"You can usually apply one of them to any decent building, but as for forming a basis for building up a theory of architecture, they're all bosh! What meaning has the word refinement when it is applied in turn to Grecian Doric and German Baroque? It means two entirely different things; and so with the rest of them, they're just empty words. Take, for example, scale, one of the most belated of the lot; scale like everything else is largely a matter of what you are used to. The word itself probably came into common use about the time the architectonic sector was devised; and in case you don't know it, an architectonic sector was a little instrument by which, given a module, you could lay out the entire front of a building. The word scale means little without its Renaissance precepts based on classic elements. And there's a moral in the fact that it took us thirty years or more to realize that

the elements that make a perfect Roman order could not be applied with any satisfaction to a tall building."

"Are we to infer from this that there are no principles to architecture?" I asked.

"If you're talking about architecture in 'the mother of the arts' sense, that's exactly what I mean. In the realm of art there are no principles, no rules at all. Once a thing of æsthetic quality is produced it is recognized by a discriminating handful, and has that which is common with the works of art of all ages; it is immutable and timeless, and no system of dynamic symmetry or whirling circles will get you to the bottom of it."

As this was getting to my point I asked J—, "if there are no principles, what is it we learn when we are learning architecture?"

"We learn to do things that will not offend the eye; we learn to put a mask on a structure that people with their whims expect to find. We learn to cater to sentimentality. We cater to sentiment even in our so-called modernism; there's nothing there to back it up. It's all a matter of what you are used to—and people can get used to almost anything, whatever's the fad. And it is the fashion nowadays to do things to a building that will probably look as foolish fifty years from now as anything that Eastlake was responsible for fifty years ago. But that is the way; and no amount of argument has ever changed a fashion."

"Where then lies the solution?" someone asked.

J— laughed. "There is no solution in our present mood, the tempo's too fast; you can't bat out buildings the way Ruth bats out homers and expect to get anything enduring out of them. We must get rid of all ideas about architecture being art; it isn't, it's a business. And the man who pays the piper, remember, calls the tune. There isn't an architect in the country who would dare to foist his stolen modernism on to a client until the client had seen enough of it in Europe to become inured to it! What was the extent of Sullivan's practice when he died six years ago? And you can count the buildings Wright has built in this country on your hands. Now, he's coming into his own; it looks as though they're going to give him some rope, at last—."

"And it looks by the pictures of those proposed apartments on the East side, as though he's going to hang himself with it," interrupted D—.

"Perhaps you're right," J— went on. "In any case, architecture as it's practiced isn't art, by any means; and the sooner we realize the fact the better. The sooner we simply build as the function of the job demands the better for our self-respect—the sooner we'll be taken for intelligent human beings, instead of sentimental geezers! Let us solve the physical requirements with the economy of means that mechanics use. Forget the tripe and goulash! Make the things as sleek as Mr. Fry's panther and then, though we will not have fine art—not by a long shot—at any rate we'll have no more Lincoln buildings. Architecture won't be a fine art, as M. LeCorbusier thinks it will, but it won't be silly."

How much longer this harangue of J—'s would have gone on is hard to say, but at this point familiar footsteps were heard coming down the corridor, and according to the office hours we should have been at work twenty minutes ago.

J— took his feet off the library table, and we all assumed a guilty nonchalance. "Well anyway, *I* like the Bowery Bank," said D—, as he sauntered from the room. "To each man his beautiful, as to each man his fair one," quoted J—. And a few minutes later he was drawing Romanesque ornament out of a book for a cornice detail of a hospital in Pittsburgh.

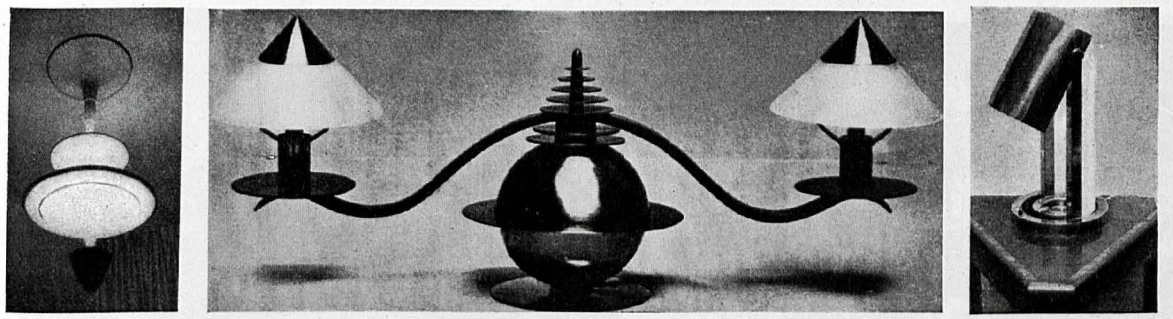
PEDIMENT FIGURE BY EDMOND AMATEIS, SCULPTOR, FOR GEORGE CARY, ARCHITECT
BUFFALO HISTORICAL SOCIETY BUILDING—BUFFALO, NEW YORK

A MODERN STAINED GLASS WINDOW

DESIGNED AND RENDERED IN WATER COLOR BY RALPH NICKELSEN

PENCIL POINTS SERIES
of
COLOR PLATES

Mr. Nickelsen's procedure in making such drawings as the one shown on this plate is as follows. He first lays out the design roughly in charcoal and after studying it in this medium makes a pencil drawing in which it is refined and improved. This is transferred to water color paper and transparent color is then applied. The individual pieces of glass are modeled with brush, stump, eraser, or carbon pencil to give texture. India ink is used for the lead lines. Shellac is applied finally to enrich the color and give more realistically the effect of glass. The design is interesting as showing how stained glass may be used effectively in other than the conventional mediæval manner. The original drawing was 14¼" high.



From "L'Art Vivant"

MODERN FRENCH LIGHTING FIXTURES

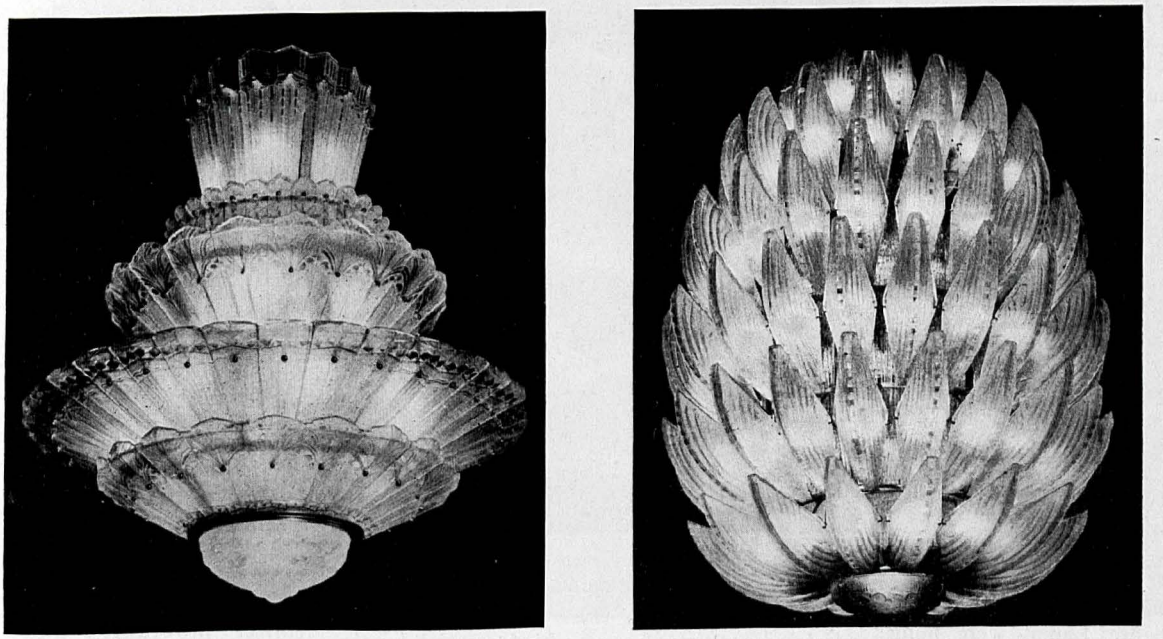
At the left a metal ceiling fixture by Eugene Printz, the lighting being entirely by reflection. In the center a table lamp by Marc Erol. At the right a metal reading lamp, with adjustable reflector and ash tray, by Boris J. Lacroix.

DESIGN IN MODERN ARCHITECTURE

6—LIGHTING AND LIGHTING FIXTURES

By John F. Harbeson

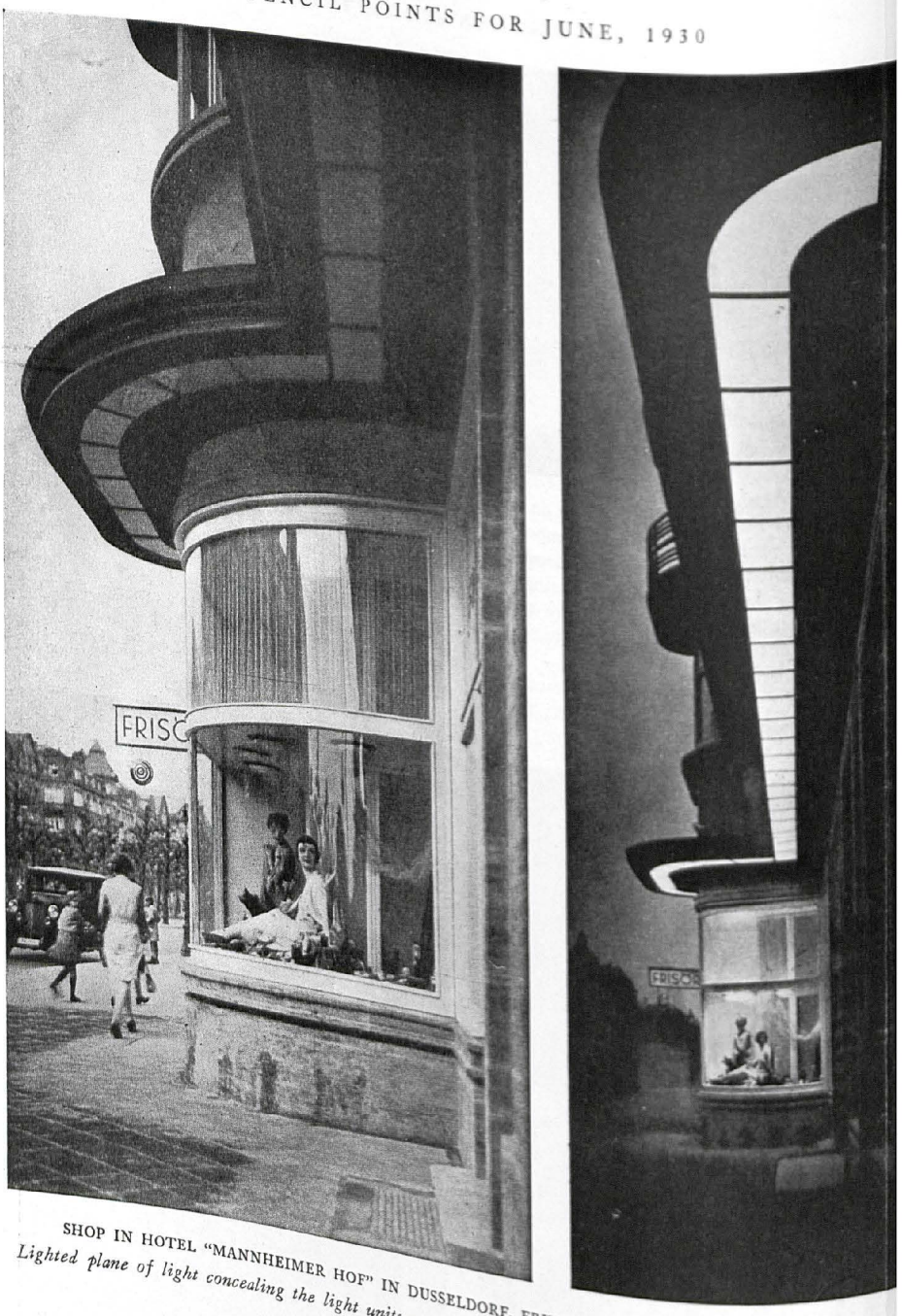
"THE QUANTITY OF shade, whether measured in terms of area or depth, contributes considerably to the power and expressiveness of architecture. A famous critic has stated that no building was ever truly great unless it had mighty masses, vigorous and deep, of shadow mingled with its surface. In architecture there are two distinct styles, one in which the forms are moulded in light upon shade as in Grecian pillared temples; the other drawn by shadow upon light as in early Gothic foliation. Outdoors it is not in the architect's power to control the factors involving direction and distribution of light which influence the light and shade effects, but a partial control of these effects lies in the original design. Indoors the lighting is usually under control so that it should be predetermined and considered in conjunction with the modeling, the position and character of the ornamental work, the reflection co-efficient of the various large surfaces and the positions of the light sources with respect to them."—M. LUCKIESH, *Light and Shade, and Their Applications.*



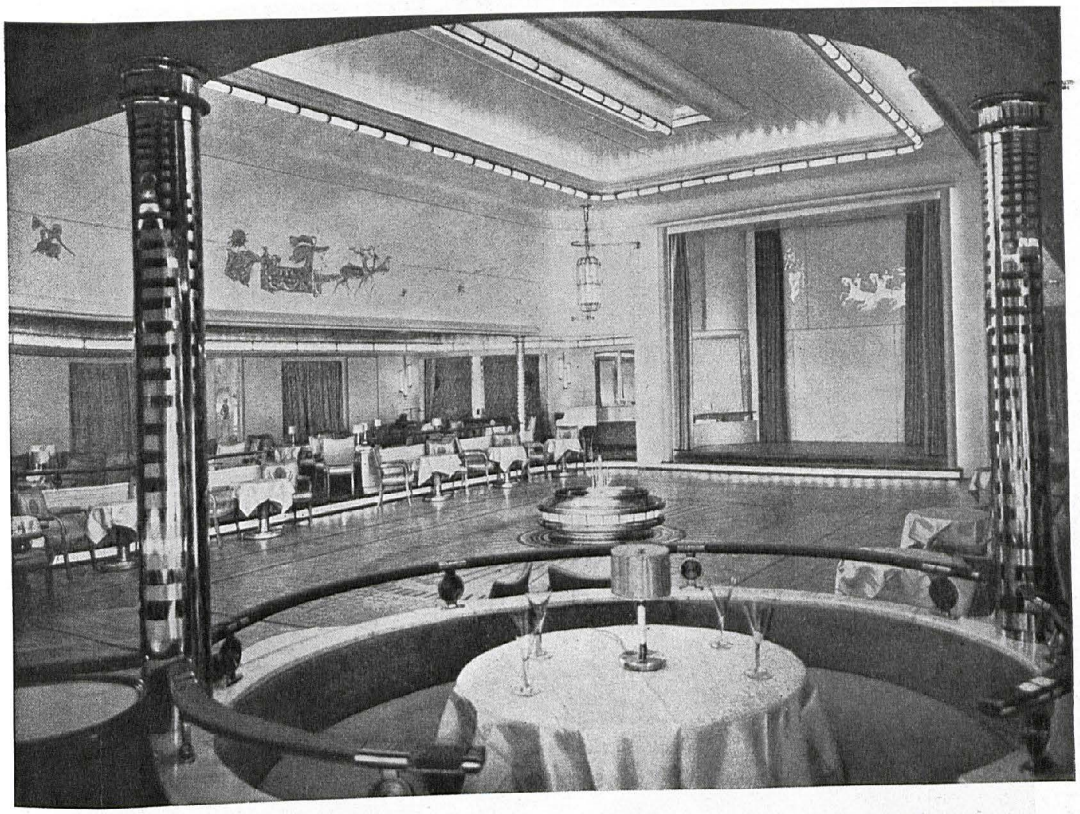
From "Le Luminaire"

SUSPENDED GLASS FIXTURES BY SABINO, MADE OF PRESSED GLASS SHAPES

The light is partly direct, through the translucent moulded ground glass, and partly indirect, from reflection from the ceiling. No light units are directly visible from the eye. That on the right is much like the natural bud forms shown in "La Plante" and similar books.



SHOP IN HOTEL "MANNHEIMER HOF" IN DUSSELDORF, FRITZ BECKER AND E. KUTZNER, ARCHIT
Lighted plane of light concealing the light units—an effective, and not expensive, use of light as one of th
of composition.



From "Moderne Bauformen"

BALLROOM OF THE STEAMER "BREMEN," BY FRITZ AUGUST BRENHAUS OF DUSSELDORF.

The lighting is partly concealed trough lighting, partly by suspended fixtures (at either side of stage) and partly by horizontal running bands of cylindrical ribbed glass. The columns are of polished metal, as is the fountain in the center forming innumerable highlights.

It will readily be seen why cornices and other parts of the orders can no longer be used as "elements" of an architectural composition, as they were used before 1900, without some thought as to the use that is to be made of exterior artificial light. For the first time in architectural history architects must study a composition as lighted both from above—in the daytime, by the sun—and from below—at night, by flood projectors, which are best placed so that the actual source of light will be hidden. Under such conditions it is not strange that architectural forms are changed, or that new ones are added to the vocabulary.

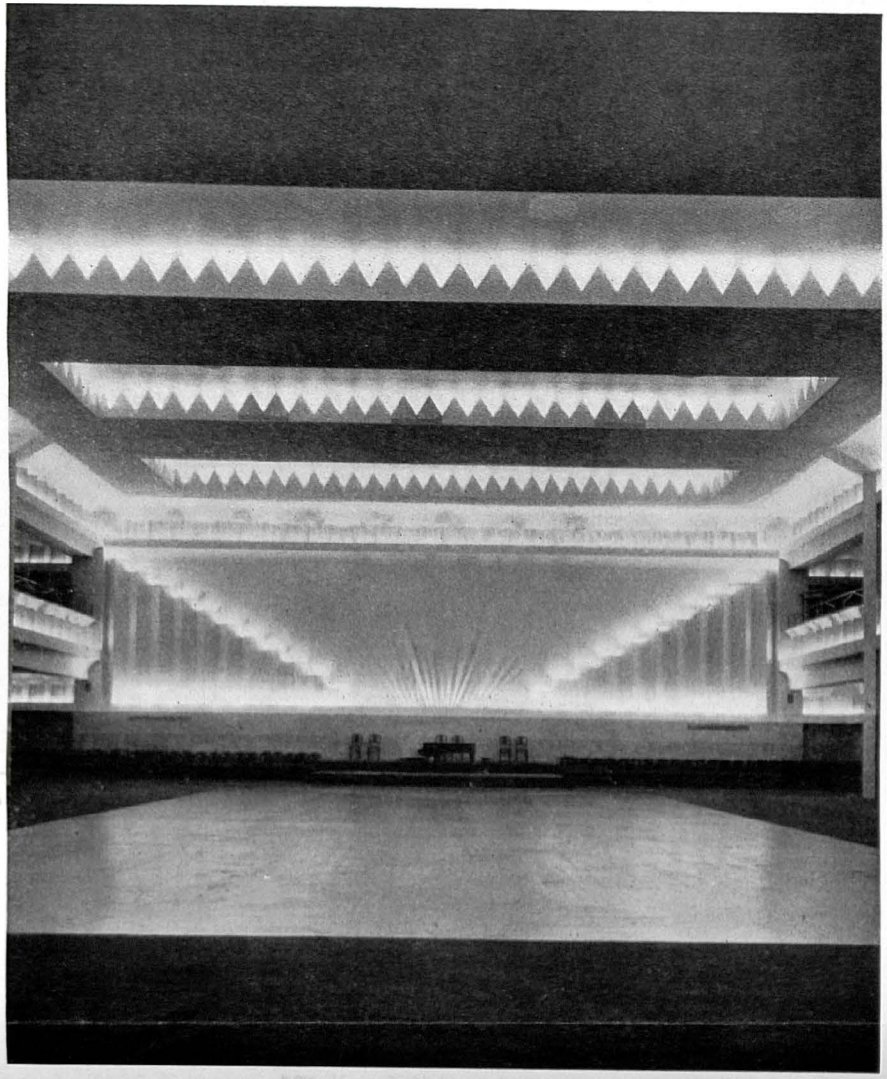
While invention has had such effects on the exteriors of buildings, the greatest mission of artificial light is interiors. Here, too, science has been at work, studying the relative values of reflected or direct light, of light as transmitted by various kinds of transparent and translucent media, plain glass, sanded or etched glass, ribbed glass, and moulded glass; of reflection of light from different types of surfaces, whether mirrors, painted or enameled surfaces, unglazed plaster, or marble. Some interesting effects have been obtained recently by so placing plates of glass that the light shines through the edge of the glass instead of through its side; from some angles glass so placed acts as a prism, and disassociates the different colors of the spectrum in the light.

"The tremendous effect of the distribution of light and shade upon the mood of interiors is but little appreciated. Even in the art of stage lighting the wonderful possibilities of light and shade have been barely touched upon . . . . Man's activities have changed very much since the advent of comparatively efficient artificial light. At present a considerable portion of his activities extend hours after sunset, and the working hours of many are such that recreation and opportunities for seeing the beautiful things about them are only available after natural light has waned."*

Direct lighting—by the use of chandeliers, brackets, or table lamps, would of itself have caused only minor changes in form. But designers interested in the newer forms naturally carry them into all phases of designing, and so we have chandeliers formed of a succession of circular glass plates, which act as baffles to the lights between, and there are lights of all kinds made of etched and moulded glass (new products, commercially) held in metal fashioned in the new spirit.

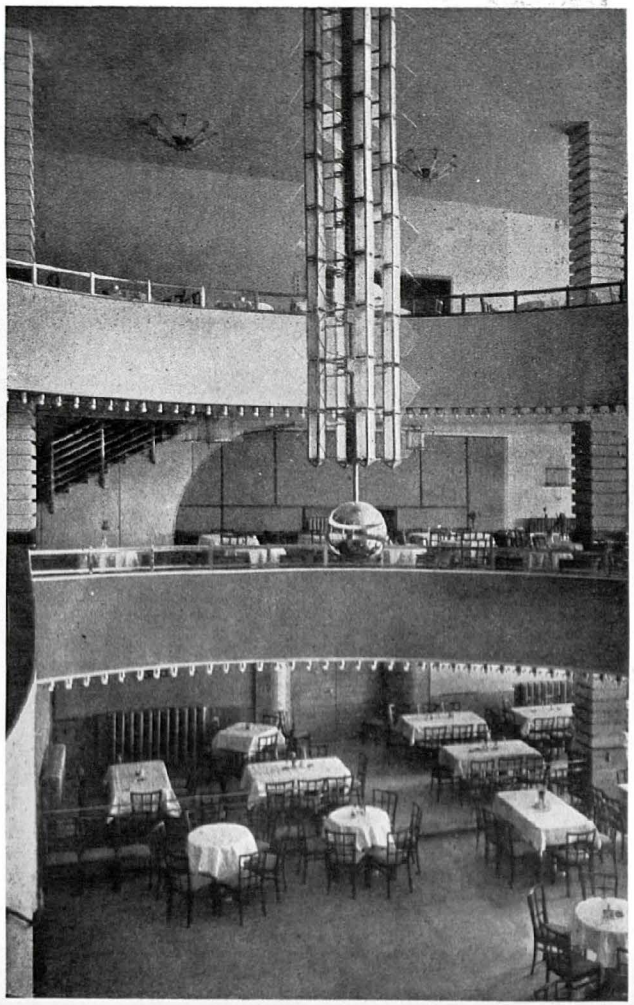
Indirect lighting, on the other hand, is a product of quite modern times. For some time there had been

*Luckiesh. *op. cit.*



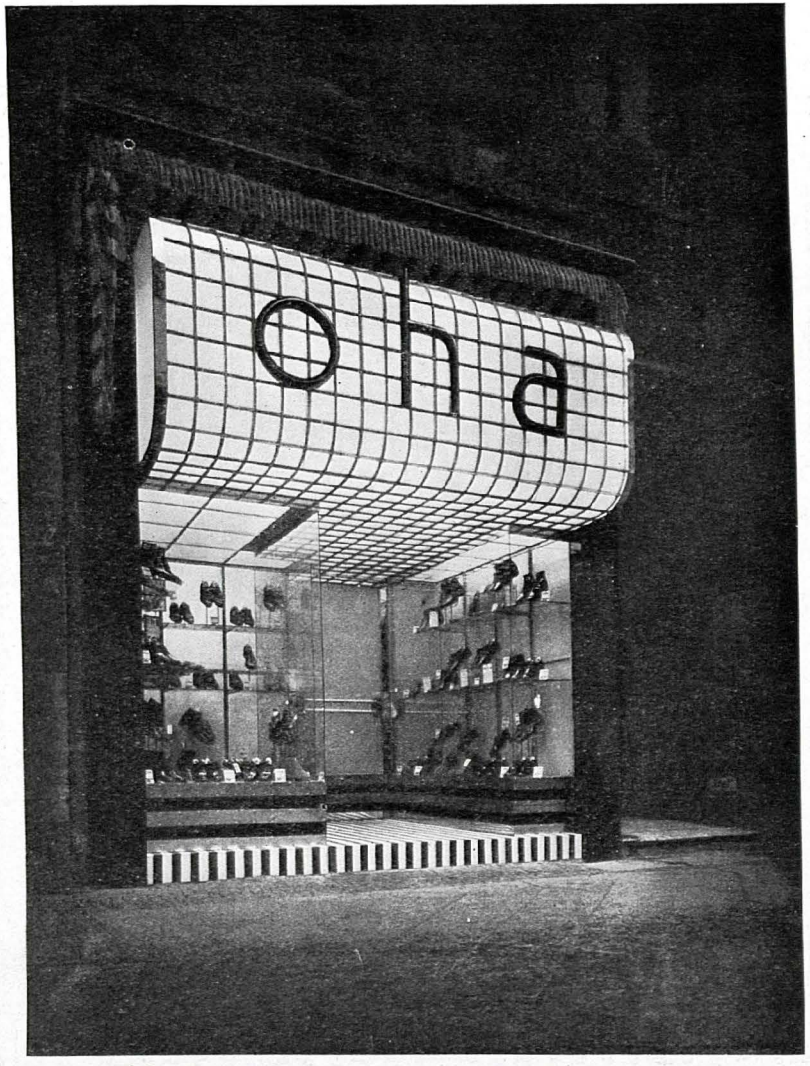
BALLROOM OF THE NEW ST. GEORGE HOTEL, BROOKLYN—WINOLD REISS, DESIGNER

Decorated entirely by shifting and changing shadows and colored lights.



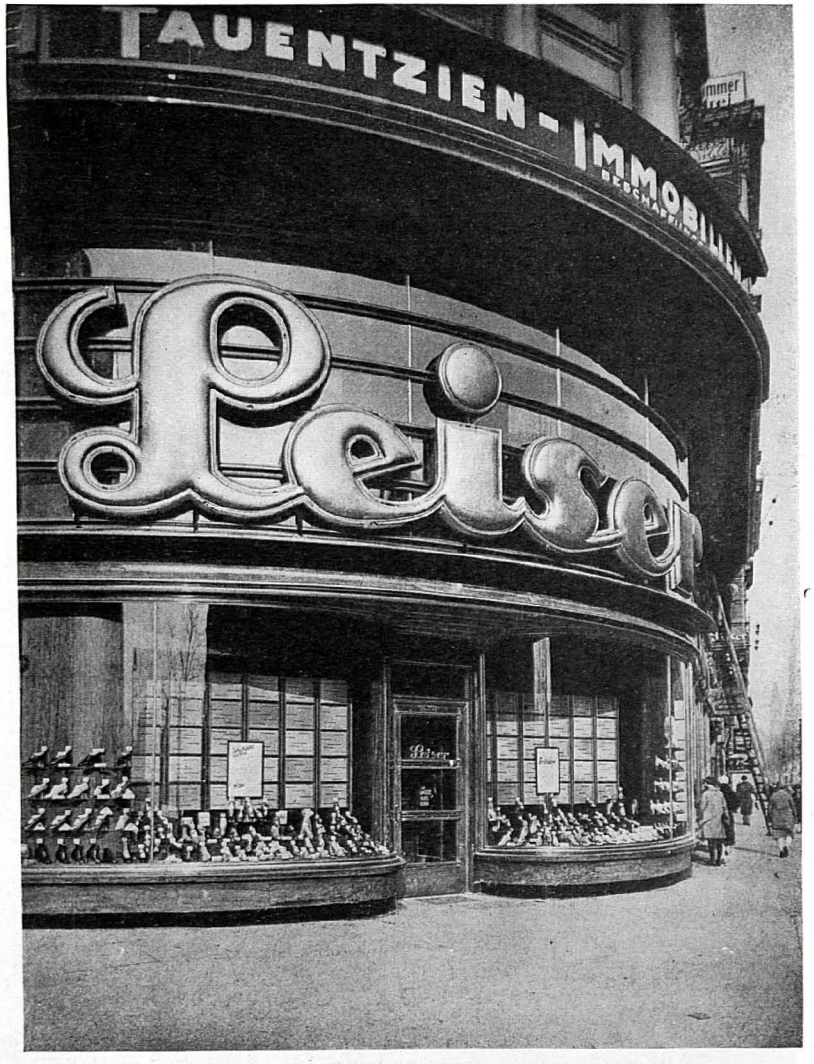
THREE-TIERED CAFE—HINDENBURG BUILDING, STUTTGART

The central lighting fixture has, between its square ground glass prisms, clear glass wings set so that the light shows through endwise. On the ceiling are fixtures of tubular lighting units. Around the edge of the soffit of each balcony are rows of visible bulbs.



SHOE STORE IN DUSSELDORF, BERNHARD PFAU, ARCHITECT

Modern use of whole surfaces of glass, lighted, the lines of the glass divisions forming patterns on the plane of light, in which are introduced advertising or, sometimes, decorative forms.



DETAIL OF THE BERLIN SHOE STORE SHOWN ON PAGE 434

Notice the method of arranging the Neon tubing around the large letters of the sign.

From "Boutiques et Magasins"

LEISER SHOE STORE IN BERLIN, PAUL ZUCKER, ARCHITECT

Neon lighting used to "render" a building at night, as well as for advertising purposes.

an effort to get rid of what are often "ugly" chandeliers, and this indirect lighting does. But there is another more compelling reason for its development. The use of higher and higher intensities in the lighting units—and more light is one of the demands of the age—makes a glare unpleasant to the eye if the light source is visible, but has no such effect if the light source is concealed. The very fact that the light sources are concealed makes it possible to use quite elaborate apparatus, with dimmers, and with several colors of bulbs, all handled by "remote control."

The ballroom of the St. George Hotel, Brooklyn, is a room of which the lighting is the entire decoration. The room has no windows, and is painted throughout a flat white. But when a button is pushed "light in the most subtle variations begins to clothe the ceiling . . . a soft green steals like moonlight over the walls about you . . . delicate pastels creep out of the coves and flutes around the walls and ceiling . . . and then the moonlight begins to wane . . . dawn comes, pale at first, and then glowing with ambers . . . patterns take on robust reds and yellows and greens . . . they play up and down the wall and across the ceiling, constantly changing or remaining motionless at the command of the remote control room."*

It is needless to say that such lighting is quite expensive, and does not solve all problems, for it cannot be used unless there is sufficient "turnover" of patronage to avoid the inevitable feeling of boredom on the part of those who are forced to see too often an ingenious mechanical effect.

Lighting of this character has been used with great success in fountains, especially at amusement parks or expositions. If the range of effects is wide enough such a fountain is a veritable "color organ," and, when played by an artist, is in itself artistic.

Similar ingenuity is used in advertising; here it is possible to spend great sums of money to obtain elaborate effects because the electric signs can be placed at the world's cross-roads, where they will be seen by countless people, perhaps a different hundred thousand every night. Under such circumstances the great cost of wiring such mechanical devices, to say nothing of the cost of the electric current used in so great a number of lamps, is thoroughly justified.

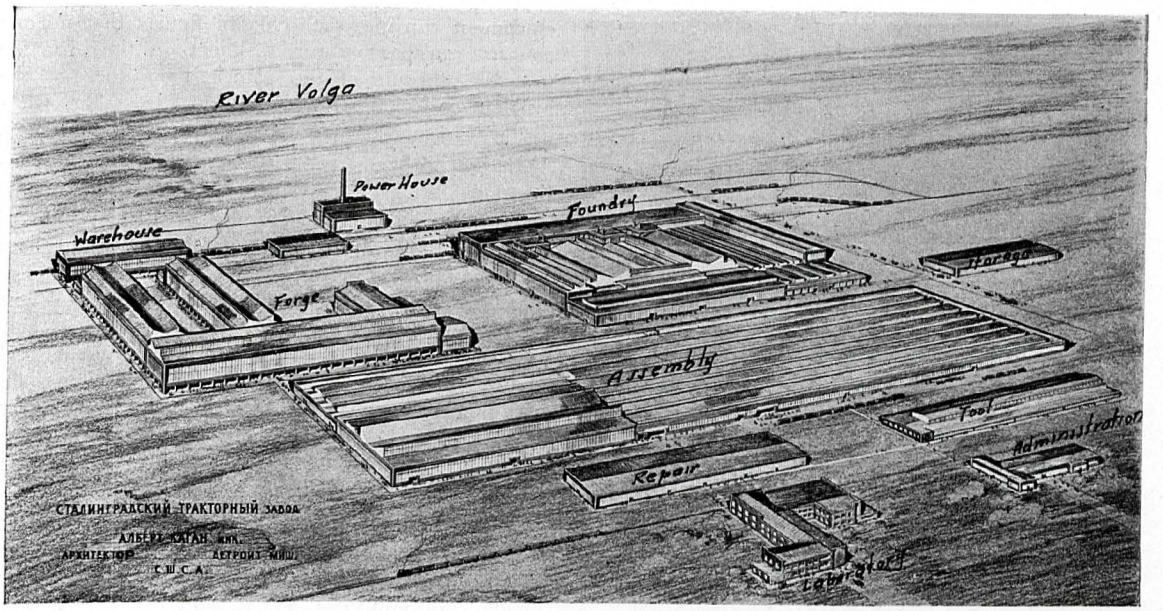
One of the more recent developments in advertising lighting—the Neon tube, where light appears as a line of any length instead of as a point or series of points—gives promise of interesting developments in architectural lighting. The Germans have already used this form of light in the "Hindenburg Building"; but this is only a beginning.

In fact artificial light has but started its history. It has had a marked effect on modern architectural form: it is likely to have still more to do with the architecture of the future. As expositions frequently show trends in architecture much before any other kind of building can, it will be interesting to see the uses to which artificial light is put in the coming exposition at Chicago in 1933.

MUSIC ROOM IN RESIDENCE IN STUTTGART, BLOCH AND GUGGENHEIMER, ARCHITECTS

Lighting fixtures consist of flat plates of etched or figured glass held by metal cylinders. In this case there are glass sides to the fixtures, but these are frequently omitted in similar fixtures.

*"Decorating with Light." Stone and Webster Journal, April, 1930.



GENERAL PERSPECTIVE OF THE STALINGRAD TRACTOR PLANT—ALBERT KAHN, INC., CONSULTING ARCHITECTS

AMERICAN ARCHITECTS AND ENGINEERS IN RUSSIA

By A. L. Drabkin

EDITOR'S NOTE:—*The author of this article was the representative of Albert Kahn, Inc., and Resident Engineer at the Stalingrad Tractor Plant during its construction. His description of the way in which this building operation was carried on will be of interest to many of our readers who have wondered how the huge construction program of the U.S.S.R. is proceeding.*

NO COUNTRY has ever been so much in the world's public eye as has Russia within recent years. At first it was the outbreak of the revolution and its probable effect on the world war that held everyone's attention. Then followed the spectacular succession of political regimes with all its possibilities and probabilities. Of late it is the unprecedented industrial expansion of the country that makes us all take cognizance of that mysterious land.

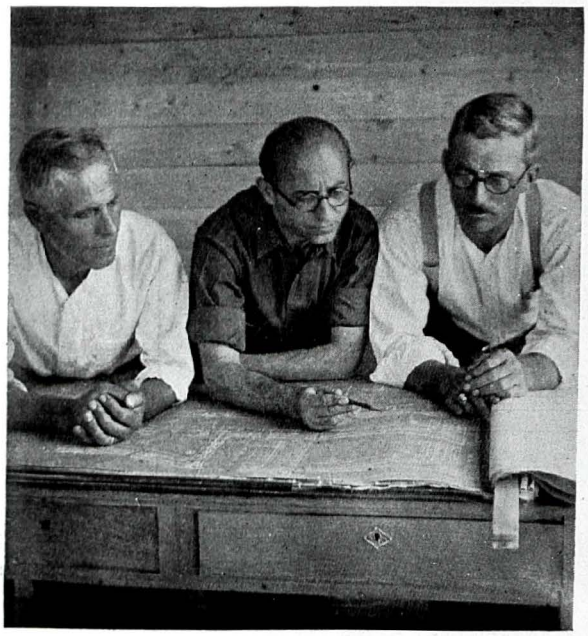
Just what is happening in Russia? Why such concentrated efforts in the direction of industrial development? Why do tractor and automobile plants head the list? What other projects are undertaken and to what extent? What is the five-year plan? How does the Russian government go about solving this problem? Why is the foreign specialist called upon? What is his task and how does he go about it? Perhaps some of you have wondered.

GROUP OF ENGINEERS, AMERICANS IN FRONT, RUSSIANS IN REAR

Seated in the center is the General Superintendent with the author at his left.

To answer these and many other related questions completely one must first give a "bird's-eye view" of that country and her immediate problems.

A glance at the map brings out the fact that Russia, or U.S.S.R. (United Socialist Soviet Republics) occupies an area equal to about one-sixth the combined areas of all continents; her climatic conditions vary through all gradations from mild Crimea to severe Siberia. The natural resources consist of grain, wool, oil, coal,



GOING OVER THE PLANS

The author in the center with the general superintendent and his assistant at right and left respectively.

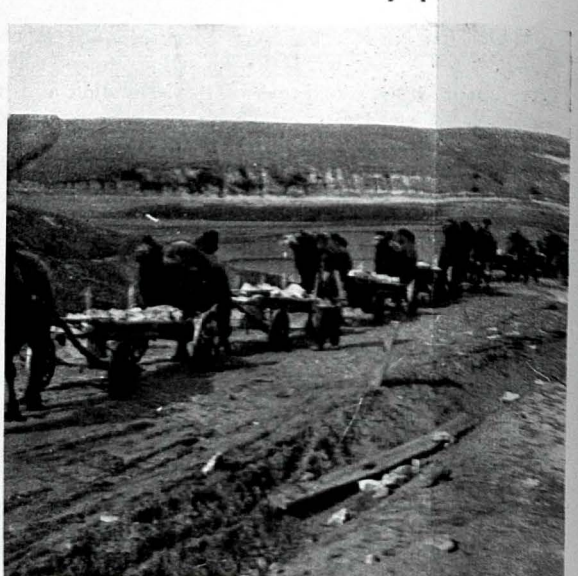
gold, silver, iron, copper, aluminum, nickel, lumber, fish, fruit, garden and dairy products. The population is about 150,000,000 and is made up of more different and distinct nationalities than that of any other country on earth. The European part is generally a flat agricultural land; the Asiatic part is mostly lumber, metal, and mineral land.

Shortly after Russia's entry into the world war the long existing dissatisfaction of the masses with the tsarist regime flared up into an open revolution. Several forms of government in rapid succession finally gave way in October of 1917 to the one now existing. After the smoke of the external and internal wars had cleared away the people found their economic life completely disrupted, the fields and industries neglected, the national treasury greatly reduced. It took superhuman efforts to reorganize the national life, reestablish relations with other countries, and make preliminary plans for resurrection and amelioration of the entire social, economic, cultural, and industrial phases of the country's life.

One of the many proposed schemes of reorganization known as "the 5-year plan" was finally adopted in 1928. This plan is a systematic effort to reconstruct all industries, exploit all natural resources, and includes development of oil, coal, metal and mineral fields; textile, leather, dye, glass, lumber, electrical, and mechanical industries; automobile, airplane, tractor, and chemical plants; extension and improvement of railroads, harbors, highways, bridges, canals, etc., etc. As the name implies, the plan is to run for a period of five years; 1928 to 1933. The expenditures involved run into billions of dollars per year. Purchases of construction and production materials and equipment run into such colossal figures that no one country can possibly furnish them on time for the progress schedule of this plan. Then there is the problem of technical forces and qualified labor, without which such a task could hardly be undertaken.

In the pre-war days Russia was known as an industrially "backward" country and dependent mainly on her agriculture and natural resources for national subsistence. The railroads and factories had been built and operated by foreign capital and under foreign management; the metal and mineral mines sunk and exploited by Westerners; oil fields and fisheries generally leased to outsiders. The Russian peasant stuck to the soil, working it in a rather primitive way and with domestic animals rather than modern machinery. Even the large landholders found it more profitable to employ man and animal labor than to import agricultural equipment.

When the present government took over the reins of power it found itself heir to a sadly neglected, devastated land, depleted and crippled railroad equipment. All industries, mines, and concessions were shut down and, worst of all, no technical leadership nor financial assistance available. For all foreigners had fled that country. Realizing the seriousness of the problem, as well as the great handicaps involved, the Soviet government turned its eyes Westward. Group after group of the best trained Russian engineers, architects, agriculturists, and economists were sent to all corners of the earth to study their particular problems and the solutions offered or methods adopted by the other countries. No easy task was that, for so complex is the structure of modern society and so intimately interdependent its social, cultural, economic, climatic, and geographical conditions that the choice of methods best suited for some definitely fixed set of circumstances was in itself an intricate proposition.



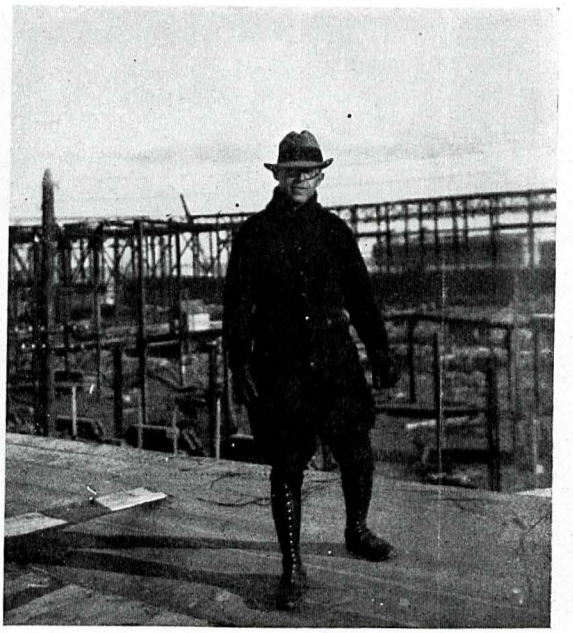
CAMEL CARAVAN BRINGING IN STONE

From nearby quarries, this stone is to be crushed and used in road construction and for concrete aggregate.

The Russians turned their first attention to the agricultural question. Fertilization of the land and greater ease and speed in working it pointed to the necessity for chemical and tractor plants and agricultural implements. Then followed the automobile industry, improvement of railroads, bridges and highways, development of harbors and canals. Building industrial plants on the scale projected by the government made it advisable to start at once the development of iron, copper, aluminum, and coal mines, oil and bituminous fields; lumber, brick and cement and other structural industries. Then, again, agricultural development paves the way to wool, textile, and leather industries; chemical and steel plants to the dye industry, etc., etc.

From above it is evident that at the outset of such a program most of the structural materials, and construction, as well as plant equipment had to come from abroad. Moreover, in making such investments in new gigantic plants the government's technical advisers decided not only to consult the foreign "specialist" but actually bring him to the job and let him erect buildings, set equipment and run it. This accomplished two purposes: the most modern methods of construction and plant operation are used throughout, and besides the Russians are being trained in all this work under the leadership of men qualified in the respective fields.

Albert Kahn, Inc., of Detroit, Michigan, were chosen the official consulting architects and engineers for industrial development of U.S.S.R. The 5-year plan calls for an expenditure of many millions of dollars. The systematic and most economical disbursement of such a sum requires a thoroughly trained and well organized force. And so it was decided by the Soviet Supreme Council of National Economy (S.C.N.E.) to arrange with our firm for the establishment of a branch office in Moscow. This office is to have a certain number of qualified American Architects, Structural, Mechanical, and Electrical Engineers capable of handling industrial and commercial work along modern lines. The work to be done consists of the preparation of plans for foundries, forge shops, assembly buildings, glass and steel plants, paper and textile mills, tanneries, printing and other industrial establishments, in all of which our force is to cooperate with the Russian technical staff. Previous to this arrangement with the Russian government we were called upon to design a plant at Stalingrad, capable of turning out 50,000 tractors per year; also a smaller assembly plant at Moscow. Recently preliminary drawings for a ball bearing plant were prepared by us here. For the latter the actual working drawings will be made in Moscow.



THE AUTHOR ON ROOF OF ASSEMBLY BUILDING

The steel in the background is the frame of the foundry.

A SQUAD OF WOMEN GLAZIERS

On the roof of the assembly building. The framework of the forge shops is seen in the distance.

There are numerous problems involved in designing for Russia. The climatic conditions and the extremes of summer and winter temperatures are different from those of most other countries. Then the newly adopted metric system must be contended with. The structural materials, as well as equipment, are to be obtained partly in U. S., partly in Germany and Russia. The structures must be erected with native labor. The relative costs of labor, with its varied qualifications, and materials has to be studied for purposes of economy and convenience. Moreover, to keep their capital within the country, Soviet officials are naturally insistent on utilizing as much as possible of their own materials and machinery. The stocks of these at the present time are neither varied nor plentiful, thus necessitating substitutions of all sorts to conform to different standards as well as to mate-

A GROUP OF RUSSIAN WORKMEN IN THE SHEET METAL SHOP

Prominent among their products are large ventilating ducts. Considering the fact that the only tools available were wood mallets and shears, these men have good reason to be proud of their work.

rials most easily obtainable. At that, speed of construction is of major importance.

The Stalingrad Tractor Plant, the first to be designed and built under this system, attracted much attention. The eyes of all Russia were literally on that spot on the banks of Volga about 650 miles S. E. of Moscow and about 225 miles N. W. of the Caspian Sea. Would this new plan work out? Even if structural steel (a material at present not easily obtainable in U.S.S.R.) were imported from Germany or United States, would the three main manufacturing buildings, costing about $4,000,000, be erected by July, 1930, bearing in mind that the design had not begun till May, 1929? Would equipment be made, shipped and installed in time for the plant to begin operations by October 1, 1930? How efficient would native labor be on this kind of work? This was to be the test in determining the feasibility of the undertaking.

In June, 1929, two American engineers left for Russia with enough information to start the foundation work for the main buildings; six weeks later followed four more Americans with completed plans for these buildings. These six men comprised a general construction superintendent, three assistant superintendents, one superintendent of welding, and the architect's representative. The latter, having been in contact with the project during the entire period of its development in the architect's office, was to be resident engineer. He was to see that the drawings and specifications were closely followed, that any changes desired by the owner, for any reason, be properly taken care of and that any substitutions of materials, necessitated by local conditions, be made correctly.

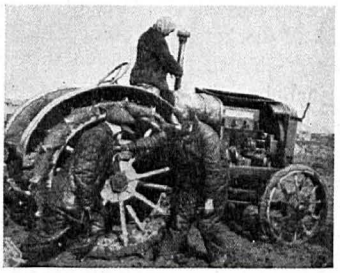
Immediately upon the arrival of this engineering nucleus from the United States, it was augmented by an equal number of Russian engineers, who were placed in charge of the construction gangs, but were acting only on advice and under instructions from the Americans. At first the "foreign specialists," who were anxious to get started and show American speed in construction, and their Soviet assistants, who were very anxious to learn and follow suit, experienced some difficulty in understanding each other. The interpreters, who were, as a rule, not acquainted with the proper terminology had a difficult task in bringing them together. After some time, however, both sides learned enough of the key-words in the other language to facilitate matters. Even though the American would say *Lithuania* for "liteynaya" (Russian for Foundry), *Abortion* for "sborochnaya" (meaning Assembly), *Clutch* for "klyooch" (key), etc., and the Russians would answer with *Troos* for "Truss," *Pairlean* for "Purlin" and *Rough* for "Roof," etc., they came to

ANOTHER GROUP OF SHEET METAL WORKERS

What appears to be three letters (C, T, 3) are the initials of the Stalingrad Tractor Plant.

understand each other pretty well. In fact after the first three months it was a rare sight to behold an interpreter trail after an American engineer on the site of the growing plant.

As for the actual speed of construction, it was soon realized that the progress schedule originally worked out would be left behind, and the dates of completion of the various structures advanced considerably. The anxiety of the labor of all grades to prove itself equal to the new task, the collaboration of all technical and executive forces with the "spets" (as the foreign specialists are referred to) proved that the Russians could and would meet the American "tempo." A revision of the progress schedule was undertaken with the object of completing all structural and architectural trades by May 1, 1930, and installation of machinery ready for operation by July 1, 1930—a gain of three months in opening the plant! This decision of the executives and engineers was passed on to a hurriedly-called meeting of all workers, and resolutions were passed by them to coordinate all efforts in order that the first tractor of the plant come off the conveyor line on July 1, 1930.

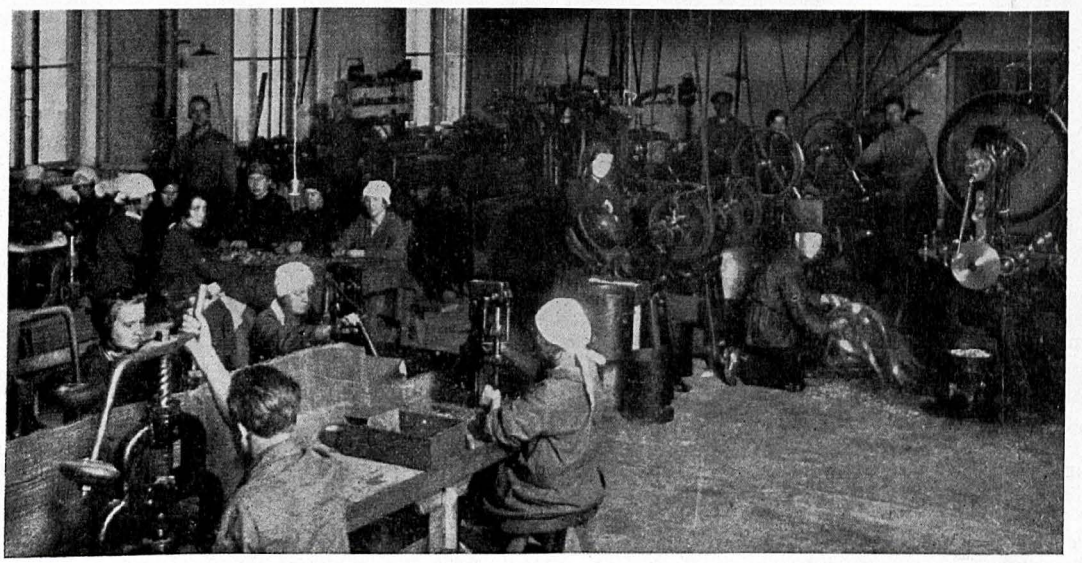


WOMEN REPAIRING TRACTOR

About the middle of September, 1929, the first boatload of structural steel, shipped from U. S. via the Black Sea, and by rail from there on, appeared on the site. 252 carloads of steel came in within three days. All structural members had been completely detailed and fabricated in the States, but were shipped 100% "knocked down." Long before the steel arrived skids for assembling were built, assembling and erecting gangs organized, and many lines of powerful electric lights strung in readiness for any possible night work required. On September 21, the first steel column was erected to the sound of clicking cameras for movies and newspapers. Thereafter the work went on in a mad rush with one object in view: "To overtake and outstrip the Americans." This was the motto. So well did the first experiment work out, so far and wide did the story of the success at Stalingrad travel that commission after commission was sent there from all corners of Soviet Land to watch its progress.

One of the most unusual experiences for an American engineer in Russia is to find among his workers a large number of women. While here women, as a rule, are kept "off the lot" where any construction is going on, in the land of Soviets one finds women unloading cars, carrying brick, lumber, glass, and steel; laying brick and tile; setting and glazing sash, heating rivets, cleaning the snow off the roofs; cutting and laying wood blocks, clearing the buildings and site of debris. Some of the best operators of rivet forges are women, and some of them can pitch a heated rivet with a dexterity and skill that would do honor to many a male competitor in the United States.

Until the winter of 1929-1930 no construction work of any consequence had ever been attempted in Russia during the four or five coldest months of the year. Whenever this subject came up for discussion in this country the Russians would invariably point to our mild "Italian" climate, as they called it, as not being a criterion to go by. And so it fell to the lot of the dwellers of an "Italian" climate to demonstrate that work can actually be done successfully at sub-zero temperatures. By completing all foundation and other concrete work before the onset of severe weather it was proven that steel erection, carpenter, sheet metal, sash, roof, and other work can just as well be done there in the winter as in the United States. True



TYPICAL RUSSIAN SHOP OF TODAY SHOWING PREVALENCE OF WOMEN WORKERS

enough, the Russian law requires that below a certain temperature (somewhere around —5° C) all workers exposed to the weather must be provided—by the employer—with suitably warm clothes, including an overcoat and felt boots. But then, this is one of the things in social obligation that we were to learn from them, as well as the fact that when anyone is forced to discontinue work for a portion of a day for such causes as lack of materials, unfavorable weather conditions, etc., he is to be paid for the balance of that day at the rate of the average earning for his particular grade. Although the past winter was exceptionally mild in Russia,* the Stalingrad experiment has proven the feasibility of winter work in that country. And now it is planned to build in the severest climates of Siberia, during the winter season.

We, of course, met many new problems, such as differences in language, codes, materials, and local conditions in this, our first effort in Russia. It was not an easy task to adjust ourselves to such unusual circumstances. We were, however, given the very best cooperation and most considerate treatment by the Russian government officials. They met every detail of the agreement with us. We found their labor, at least at first, not as efficient as ours, but ready to do its best and willing to be taught our methods. With such efforts on the part of the Russian workmen and the efficiency shown by the respective heads of the government, there is every reason for believing in the ultimate success of their remarkable 5-year plan.

The lowest temperature reached was —24° F, coupled with a 50-mile gale.

FROM A WOOD ENGRAVING BY PAUL LANDACRE—"PHYSICS BUILDING, U. C. L. A."

ONE OF THE FIFTY PRINTS OF THE YEAR SELECTED BY JOHN SLOAN FOR THE AMERICAN INSTITUTE OF GRAPHIC ARTS

ADVENTURES OF AN ARCHITECT

8—LAND SUBMARINES!

By Rossel E. Mitchell

"ROLL ON, thou deep and dark blue ocean, roll!—
Man strews the earth with ruin. His control
Stops at Thy shores."

The lame lord understated. Man's control has never yet compassed the unstable element on land, much less the sea. Flood control is much in the public eye at present. Flood control in the cellar has been less in the eye but very much *at the feet,* not to mention the doorstep, of a great section of the public having dwellings with cellars, and business houses with basements. The great sums to be spent to bridle the Father of Waters and his feeders probably does not exceed the aggregate spent already by Americans to secure "bone dry" basements, regardless of how wet some Bolsheviks may want the contents! An army of engineers, chemists, manufacturers, salesmen, builders, and a mighty corps in tar bucket brigades have labored more or less effectively to solve the innumerable problems, small and large, of damp and waterproofing. Spring freshets and flooded streets are accepted as acts of Nature, but high water in cellars brings chagrin to an owner, an inundation of complaints to the architect, and often proves so costly to the builder he can no longer keep his head above water!

An amusing experience occurred in the very first office in which I worked as a junior draftsman. The architect was of Teutonic extraction and nothing if not positive. Having ventured to overcome the laws of hydraulics in the basement of a client's residence, he was asked on the wind-up, "Are you *sure* our cellar will be absolutely dry?"

He replied, "I will *drink* all the water that ever comes into this cellar!"

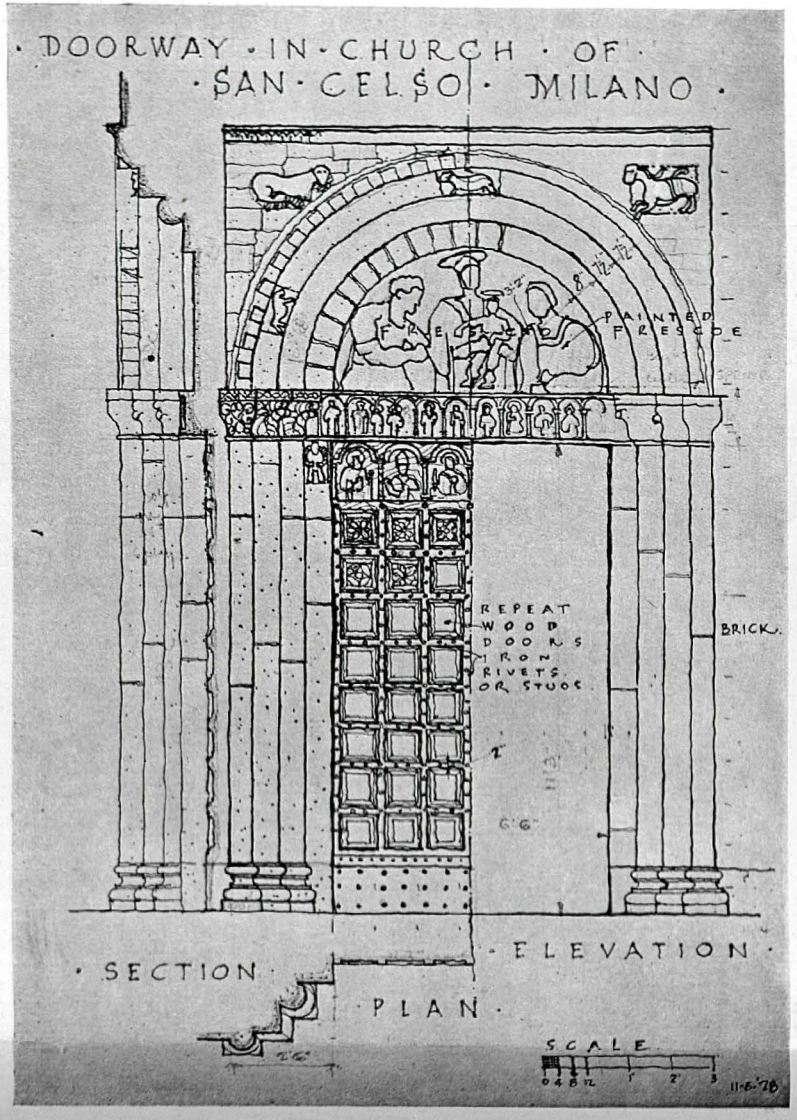
Several months later, the locality was subjected to a period of prolonged rains. What was the consternation of Mr. Architect one morning, as a female voice gently informed him, "We have about three inches of water in the cellar for you to drink!"

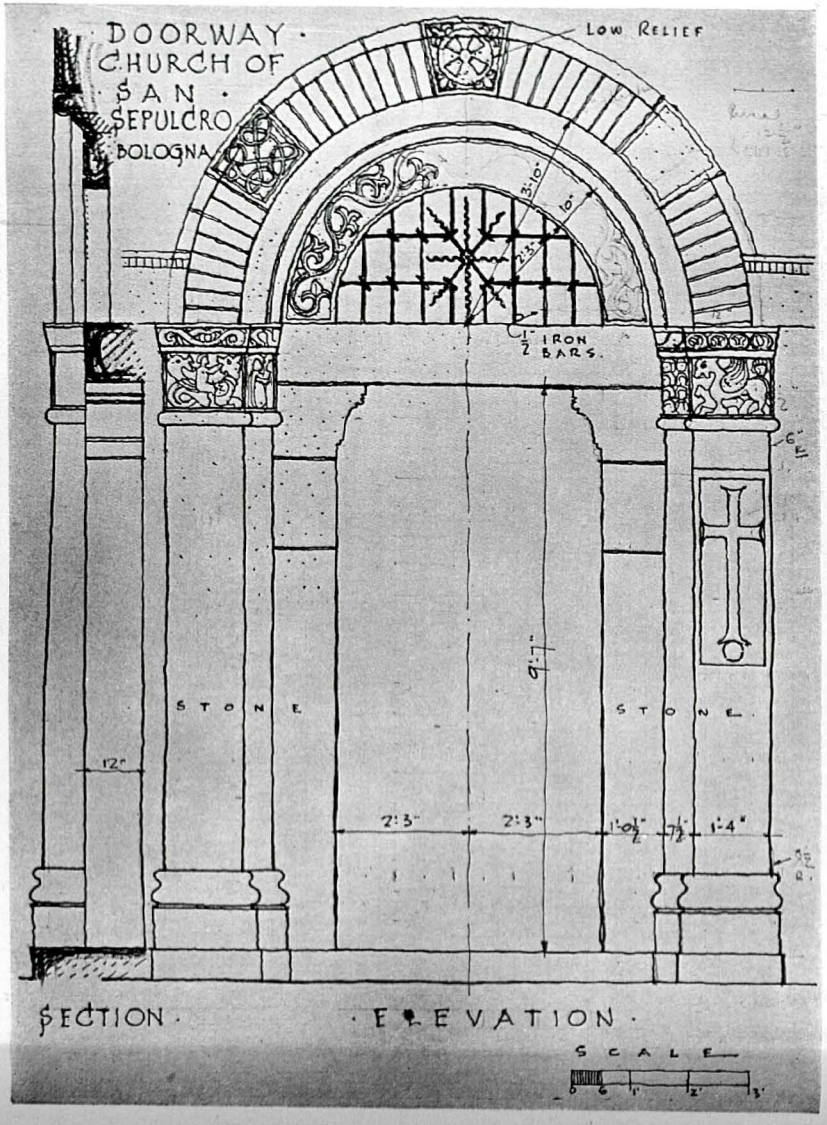
It was years after this before I encountered my first real waterproofing problem, but the experience of that architect had put me permanently on guard against such cock-sureness. My building was located in a flat country, and in a depression in the flatness. The ground water level averaged three feet below grade. Storm sewers led from this point, but were inadequate for excessive rains. We needed a basement, and a subbasement for the mechanical equipment, with a total depth of 15 feet below the water level. Hardly was the excavation well opened before there commenced a series of tremendous showers. I received an early morning 'phone call: "Come down to the building; we have the swimming pool all built—only it's a lake!"

The storm sewers had overflowed, the excavation was overwhelmed with water. No sooner would the bedeviled builder pump the hole out than Jupiter Pluvius would fill it up again. We figured finally he could float the largest ocean vessel in the water he had pumped out, with extra berths for some tugboats! He managed to get his footings and outer concrete walls in place, but the felt and asphalt membrane got washed off several times. At last the "membrane" was finished and the reinforced concrete topping put down. Every architect understands the tremendous pressure exerted *upwards* by a substantial "head" of water. Nine hundred pounds per square foot is regarded as an extremely heavy floor load, requiring extraordinary construction. Yet this pressure, which we had to overcome, is not at all unusual in building construction below water. The fact that the pressure is upward, and must be provided for uniformly at all points, and be erected in the mud, does not simplify matters! Finally the work was done and under cover, the pumps stopped and—a dozen small leaks showed up in the walls! Not large or fast flowing, but small and persistent. "Integral" waterproofings were rather new in those days, and lightly regarded. But the builder's foreman and I decided to see if we could finish the job the experts left incomplete. We used pure cement with some compound added, for a stucco. Nothing, however, will stick to a wall with the water coming through. So we borrowed a plumber's blow torch and dried out the wall temporarily, then applied the cement, using the torch immediately to hasten the set.

It was quite contrary to accepted standards then to attempt waterproofing on the *inside* of a wall. No expert at that time would consider anything but outside waterproofing for walls. However we stopped one leak, then another, and finally all of them until the sub-basement was quite free from seepage. Our work was amateurish and not very scientific, but it succeeded! Some years since that time, waterproofing on the *inside* of walls has become standard practice.

In the meantime another architect was also having his troubles in a building directly across the street. His basement was only ten feet deep below grade—but quite enough to invite a peck of trouble! The first we heard was that there had been an "explosion." An inspection showed a six-inch plain concrete floor had been laid down, over a water pressure of about 400 lbs. per square foot. Since the concrete weighed only 70 lbs. per square foot, it is not difficult to figure why the floor burst up. Shortly thereafter the building was decorated profusely with the signs of a metropolitan waterproofing company. After they had collected and departed for some months, I decided to visit that basement and note results. Much steel had been built in to hold down the new floors. The waterproofing company had evidently gone about the matter systematically, and the concrete work was beautifully done. Only one thing disappointed me, and I can only imagine how the owner felt about that—four inches of water covered the entire floor!





FROM TRAVEL NOTES BY JOHN N. RICHARDS—HOLDER OF THE STEWARDSON MEMORIAL SCHOLARSHIP OF THE UNIVERSITY OF PENNSYLVANIA, 1928-29

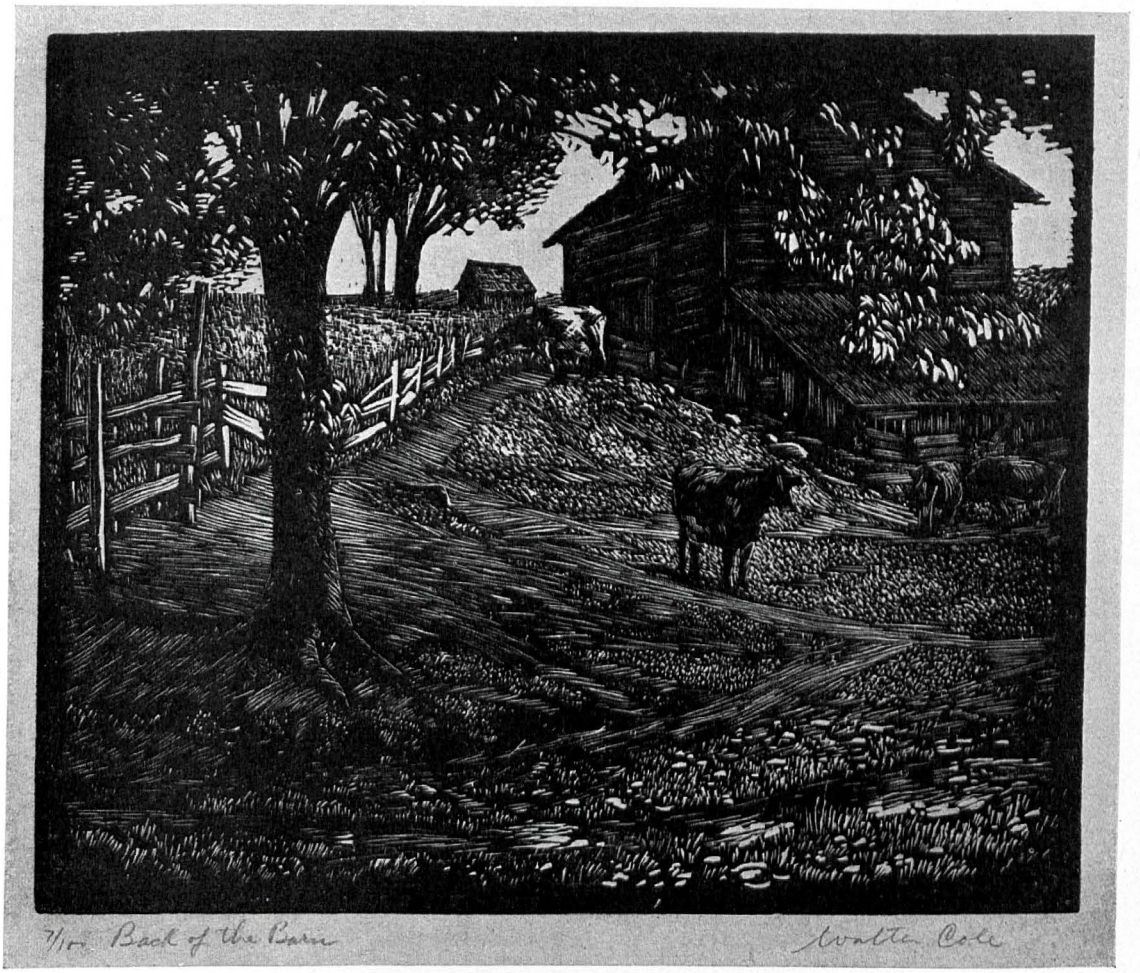
RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN

A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PENCIL POINTS FOR JUNE, 1930
VOLUME XI NUMBER 6

"This handsome stone doorway, situated in the Calle de la Calera, and adjoining the Casa de Miranda, is in a very good state of preservation. The original wooden door remains, and is made to open in parts to suit the convenience of the inmates. The plain wall space adds greatly to the effect of the excellent sculpture. The upper portion of the house, consisting of two stories, is of brick, a treatment common to many of the houses in Burgos. It contains numerous windows with rich stone dressings, and iron balconies."

A. N. PRENTICE.



FROM A WOOD ENGRAVING BY WALTER COLE
"BACK OF THE BARN"

PENCIL POINTS FOR JUNE, 1930

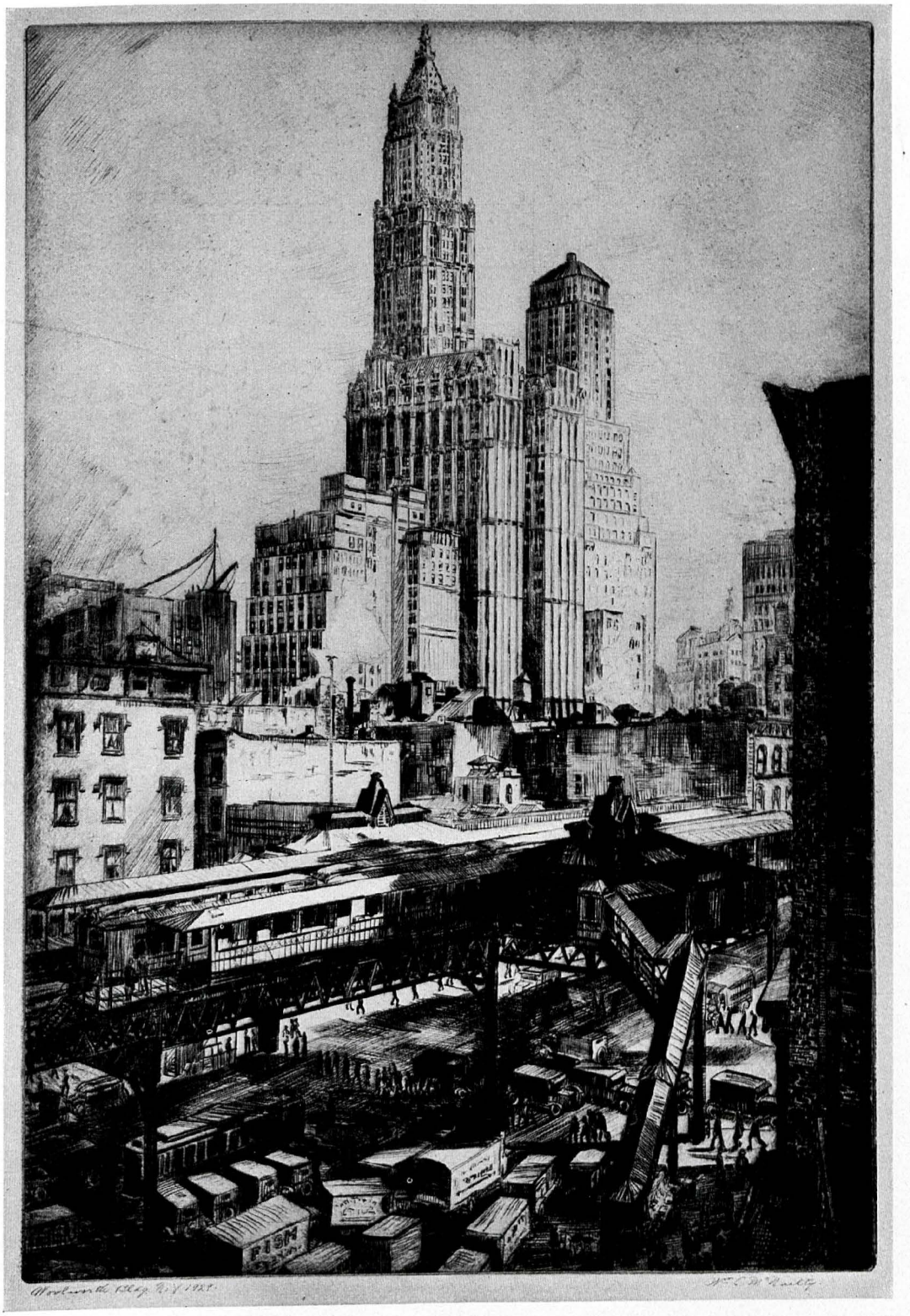
VOLUME XI NUMBER 6

This wood engraving has been reproduced here at the exact size of the original. It is an extremely good example of the art of the engraver on wood and was selected by John Sloan from among 946 prints submitted for inclusion in the Fifty Prints of the Year sent annually on an exhibition tour by the American Institute of Graphic Arts.

FIGURE BY EDMOND AMATEIS, SCULPTOR, FOR PEDIMENT OF BUFFALO HISTORICAL SOCIETY BUILDING "AGRICULTURE"

PENCIL POINTS FOR JUNE, 1930
VOLUME XI NUMBER 6

On this plate is shown one of a group of nine figures composing the pediment sculpture of the Buffalo Historical Society Building at Buffalo, New York. This figure, representing Agriculture, is a sturdy peasant type, suggesting the strength and dignity of those who wrest their living from the soil. It will be executed in white marble and is to stand 7 feet high. The entire pediment tympanum space is about 50 feet wide and 8 feet high at the center. One of the end figures, representing Law, is also shown in this issue on page 424. George Cary was the architect of the building.



FROM A DRYPOINT BY WILLIAM C. McNULTY
"WOOLWORTH BUILDING, NEW YORK, 1929"

PENCIL POINTS FOR JUNE, 1930
VOLUME XI NUMBER 6

This plate by William C. McNulty was done from an excellent point of view to take advantage of the way in which the structures of a big city build up in a sequence of zig-zags from bottom to top while the verticality of the tall buildings remains dominant. The composition will repay careful analysis. The original print measured 9" x 13". The tower at the right of the Woolworth is the Transportation Building.

ELEVATOR TRAFFIC SCHEDULES

By L. J. Kinnard

Electrical Engineer with the Consolidated Steel Corporation, Ltd., of Los Angeles

THERE IS A general opinion among the building trades and professions that "Elevator Traffic Studies" are difficult to make and very mysterious. This article has been written to disprove that fallacy, and to provide the tools with which anyone, familiar with elevators, may easily determine how many cars are needed in a prospective building. The information is based primarily upon office building service, but it could be readily applied to other types of buildings.

It is quite true that a great many variables enter into the problem of elevator application, but fortunately the averages of those variables have been determined. For instance, the average number of stops per round trip during the rush period in an office building has been found to depend upon the number of passengers carried and the number of floors served, as will be shown by one of the following curves. Likewise the average number of false stops, the average length of time required for each false stop, the average time consumed per passenger entering and leaving a car, and even the average length of time required to open and close doors are elements in elevator schedules that can be safely calculated from the past experience of many observers in all parts of the country.

Besides these variables, and in many cases directly affecting them, are many conditions surrounding an elevator installation which cannot be disregarded if an intelligent study of the prospective building is to be made:

1. Population of building.
   - (a) The anticipated density.
   - (b) The uniformity of distribution.
   - (c) Type of tenants.
   - (d) Length of arrival and departure periods.
2. Corridors.
   - (a) Their relation to entrances.
   - (b) Possibility of congestion.
   - (c) Distance of elevators from offices.
3. Crowded Floors.
   - (a) Assembly Halls or Auditoriums.
   - (b) Dining Rooms.
   - (c) Exhibition Floors.
   - (d) Wash Rooms and Rest Rooms.
4. Shape of Building.
   - (a) Tower type (Small cars at high speed).
   - (b) Spread type (Large cars at lower speed).
   - (c) Irregular shape (Requiring more than one bank).
5. Location of Building.
   - (a) Distance from transportation terminals.
   - (b) Rental competition with other buildings.
   - (c) Habits of tenants (Fairly consistent in any one city, but different in different cities).
   - (d) Class of elevator service required.
6. Location of Stairways.
   - (a) Accessible stairways relieve elevator congestion between adjacent floors.
7. Maintenance and Operation.
   - (a) First class maintenance by the owner cannot always be expected.
8. Terminal Floors.
   - (a) Subway, basement, and second floor entrances must be considered.

The actual effect of the various items, listed above, upon the final operation is a matter of speculation and their consideration must depend upon good judgment and experience.

There has been a general demand among architects for a "Rule of Thumb" by which one could determine in a few seconds how many elevators were needed in a prospective building. If every one concerned agreed upon a certain performance as being satisfactory, then a "Rule of Thumb" could easily be produced that would serve the purpose. But since "Satisfactory performance" is also an important variable, it might be well to indicate what is considered good performance in most of the large cities. The following table shows satisfactory values, and not the extremely high class service that has been obtained in a few of the most recent and spectacular buildings. The "Interval of Departure" refers throughout this article to the length of time between consecutive cars leaving the main floor; and the "Time to Empty Building" assumes the average rush-hour load down, each trip, and not capacity load.

TABLE I.

SATISFACTORY ELEVATOR SERVICE

	Interval of Departure	Time to Empty Building
Office Bldg.	30 Seconds	45 Minutes
Public Bldg.	40 "	60 "
Dept. Store	60 "	100 "
Hotel	40 "	45 "
Hospital	45 "	60 "

In different cities and even in different locations of the same city, the congestion of offices varies over a large range. Considering the rentable area or space used for offices, stores, studios, etc., the following table permits a fairly accurate estimate of the population of a building.

TABLE II. (Item 5)

OFFICE BUILDING POPULATION

80 Sq. Ft. Per Person	Very congested
100 " " " "	Normal
120 " " " "	Comfortable
(3 people per individual office—Average)	

In order to solve the problem—"How many cars are needed?"—two methods are offered. The first method requires only the consideration of Table I, Table II and Figure 1, and of course assumes that at least an approximate estimate has already been made as to the height of the building and the rentable floor area or number of offices. If the conditions of the prospective building differ radically from the assumptions shown on Figure 1, reasonable allowances can be made for these variations. For instance the curve assumes "automatic Landing Control." If "Car Switch Control" is deemed satisfactory for a certain prospective building, the "Interval of Departure" would be increased about 15% for the same number of cars, and the "Time to Empty Building" would also be increased in the same proportion. As an example in the use of these curves, it will be noted that a bank of 4 cars in an 18 floor building will maintain an Interval of Departure of 30 seconds and will handle about 1,450 people per hour. Obviously it would empty a building having 1,100 people (or 360 small offices), above the main floor, in 45 minutes. This performance, according to Table I, would be satisfactory.

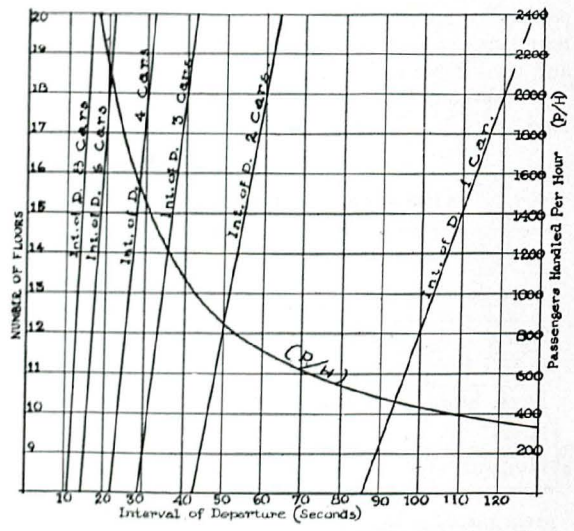


FIGURE 1—SEE TEXT

Assuming Automatic Door Operators, Automatic Landing Control, Capacity of 2,500 lbs. at 600 F.P.M., Office Building Service at Rush Period.

If the foregoing approximate method is used for a bank of express cars the curves of Figure 1 would still apply to the upper or local zone. The Interval of Departure, however, would be increased in each case by twice the length of time required for the car to travel through the express zone, which could be calculated by simple mathematics. The people handled per hour (P/H) would decrease accordingly for the same number of cars.

The following method of making a traffic study requires more time than the first method and makes more accurate provision for all variables. In every round trip of an elevator, there is a definite sequence of operations. The required time of some of these depends upon the personal element, in which case, average observed values must be used. Other operations depend upon the mechanical and electrical mechanism—in other words—upon the machines and control. The required time for these functions can be very carefully tested and calculated.

Figure 2 shows a convenient form of detailed Traffic study. It includes a list of the items entering into this study and in order to explain the procedure, each item is considered with its corresponding charts or curves. A typical building is used for an example. The tentative number of elevators was chosen after an inspection of Tables I and II, and Figure 1.

On the form shown in Figure 2, the first four items can be taken from the preliminary architectural drawings. The fifth item can be determined by inspection of Table II or by observation and examination of the census records of similar buildings in the same neighborhood. Item 6, of course, depends upon the height of the building and some assumptions must be made upon which to base a traffic study. Express cars are seldom used on buildings less than 20 floors in height.

The principal purpose of making the entire traffic study is to determine Item 7, "The Number of Elevators in the Group." Nevertheless, an arbitrary decision must first be made; the results of the traffic study simply show whether or not this decision is correct. Figure 1 will help to make at least an approximate assumption.

Items 8 and 9 "Full Speed of Car" and "Capacity in Pounds" also call for some experience and judgment, although elevator practice has become fairly stable in respect to these features.

Item 10 can easily be figured by allowing about 150 pounds per person (The weight of the operator must be considered). The "Type of Control" (Item 11) and "Type of Door Operators" (Item 12) have a very decided effect upon the operation of a bank of cars, as further discussion will disclose.

Item 13, "Time to Open and Close Doors." It should be noted in the following table that when automatic landing (Auto. Ldg.) is used, the door operating time is decreased by 1½ seconds. The doors themselves do not operate any faster, but they may be

TRAFFIC STUDY

Name of Building ..... Location .....

1.	Number of floors served (Including Main Floor)		18
2.	Travel, Round Trip (Ft.)		400
3.	Rentable Area, per floor (Sq. Ft.)		7,750
4.	Rentable Area, above Main Foor (Sq. Ft.)		132,000
5.	Population, Above Main Floor		1,100
6.	Service (Local or Express)		Local
7.	Number of Elevators in Bank		4
8.	Full speed of cars (F.P.M.)		600
9.	Capacity (Pounds)		2,500
10.	Capacity (Passengers)		16
11.	Type of Control		Auto. Ldg.
12.	Type of Door Operators		Power
13.	Time to open and close doors, each stop	(Seconds)	2
14.	Extra time to Accel & Descel, each stop	(Seconds)	2.3
15.	Standing time, Main Floor	(Seconds)	20
16.	Standing time, top floor	(Seconds)	5
17.	Passengers carried per round trip, each car		12
18.	Stops per round trip, each car		9
19.	Loading time per passenger	(Seconds)	1
20.	Standing and Loading time, each car	(Seconds)	37
21.	Door Operations, round trip, each car	(Seconds)	18
22.	Full Speed Time, round trip	(Seconds)	40
23.	Extra Time, Accel & Descel, round trip	(Seconds)	21
24.	Extra Time, slowdown in limits	(Seconds)	5
25.	Time for False Stops, round trip	(Seconds)	0
26.	Total time of round trip	(Seconds)	121
27.	Interval of Departure	(Seconds)	30
28.	People Handled in 1 Hour		1,440
29.	Time to Empty Building	(Minutes)	46

FIGURE 2—TRAFFIC STUDY FORM

started to open as soon as the car enters the landing zone, which is several inches from the floor.

TABLE III. (Item 13)

Manual Corridor Door	5 Seconds
Manual Corridor Door & Manual Car Door	7 Seconds
Power Doors	3½ Seconds
Power Doors with Auto. Ldg.	2 Seconds

Item 14 "Extra Time to Accelerate and Decelerate." As a matter of convenience in calculating, it will be noted that Item 22 covers the required time for the car to run at full speed the entire round trip distance. Therefore, to obviate calculations that would involve vertical space in the hoistway through which the car runs at full speed, the following table shows the "Extra Time" consumed for each stop for acceleration and desceleration.

TABLE IV. (Item 14)

EXTRA TIME PER STOP FOR ACCELERATION AND DESCELERATION

F.P.M.	Rheostatic	Variable Voltage
200	1.5 Seconds	1.2 Seconds
300	1.9 Seconds	1.5 Seconds
400	2.6 Seconds	1.8 Seconds
500	3.6 Seconds	2.1 Seconds
600	4.5 Seconds	2.3 Seconds
700		2.6 Seconds
800		2.8 Seconds
1000		3.1 Seconds

Item 15 and Item 16. "Standing Time" at the main floor includes the loading or unloading of passengers. It has been found that in different types of buildings the Standing Time at terminal floors varies somewhat.

TABLE V. (Items 15 and 16)
STANDING TIME

	Office Buildings (Sec.)	Hotels (Sec.)	Dept. Stores (Sec.)
Main Floor	20	25	35
Top Floor	5	5	10
Transfer Floor	10	10	

Item 17 "Passengers Carried per Round Trip." It is noticeable that even during the rush period, elevators do not average capacity loads; in office buildings the average load is about 70% capacity, in hospitals and hotels about 50%, while in department stores it is about 90% full capacity.

TABLE VI. (Item 17)
AVERAGE RUSH PERIOD LOADS

CAPACITY		Office	Hotels,	Dept.
Pounds	Pass.	Building	Hospitals	Stores
1000	6	4	3	5
1500	9	7	5	8
2000	13	9	6	12
2250	14	10	7	13
2500	16	12	8	14
2750	18	13	9	16
3000	19	15	10	17
3500	23	18	12	20
4000	26	20	13	23

Item 18 "Stops per Round Trip." This is very important and can be determined from Figure 3, which has been compiled from a great many observations. For example, an inspection of this curve shows that for 18 floors served, which in this case includes the main floor, and with 12 passengers in the car, it will probably stop 9 times during a round trip.

Item 19 "Loading Time per Passenger" has also been obtained by careful and repeated observations. During the "Up" rush period such as occurs in the morning, this is really "Unloading Time," since the time used by passengers either entering or leaving the car at the main floor is included in the "Standing Time."

TABLE VII. (Item 19)
LOADING TIME PER PASSENGER

Office Buildings	1 Second
Hotels	2 Seconds
Department Stores	1½ Seconds

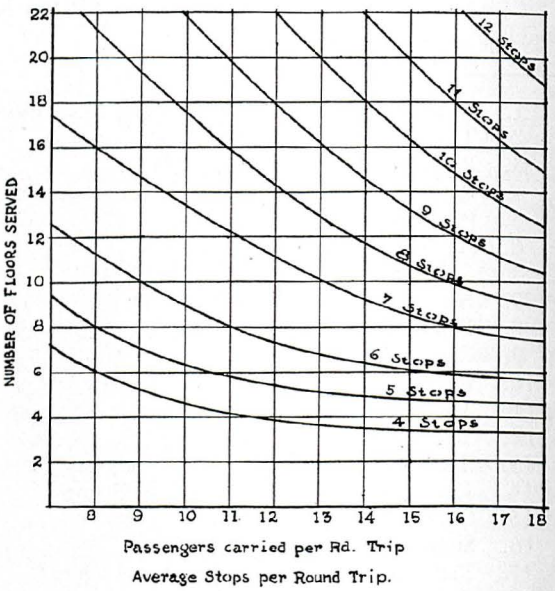


FIGURE 3—TO DETERMINE ITEM 18

Item 20 "Standing and Loading Time, Each Car." This is the sum of Items 15, 16 and 19, keeping in mind that the number of passengers carried is shown on Item 17.

Item 21 "Door Operations, Round Trip." This is simply a combination of Items 13 and 18.

Item 22 "Full Speed Time, Round Trip." As mentioned above, this item is used as a matter of convenience in figuring. It is impossible, of course, for a car to start at full speed and stop instantly; at least, it would be very uncomfortable. Nevertheless, this method permits of simple calculations, as shown by the following table.

TABLE VIII. (Item 22)
FULL SPEED TIME—ROUND TRIP

F.P.M.	Time of Round Trip				(Sec.)
200	Round Trip Travel (In Feet)			X	.3
300	"	"	"	X	.2
400	"	"	"	X	.15
500	"	"	"	X	.12
600	"	"	"	X	.1
700	"	"	"	X	.085
800	"	"	"	X	.075
1000	"	"	"	X	.06

(For round trip travel, refer to Item 2)

Item 23 "Extra Time, Acceleration and Deceleration, Round Trip." This is found by examination of Items 14 and 18.

Item 24, "Extra Time, Slowdown in Limits." The time lost due to the longer slowdowns at the ends of travel is proportional to the speed because, as a matter of safety, the higher speed cars have a longer

slowdown period. A reasonable figure is twice the "Extra Time for Accel. and Descel."; in other words, twice as much as Item 14.

Item 25, "Time for False Stops." On Car Switch Control, the time lost on account of the operator missing floors averages 1½ seconds per stop. With automatic landing, properly adjusted, there are no false stops.

Item 26, "Total Time of Round Trip." This is the sum of the values found for Items 20, 21, 22, 23, 24, and 25. In the example this round-trip time is 121 seconds.

Item 27, "Interval of Departure." By many architects and owners, this is considered the "measuring stick" by which a bank of elevators is to be judged. In many cases it is sufficient but in buildings that have considerable rentable area and hence a heavy population, the following items must also be considered. To continue our example, it will be seen that if these four cars are dispatched at regular intervals, the "Interval of Departure" will be 30 seconds, which corresponds to the curve of Figure 1.

Item 28 "People Handled in 1 Hour." This item can easily be calculated from Items 17 and 27. To prevent any confusion the following formula will show the number of people that can be handled in one hour:

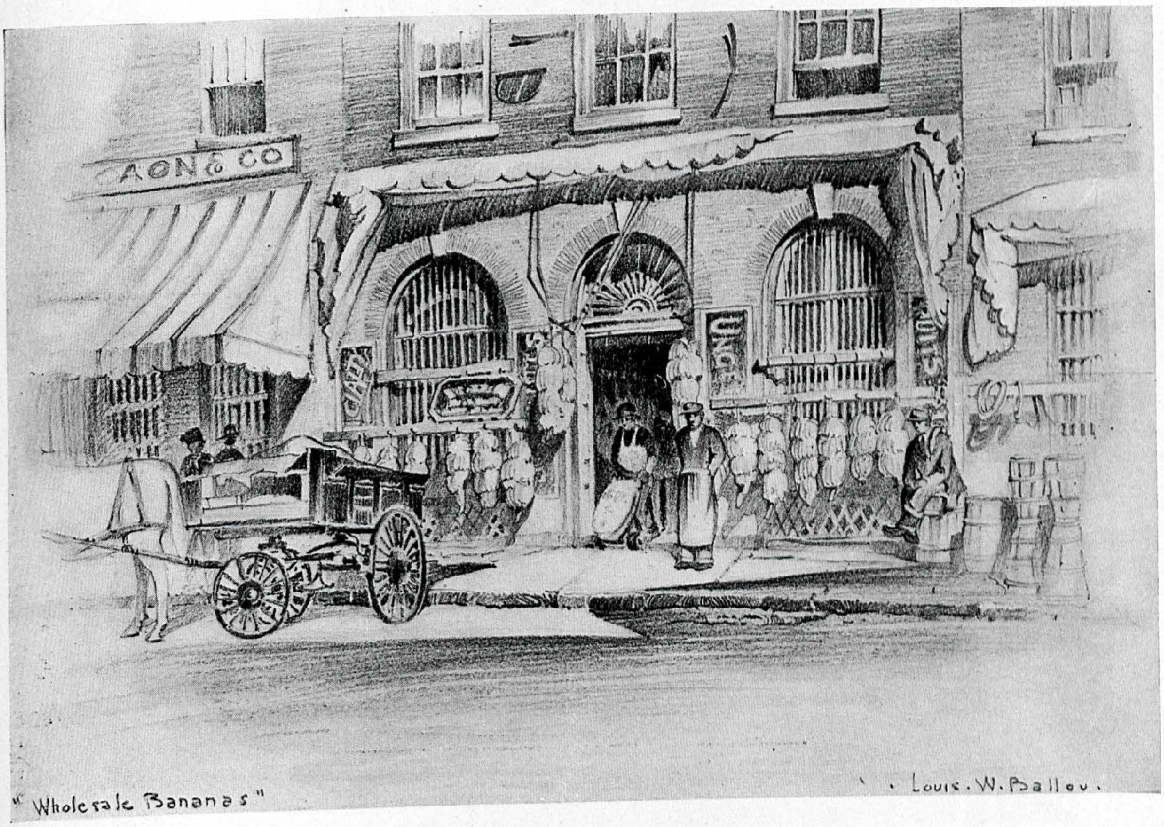
$$\frac{3600 \times (\text{Pass. Carried per Trip})}{(\text{Int. of Dep.})} = \text{People per Hour.}$$

$$\frac{\text{Or: } 3600 \times (\text{Item } 17)}{(\text{Item } 27)} = \text{Item } 28.$$

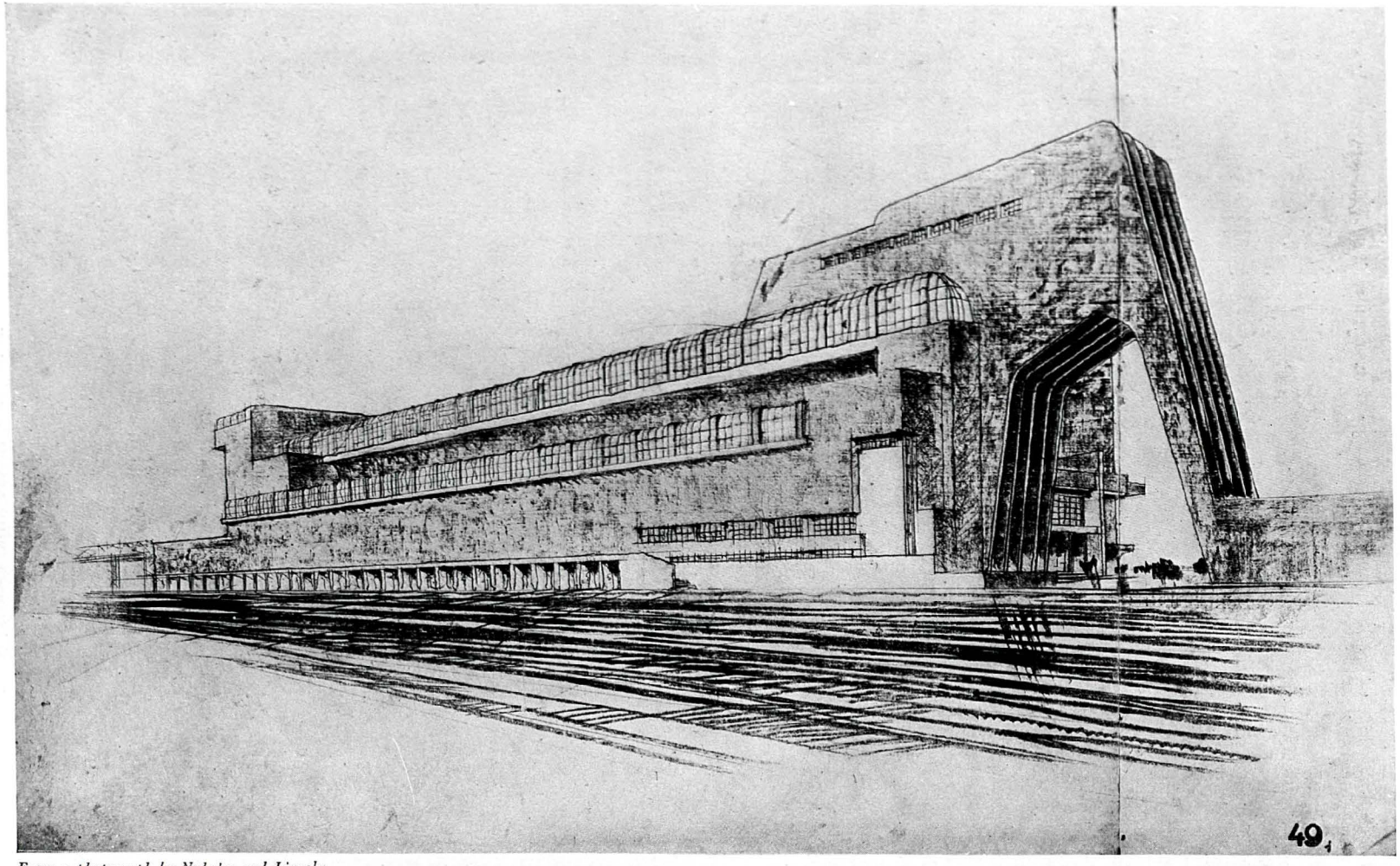
Item 29 "Time to Empty Building." It is readily apparent that this item can be calculated from Items 5 and 28. In other words:

$$\frac{(\text{Item } 5) \times 60}{(\text{Item } 28)} = \text{Item } 29.$$

From the foregoing explanation, it will be seen that a great deal of experience is not required to make an elevator traffic study. In many cases, it is worth while to compile several combinations, using not only prospective cars of different capacities and speeds, but also different controls and door operators. A variety of traffic studies will very quickly bring to light the best possible elevator installation, indicating the best equipment and the proper number of cars.



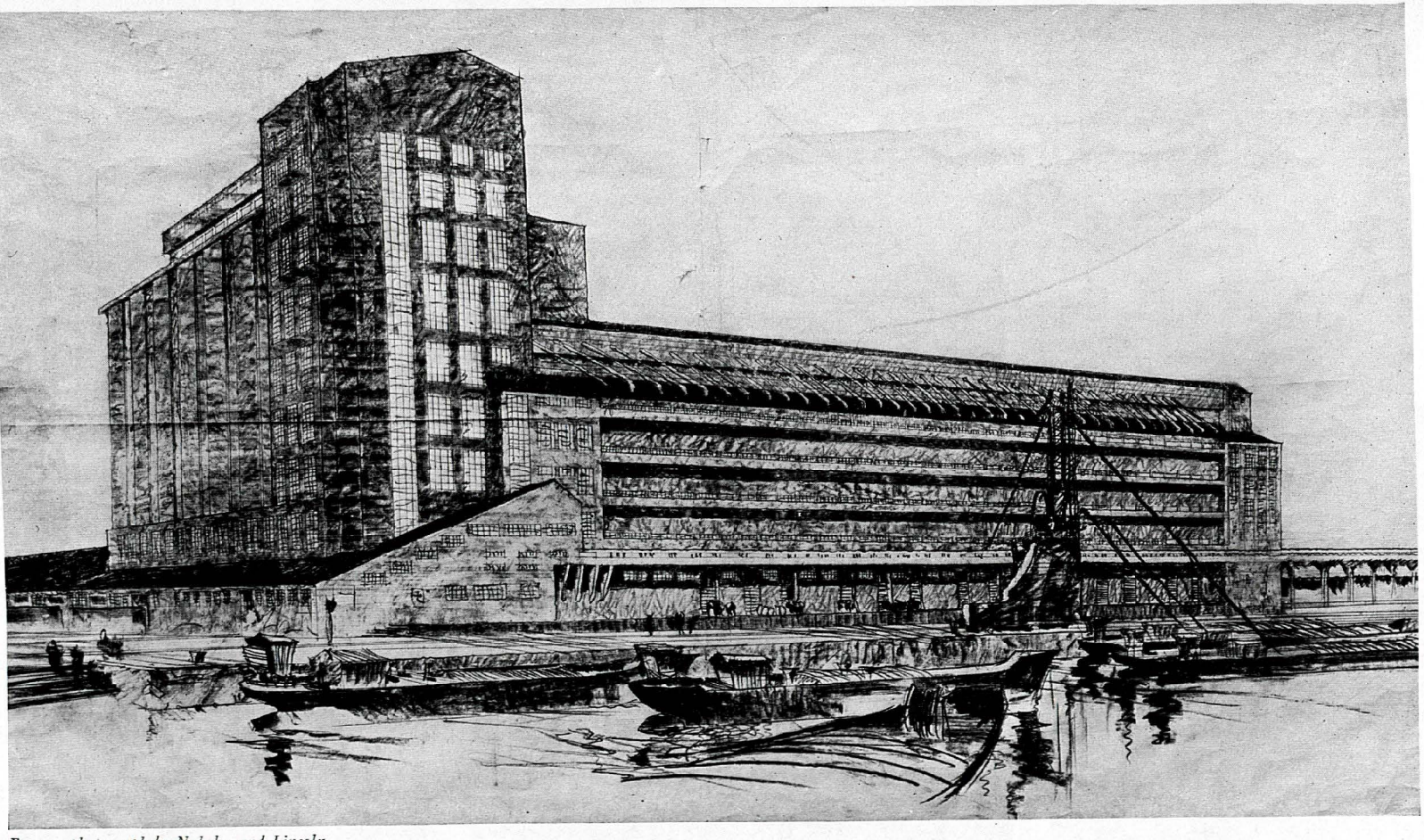
FROM A LITHOGRAPHIC PENCIL SKETCH BY LOUIS W. BALLOU



From a photograph by Nyholm and Lincoln

DESIGN FOR A COAL WASHERY BY JOHANN SCHREINER, ARCHITECT

THIS DRAWING WAS INCLUDED IN THE RECENT GERMAN EXHIBITION AT THE BROOKLYN ART MUSEUM



From a photograph by Nyholm and Lincoln

DESIGN FOR A GRAIN ELEVATOR BY ALEXANDER POPP, ARCHITECT

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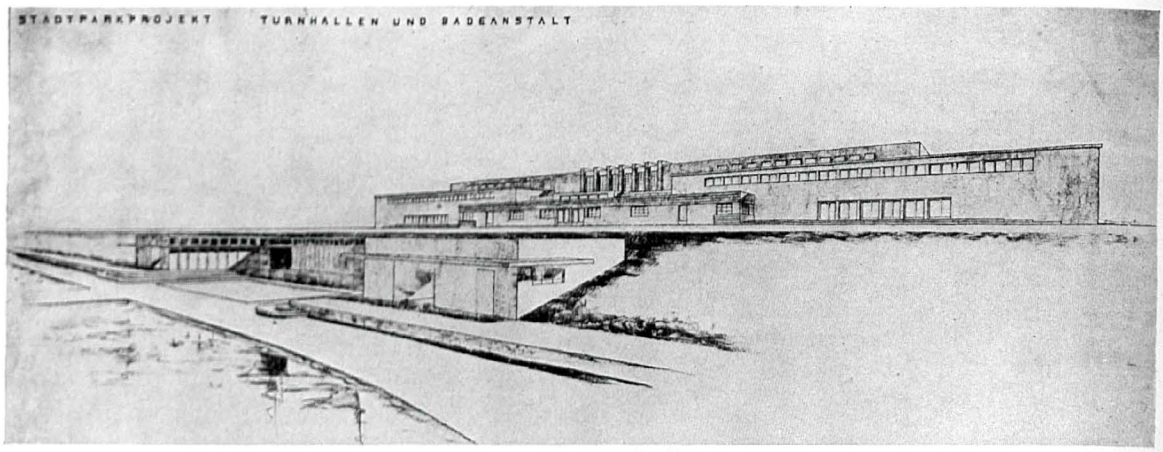
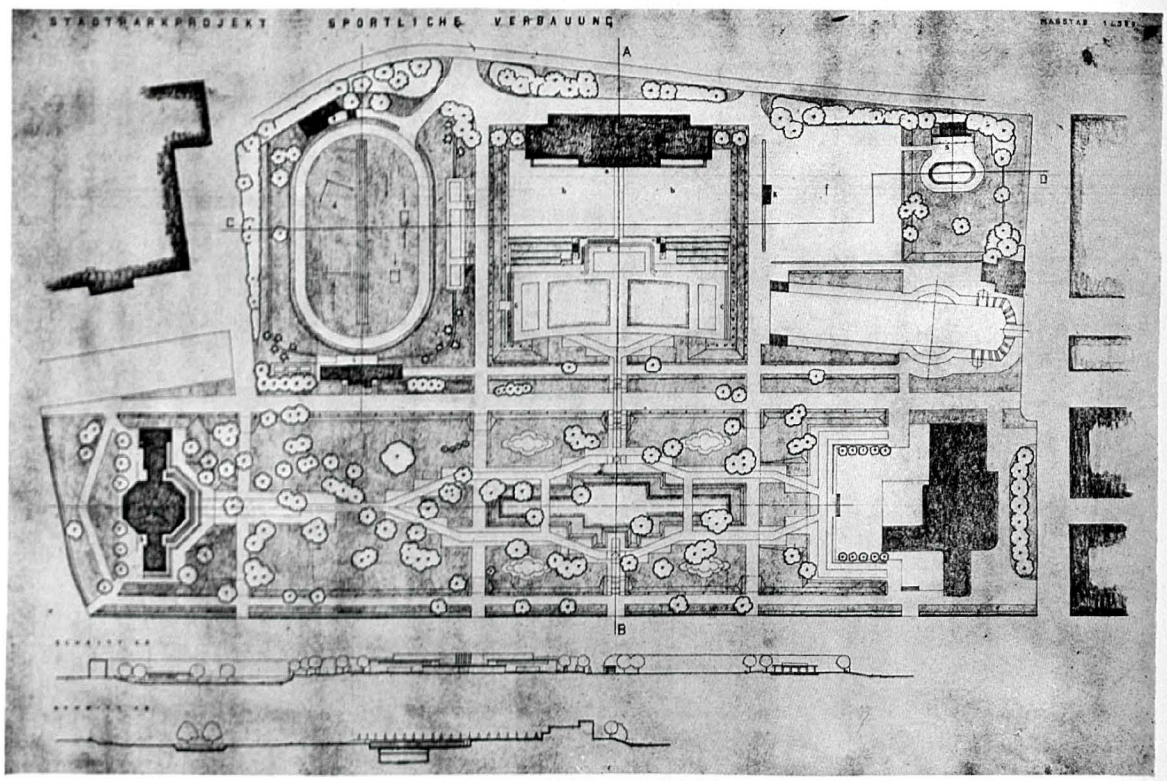
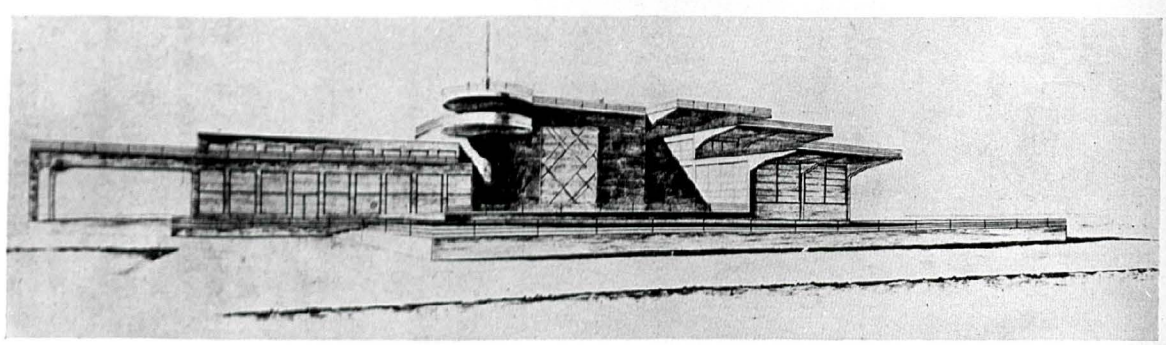






COMMUNITY PARK WITH GYMNASIUM AND SWIMMING POOL

DESIGN BY ERIC RICHTER SHOWN AT GERMAN EXHIBITION IN BROOKLYN ART MUSEUM

THE A. W. BROWN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

THE PROBLEM AND REPORT OF THE JURY OF AWARD

THE 1930 COMPETITION FOR THE A. W. BROWN TRAVELLING SCHOLARSHIP established by Ludowici-Celadon Company was judged in Charleston, S. C., on April 24th, 25th, and 26th, by a Jury of five architects.

THE PROBLEM

The problem is the design of an Exterior Court in an Exposition Building.

It is assumed there is being designed for an Exposition a Building to house the exhibits of many small manufacturers and, that the competitor, working in conjunction with others, has the problem of designing the embellishment of the court itself and of the walls enclosing the court.

For the purpose of this design, the competitor may assume that the architectural style of the remainder of the building, the heights of openings, belt courses, cornices, etc., will be set by his design.

The dimensions of the court are 40′-0″ x 65′-0″, the open side being 65′-0″ wide. It is assumed that the level of the main floor of the building is 6′-0″ above the ground and that the exterior walls shall not extend higher than 24′-0″ above the floor level. In other words, the treatment of the wall surfaces, including cornices and parapets, shall not be higher than 30′-0″ from the ground level, except for roofs which may show above this.

The inside 65′-0″ wall of the court is the wall of a passage and may be opened with whatever penetrations the designer wishes. However, the two wings contain one-story exhibition rooms with overhead light and their walls shall be without openings.

Opposite the court is a small lagoon 65′-0″ wide with its nearest edge 30′-0″ from the face of the wings. End of lagoon may be any shape but no point may be closer than 30′-0″ to building.

It is assumed the ground for this portion of the exhibition is level.

The main entrance of the building will be on the opposite side from the court. The court will be used as a promenade and resting place and should be treated to take advantage of the outlook over the lagoon. However, the actual design of the three enclosing walls is the essential part of the problem.

Choice of materials and type of architecture are left entirely to each competitor. The committee desires to call specific attention, however, to the fact that, while the donors of the scholarship are manufacturers of roofing tiles the use of tile roofs in the design is not in any way to be considered essential or necessary and that the Jury will not give any preference, in making their judgment, to designs in which such roofs have been shown.

There were one hundred and seven designs submitted by architects and draftsmen from all sections of the country.

The Scholarship or first prize of two thousand dollars was awarded to Carl K. Loven of Bloomfield, N. J. Second prize of two hundred and fifty dollars was given to Kindred McLeary of Pittsburgh, Pa.; third prize of one hundred and fifty dollars to Eugene P. Nowlen of Chicago; and fourth prize of one hundred dollars to Carl C. F. Kressbach of Jackson, Mich. Honorable mention was given Elmer I. Love of Urbana, Illinois, and mentions to William P. LaVallee of New York, Joseph N. Arnold of Middletown, Ohio, and to Simon Breines of Brooklyn, New York.

As required by the program, the Scholarship Committee has investigated the personal qualifications of the competitor whose design was placed first by the Jury and has confirmed the award of the Scholarship to him.

THE JURY REPORT

The problem in the program as issued was the design of a court at the rear of an exposition building with particular emphasis given to the treatment of the wall surfaces. The Jury was disappointed to find that the majority of the competitors had rather ignored this part of the problem and had failed to study the decorative treatment of the three walls enclosing the court as a definite part of the problem. Also, in most of the designs the court had been treated more as an entrance to the building than as a court which visitors would enter from the building, as implied by the program.

It was extremely interesting that of the 107 drawings submitted, in only four or five were the traditional classic forms followed; in the others the designs were of the so-called "modern" trend. While many of these were interesting and fresh in their spirit, the Jury wishes to express itself as deploring the results shown in many cases where the "modern" treatment seemed to be more an effort to throw over all tradition rather than to use tradition as a foundation from which to advance.

The Jury in accordance with the suggestion in the printed form of competition presents the following statement of the reasons for its awards.

SCHOLARSHIP AWARD (Carl K. Loven): This design, while having a freshness of feeling in its actual detail, nevertheless respects the tradition of our art.

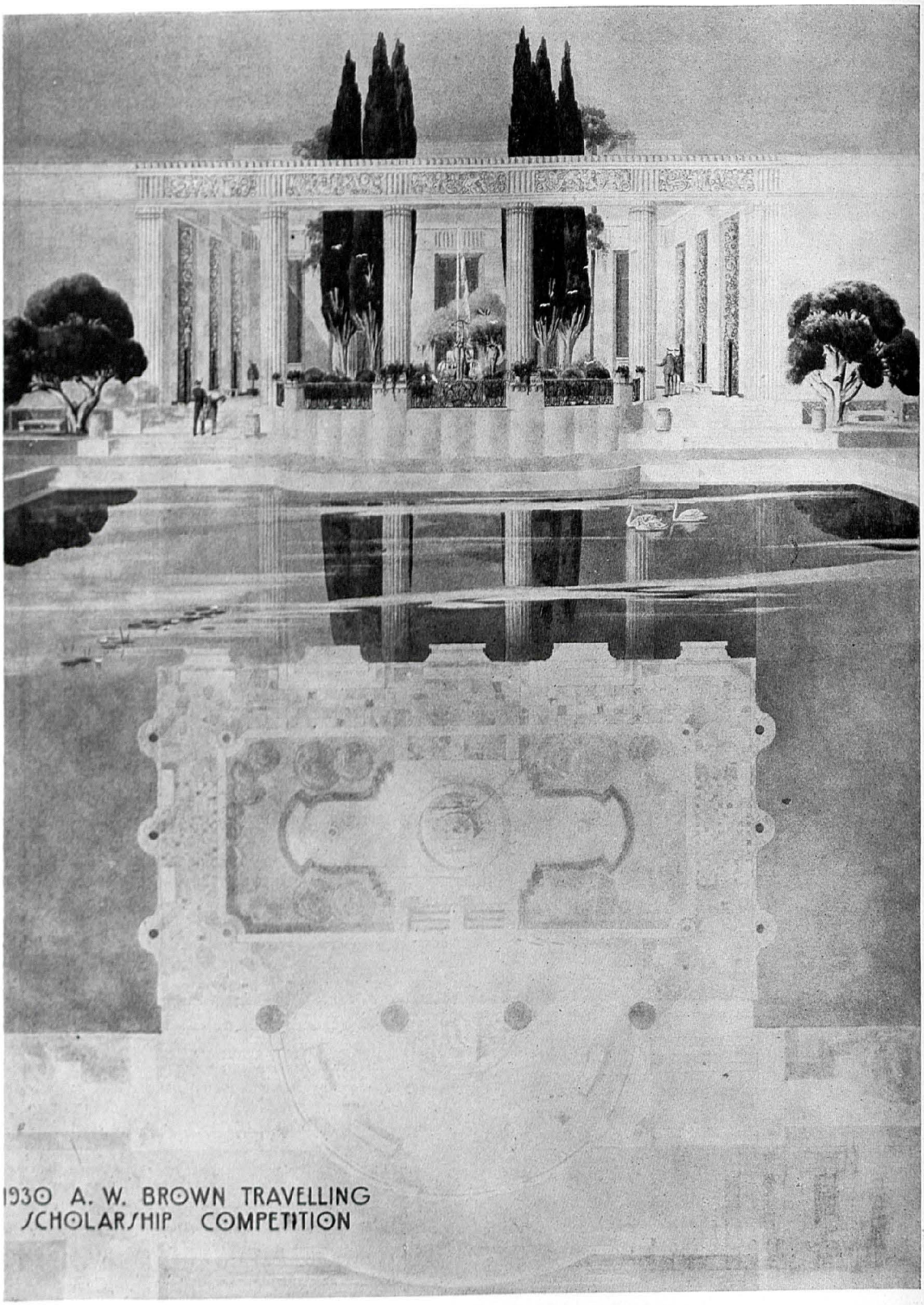
The Jury felt that of all the designs this one was the best interpretation of the problem as a court to be used as a "promenade and resting place." The sunken garden space with walking space bordering the building, the colonnade somewhat enclosing the court, the indicated planting—all these would make for a pleasant and comfortable place to enter and in which to sit.

The decorative treatment of the wall surfaces is simple and fine; the mosaic-lined niches on the side walls would be interesting in themselves and afford a contrast to the openings in the rear wall.

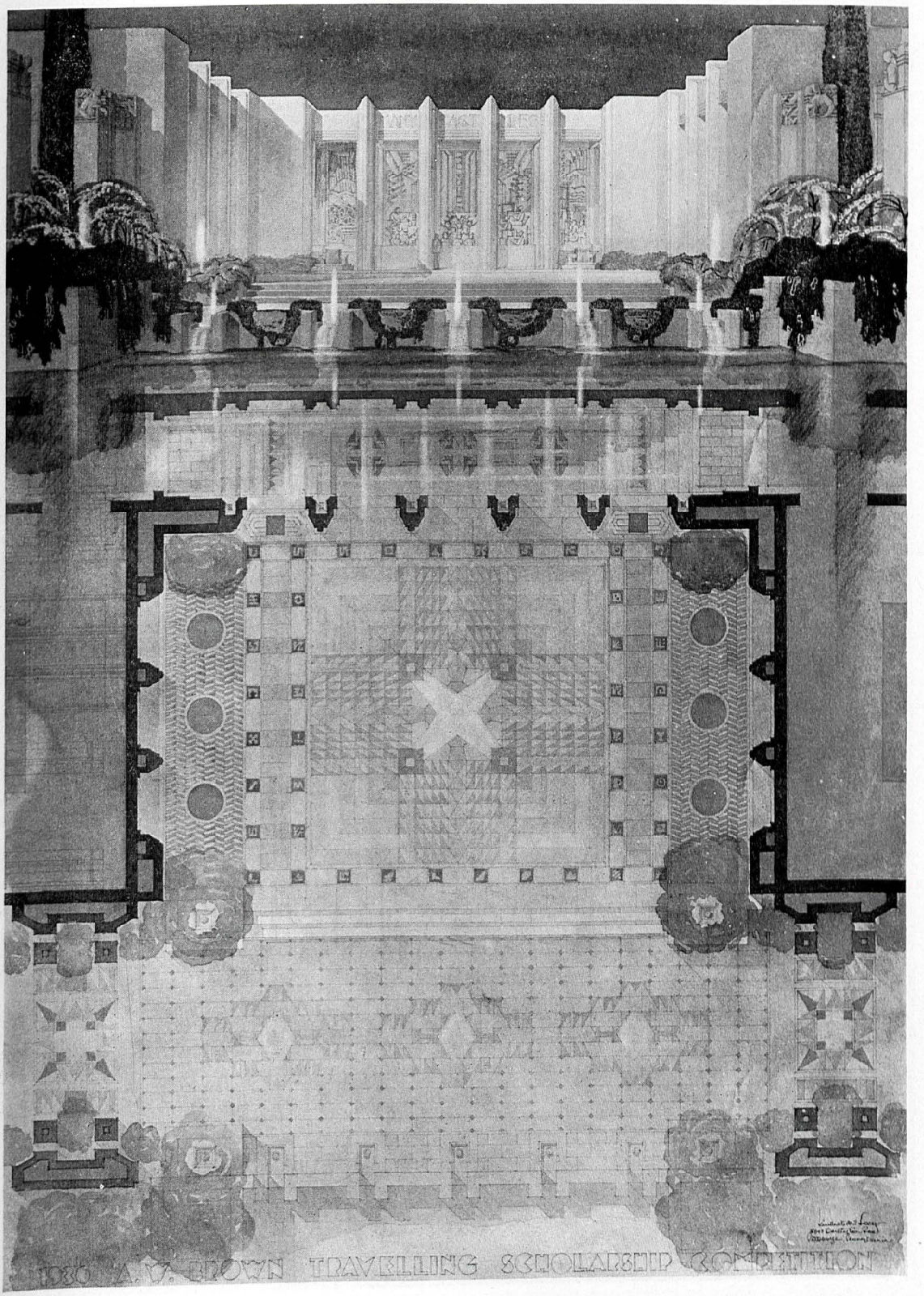
The Jury felt that the arrangement of the steps and circular promenade in front of the colonnade had not been sufficiently studied and also that the iron railing was not in character with the rest of the design. But the design as a whole was nearest the solution of the problem, was generally good in detail and was excellently presented.

SECOND PRIZE (Kindred McLeary): The plan of the court in this design was carried into the building by making the "passage" a loggia, with steps inside at either end, giving more height to the walls of the court. While the

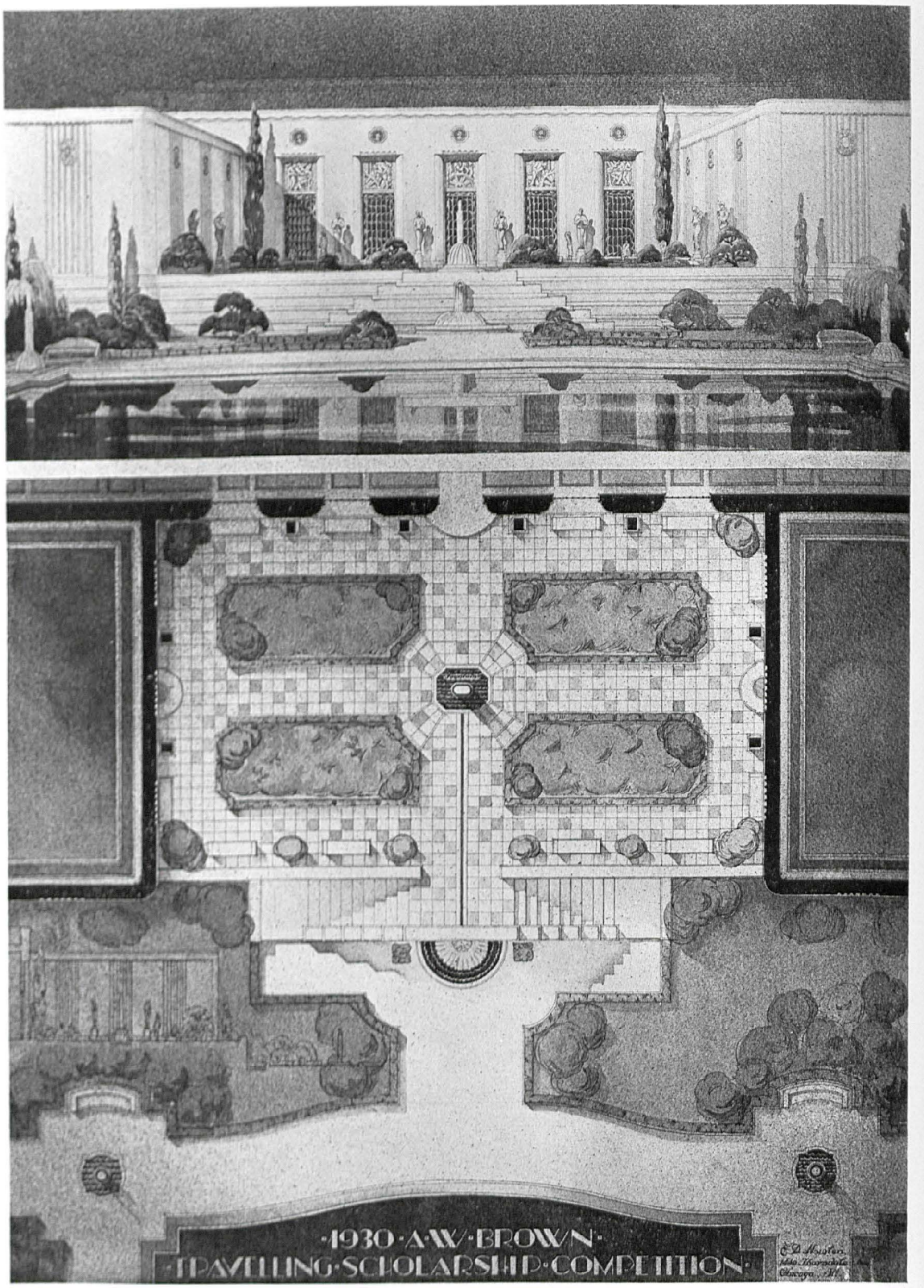
(Continued on page 476)



PRIZE WINNING DESIGN FOR "AN EXTERIOR COURT IN AN EXPOSITION BUILDING," BY CARL K. LOVEN
A. W. BROWN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

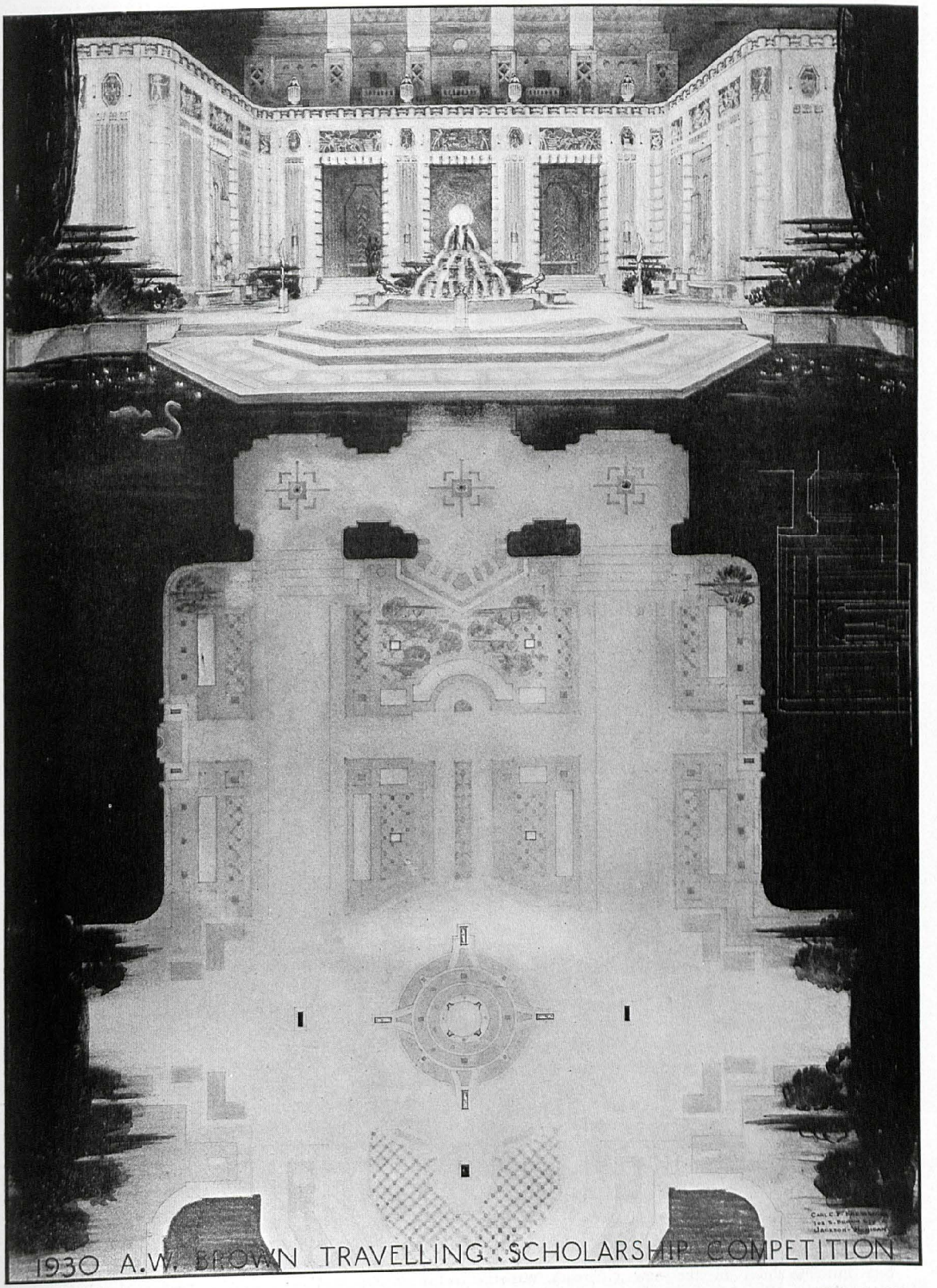


SECOND PRIZE DESIGN FOR "AN EXTERIOR COURT IN AN EXPOSITION BUILDING," BY KINDRED McLEARY
A. W. BROWN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930



THIRD PRIZE DESIGN FOR "AN EXTERIOR COURT IN AN EXPOSITION BUILDING," BY EUGENE P. NOWLEN

A. W. BROWN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930



FOURTH PRIZE DESIGN FOR "AN EXTERIOR COURT IN AN EXPOSITION BUILDING," BY CARL C. F. KRESSBACH
A. W. BROWN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

CARL K. LOVEN

CARL K. LOVEN, winner of the A. W. Brown 1930 Traveling Scholarship, was born in Jersey City in 1906.

Mr. Loven is a graduate of Dickensen High School, Jersey City, N. J., where he received his general education and started his studies of architecture.

After graduating from High School he was employed in the office of Mr. Newmann of Jersey City. From there he went to the office and atelier of William Mayer, West New York, N. J., to whom he is greatly indebted for his encouragement and help. He was then employed in the office of Sibley and Licht of Palisade, New Jersey, and through Mr. Licht's persuasion started Beaux-Arts work under his criticism.

At the present time Mr. Loven is employed in the office of Schultze and Weaver, New York, and he wishes to express his appreciation to Leonard Schultz and S. Fullerton Weaver for their encouragement and the opportunities they have given him. It is here that Mr. Loven came into contact with Lloyd Morgan.

For the past year Mr. Loven has studied in Atelier Morgan, and although his practical training has helped him a great deal in Beaux-Arts work, he gives the credit of his success to the unfailing help and able guidance of his patron, Lloyd Morgan.

THE INDIANAPOLIS ARCHITECTURAL CLUB

THE "GRAND INAUGURAL" of the new clubroom in the Architects' Building took place on Saturday, May 17th, at which time the ceremonies opened with a Stag Banquet in the evening.

The initial exhibit in the new clubroom was the Chicago World War Memorial Competition drawings. The exhibit was sponsored by the Indiana Society of Architects.

BOSTON ARCHITECTS' BOWLING LEAGUE

FINAL STANDING

Team	1	2	3	Total
Monks & Johnson	454	468	450	1372
vs.				
N. E. Power	449	447	468	1364
Densmore, LeClear & Robbins	432	439	464	1335
vs.				
J. D. Leland & Co.	391	450	435	1276
J. W. Beal Sons	429	451	446	1326
vs.				
Hutchins & French	448	422	429	1299
Cool., Shepley, Bulfinch & Abb.	433	433	444	1310
vs.				
J. H. Ritchie & Associates	448	415	400	1263
Adden, Parker, Clinch & Crimp	407	444	442	1293
vs.				
Chas. T. Main, Inc.	413	433	406	1252

STANDING OF TEAMS

Team	Won	Lost	Pinfall
N. E. Power	79	29	36931
Densmore, LeClear & Robbins	76	32	36601
Chas. T. Main, Inc.	71	37	35739
Monks & Johnson	67	41	36285
Cool., Shepley, Bulfinch & Abb.	66	42	35413
Hutchins & French	54	54	35798
J. W. Beal Sons	42	66	34808
J. H. Ritchie & Associates	37	71	33817
Adden, Parker, Clinch & Crimp	34	74	33954
J. D. Leland & Co.	14	94	32097

FIRST TEN AVERAGES

1.	Davis—(H. & F.)	96-73/81
2.	Peterson—(N. E. P.)	95-13/60
3.	Reid—(D. LeC. & R.)	94-73/81
4.	Wilson—(M. & J.)	93-36/78
5.	Gader—(N. E. P.)	93-32/78
6.	Maker—(M. & J.)	93-26/78
7.	Werner—(N. E. P.)	93-13/66
8.	Biagi—(C. S. B. & A.)	92-42/81
9.	Buckley—(N. E. P.)	92- 4/69
10.	Bullock—(D. LeC. & R.)	91-62/69

LEADERS

Team Single String	
Densmore, LeClear & Robbins	520
Team Three-string Total	
Chas. T. Main, Inc.	1446
Individual Single String	
Peterson—(N. E. P.)	139
Individual Three-string Total	
Davis—(H. & F.)	350

NEW YORK SKETCH CLUB ALUMNI DINNER

THE ANNUAL DINNER of the New York Sketch Club Alumni was held at the Architectural League Clubhouse in New York on the evening of Saturday, May 17, 1930. An account of the evening's activities will be included in the July issue of PENCIL POINTS.

EXHIBITION OF MODELS AND PLANS AT BROOKLYN ART MUSEUM

AN IMPORTANT EXHIBITION of models and plans by Professor Peter Behrens and his Master School at the Academy of Fine Arts in Vienna showing modern developments in architecture was held recently at the Brooklyn Art Museum. Several of the drawings are shown in this issue of PENCIL POINTS on pages 458, 459, and 460.

GEORGE WASHINGTON SMITH

THE WORLD, ESPECIALLY AMERICA, is full of architects, and perhaps the highest average of professional work is done by the group in this country. Even the European architects, to whom we have had our hats off for so long, have been free to admit that in residential and commercial work especially, the results in our country have been in advance of that in other countries.

This admission was first made in regard to residential work, and one of our foremost architects in this line was the late George Washington Smith, who is best known for his achievements in the neighborhood of Santa Barbara in California. With a background of education in the Harvard Architectural School and a certain amount of experience in this country that is rather unknown to most of us, he spent several years abroad, as he explained to me, "trying to find myself."

No doubt, much of his early work had the same charm and quality as he showed later on, but it has been lost sight of and is probably included in that great volume of most excellent design that is daily produced by so many of our young men who are gaining their experience in the various architectural offices.

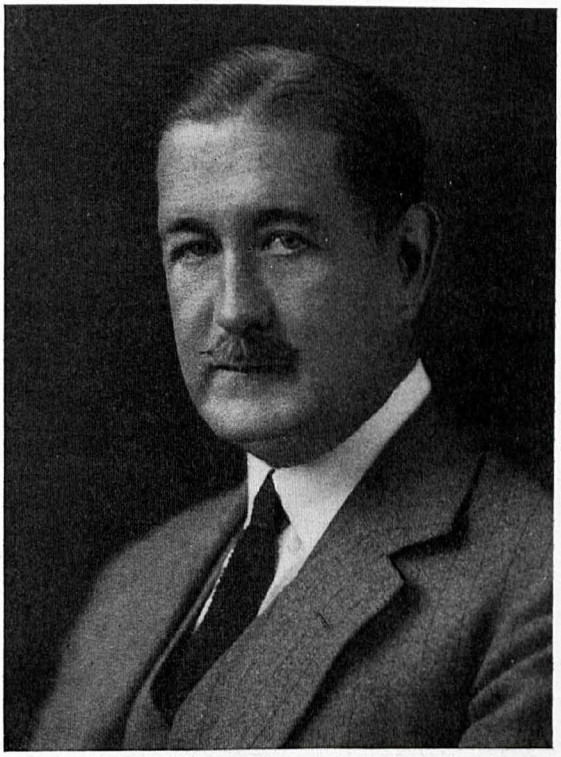
The outbreak of the war found him abroad, where he had become intensely interested in modern painting, which he studied there for three years and later exhibited some of his paintings in this country. Fortunately for California, he finally settled in Montecito adjoining Santa Barbara, where the wonderful climate and natural picturesque settings gave him an opportunity to design buildings in the Spanish style he loved so well, and which seem so particularly suited to the place from an historical point of view as well as in other respects.

Apparently, he found himself right from the start, as every building or house of his that I saw, in a trip through this section, was a great success. Starting with rather modest houses, they had such merit and were so outstanding that in an incredibly short time, his work was known all over the country and photographs of his houses were sought for publication in the best magazines and for exhibition in the important architectural shows, such as the first Architectural League Exhibition at the Grand Central Palace at the time of the Institute Convention a few years ago.

The quality of Mr. Smith's work was so subtle, and the manner that he combined extreme simplicity with a rather sparing use of well chosen Spanish detail would make his buildings charming in any setting. When combined with the marvelous landscape effects that are possible in Santa Barbara, the result was too exquisite for expression.

Every student or draftsman would do well to study his work, especially noting the straightforward quality of design, the lack of artificial effects that can be no more than fads and the charm of composition both of masses and line. These are the qualities that make his work so outstanding and are of more importance than the detail which, though excellent, is more historical than original. It is indeed a pity that he did not live to try his skill at some of our more complex modern problems where historical detail and ornament do not seem as appropriate as that of the modern school, for I feel that he would have contributed much help where it is so badly needed.

But at least, we can be thankful that his beautiful section of California has been made still more beautiful because of his efforts, and I hope and believe that many future generations will do honor to George Washington Smith, a modest man whose achievements have placed him in the front rank of architects.—*Leon N. Gillette.*



GEORGE WASHINGTON SMITH
1876 — 1930

GEORGE WASHINGTON SMITH died at his home in Montecito, California, on March 16, from heart failure. He was born at East Liberty, Pennsylvania, February 22, 1876. After studying architecture at Harvard, he was employed by various architects in Philadelphia before going abroad to study. He remained in Paris for three years and became intensely interested in modern painting. Upon his return to this country, while on a painting trip in California, he decided to make his home in Santa Barbara.

Miss Lutah Riggs, Architect, who was in Mr. Smith's office at the time of his death, says, in a tribute to him:

"Mr. Smith's taste was toward the more primitive in architecture, as in painting and sculpture. His work was always distinguished by its purity and simplicity, its lack of self-consciousness, its fitness and exquisite charm. The exotic and romantic qualities were balanced by a certain restfulness and peacefulness.

"He distinguished himself in residential architecture, although he did other work as well. He built extensively, not only in Santa Barbara and Montecito, where he had his office, but up and down the coast of California, in Texas, Arizona, Colorado, and New York. He took only those of the long distance commissions which he felt he could handle with distinction and satisfaction."

"He was of a retiring nature, modest and reserved, and not an adept at small talk. Dinner parties, conventions, and gatherings of any sort he regarded as ordeals. And with his tall and imposing frame, he presented a figure difficult to approach. But with the ice finally broken, he was the most genial of companions, making the wittiest of dry remarks. He was always kind, calm, and thoughtful of the people around him; not overhasty in making decisions, and displayed infinite patience in dealing with everyone. He was a great artist, a distinguished architect, and a gentleman of the first water."

CONCERNING ST. MARK'S IN THE BOWERIE

IN THE MARCH ISSUE OF PENCIL POINTS there appeared as illustrations for John F. Harbeson's article on *Design in Modern Architecture* a plan and perspective view of the proposed St. Mark's Tower, Saint Mark's in the Bowerie, New York, as designed by Frank Lloyd Wright. In his comments on this design Professor Harbeson included some criticisms to which Charles Morgan of Chicago, Mr. Wright's associate in the practice of architecture, has taken exception in a letter which we are glad to print, together with a defense by Professor Harbeson of his position. Both letters follow:

April 24, 1930.

Editor
PENCIL POINTS
"DEAR MR. WHITEHEAD:

"I do not know how PENCIL POINTS can achieve or hold any influence in architecture when it will misrepresent so valuable a construction to modern architects as the designs by Frank Lloyd Wright for St. Mark's in the Bowerie.

"The bathtubs are symmetrical if special.

"The rooms all likewise, and well adapted to their purpose.

"The fireplaces are not sham.

"The arrangements for dining are not irregular but convenient and plausible.

"The bedrooms have not only each direct access to outer air but to an exterior balcony as well.

"They also have perfect privacy within and without by means of closing screens.

"There is an independent fire tower for all to reach the street.

"In other words why criticise what you have apparently taken no pains whatever to understand?

"Sincerely yours,

(*Signed*) CHARLES MORGAN,
333 North Michigan Ave.,
Chicago, Ill."

May 7, 1930.

The Editors
PENCIL POINTS
"GENTLEMEN:

"I thank you for the privilege of reading Mr. Morgan's letter in reference to my remarks about the proposed Apartment House for St. Mark's in the Bowerie, designed by Frank Lloyd Wright.

"When I started these articles I realized the likelihood of treading on people's toes, and for that reason put what I called the author's apology at the head of that first article, in which I said, 'It is difficult to judge the work of one's own time: it is too close to allow perspective.' I should, perhaps, have asked that you print this at the head of each article.

"Evidently Mr. Morgan is a disciple of Frank Lloyd Wright and resents criticism. I do not think that Frank Lloyd Wright himself would object to honest criticism; for he, like all men of active minds, with imagination, would be the first to say that new ideas in Architecture are not born fully developed. He would probably say that he has ideas now that would improve some of his earlier work.

"I am certainly an admirer of Thomas Edison, and I do not feel in the least that I am trying to detract from his reputation in saying that the early electric lights which he invented were not a complete solution of the problem he had set himself, nor was his early Gramophone the last word in the reproduction of music. Had Mr. Edison died after making those early experiments and before he had time to bring his work to its present perfection, he would still have deserved all the credit for the original idea, even though others would have carried on the refining of the invention to somewhat their present situation.

"If Mr. Wright suffers the usual fate of Architects who have new ideas, various parts of this scheme for an apartment house will be erected by imitators before he has a chance to complete so large a building. Frequently the façade of a winning competition drawing is imitated, somewhere, in stucco before the building itself is done in stone. Should that happen, there will be an opportunity to see if people fit well into bathtubs 'symmetrical if special,' where one leg must be drawn up further than another, or if they would like beds of relatively the same shape.

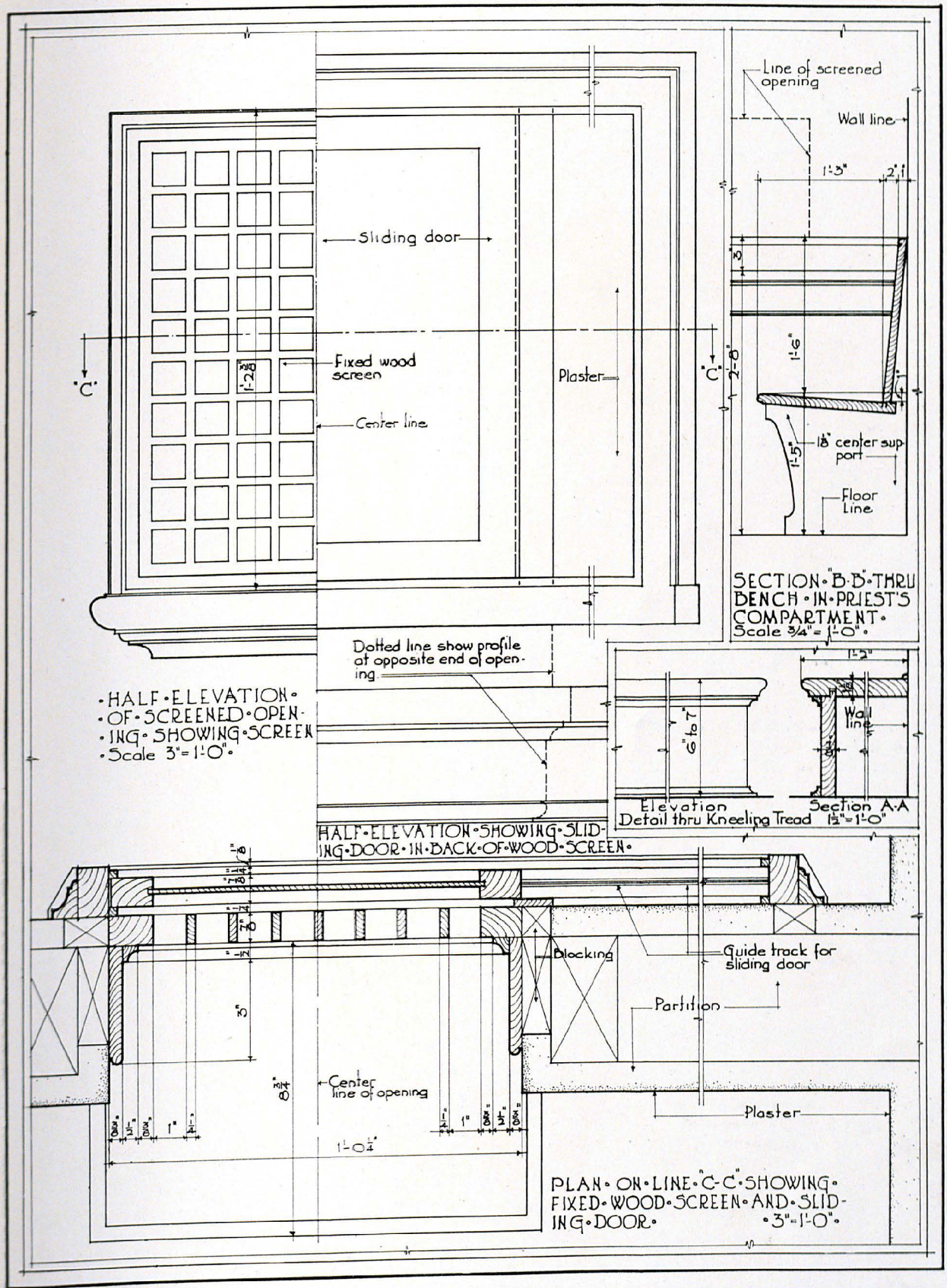
"Mr. Morgan says perfect privacy is effected in the bedrooms by sliding screens: these screens may be a new invention, but certainly the type now common would not keep out either conversation (even the mackite block partitions in office buildings do not always do so), or cigar odors. In this connection I might call attention to one note on the plans: 'No radiation needed otherwise; bedrooms above receive heat from this source' (from under sills of living room). This would indicate that the screens are not entirely airtight. But even if the screens could hermetically seal the room, would the psychological effect of living behind such screens along one complete wall be a happy one?

"Much depends, of course, on what we mean by words. Mr. Morgan says the fireplaces are not sham. To me a fireplace is a sham unless one can burn wood or coal there (and my dictionary agrees with me). To others, a satisfactory fireplace is one where by a turn of a button a colored light may be made to glow under a number of pieces of black glass, or a gas jet burns in small flames around an asbestos log. Certainly effects can be attained by gas and electricity, but why should modern architects, who have attained a great reputation with the public because they meet modern problems in a modern way, make modern scientific apparatus masquerade in the guise of relics of a sentimental age, which fireplaces, speaking in the old-fashioned dictionary sense, are.

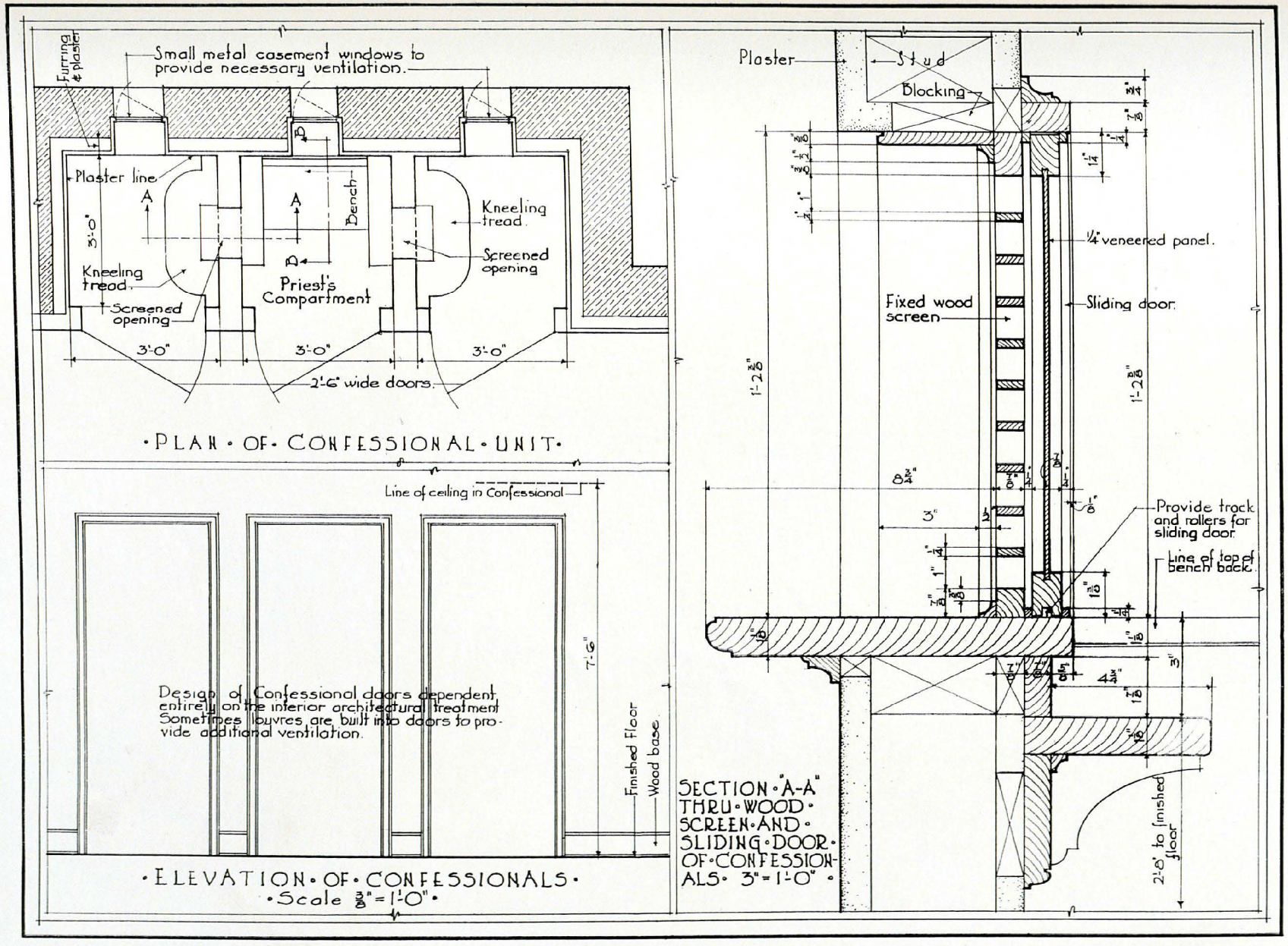
" 'The proof of the pudding is in the eating.' If people prove to like rooms of irregular shapes with no right angles, and enjoy sitting at dining tables such as here are shown, then the scheme is a good one in these respects. If the public feels, rather as I do, about these things, then the apartments will probably be left when others with rooms of more usual shape are built which may be rented for the same price and which have the other advantages of this scheme.

"Sincerely yours,

(*Signed*) JOHN F. HARBESON,
Acting Dean, The School of Fine Arts,
University of Pennsylvania."



GOOD PRACTICE IN CONSTRUCTION—CONFESSIONALS—DRAWN BY PHILIP G. KNOBLOCH



GOOD PRACTICE IN CONSTRUCTION—CONFESSIONALS—DRAWN BY PHILIP G. KNOBLOCH

BARNETT SUMNER GRUZEN

BARNETT SUMNER GRUZEN, winner of the Rotch Travelling Scholarship for 1930, was born in Russia in 1903. He came to this country at the age of four and until two years ago lived in Chelsea, a suburb of Boston. Here he attended the public schools. He graduated from Chelsea High in 1922 and after attending the Berkeley Prep School of Boston entered the Massachusetts Institute of Technology as a student of electrical engineering. In 1923 he transferred to the Architectural Course in which he received his degree of Bachelor of Science in Architecture in 1926.

During his early summers at Tech he worked for S. S. Eisenberg and later for Ritchie, Parsons, and Taylor of Boston. In 1926 he left for the Florida office of this firm returning to enter the office of Perry, Shaw, and Hepburn and later that of Henry and Richmond, successors to Guy Lowell. He spent a short time as designer in the Architectural Department of Stone and Webster. In 1927 he re-entered Tech where he secured his degree as Master of Architecture in 1928.

In 1927 Mr. Gruzen placed second in the Rotch Fellowship which carried a prize of $100 and the following year placed fourth. This year he won second place in the Guy Lowell Travelling Scholarship.

Mr. Gruzen is now associated with Charles Shilowitz of Jersey City. He feels that while he is particularly indebted to Professors Emerson and Carlu of the Institute for their interest and advice, he knows that it was the wonderful training he received at the Institute as he progressed each year under the able guidance of the instructors in each department, culminating in the masterly criticisms of M. Carlu, that he owes all that he has gained.

Mr. Gruzen will sail in the fall and plans to visit England, Italy, Spain, France, and Germany. He is a licensed Architect in New Jersey, a member of the Jersey Society of Architects and a junior member of the A.I.A.

ROTCH TRAVELLING SCHOLARSHIP AWARDED

THE ROTCH TRAVELLING SCHOLARSHIP Competition for 1930 has been awarded to Barnett Sumner Gruzen. The scholarship provides $3,000.00 payable quarterly over a period of two years while the winner is travelling abroad.

The subject of the program for the competition was *A Memorial to the Pilgrim Fathers.*

THE PROBLEM

The State of Massachusetts proposes to erect a permanent memorial to commemorate the landing of the Pilgrims on the shores of New England. This memorial is to be of a monumental character executed in stone. The site selected is part of a beautiful park reservation bordering the ocean. Parallel to the shore and forming the only approach to the Memorial is a wide boulevard. The distance from the boulevard to the shore is approximately 500 feet. From the boulevard to the shore line there is a gradual downward slope of approximately 30′-0″. The buildings, treatment of grounds, etc., should be studied to compose well with the adjacent wooded park and rocky shore.

The location and character of buildings, and treatment of the grounds, is the subject of this program.

The requirements are: A large, formal and paved court or area suitable for open air gatherings. Adjacent to, and forming part of, this court there are to be two buildings, one for public receptions and the other a museum. There should also be a monument or memorial to the Pilgrim Fathers.

Memorial: Placed in a conspicuous location of the large open court which may be closed or partly closed by the two main buildings, colonnades, balustrades, etc., is to be erected a monument dedicated to the Pilgrim Fathers. The character of this is left to the discretion of the designer, the only restriction being that it is not to be over 100′-0″ above the court level.

Reception Hall: This building is to contain a large hall of approximately 3000 sq. ft. used for receptions and other State functions. On one side or end of this hall there should be a slightly raised platform for important guests. Preceding the hall there must be a generous and monumental lobby with coat rooms, toilets, attendants' rooms and other necessary services. Two or more small reception rooms for distinguished guests should also be provided.

Museum: This building is to house a permanent collection of objects such as furniture, medals, paintings, books, documents, etc., relating to the early history of the Colony. The space required for the main exhibition room is approximately 3000 sq. ft. There may be several smaller rooms to be used for special collections. There should also be a large entrance lobby for the public with coat rooms, attendants' offices, public toilets, etc.

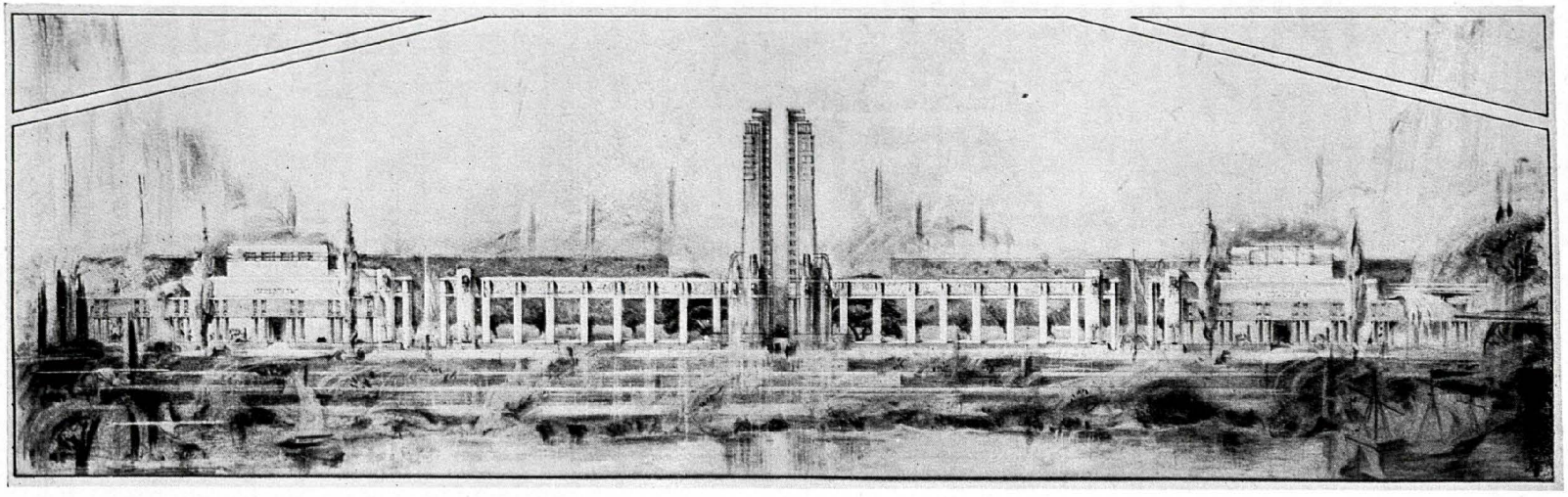
Grounds: The grounds surrounding the Memorial and buildings including the area from the shore to the boulevard should be treated with walks, terraces, colonnades, gardens and other suitable accessories.

REPORT OF THE JURY OF AWARD

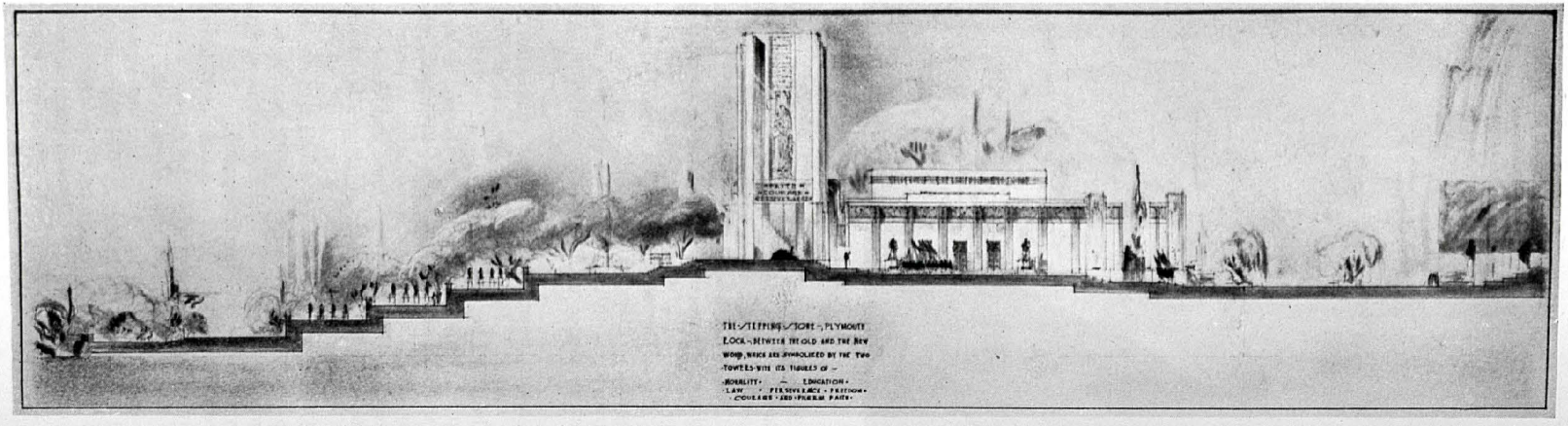
The Jury was impressed with the high quality of the presented drawings, and wishes to commend the competitors on the high excellence of the work achieved in such a short time.

After considerable deliberation, the Jury was reluctantly forced to place projet marked No. 3 *Hors de Concours.*

(Continued on page 476)



ELEVATION

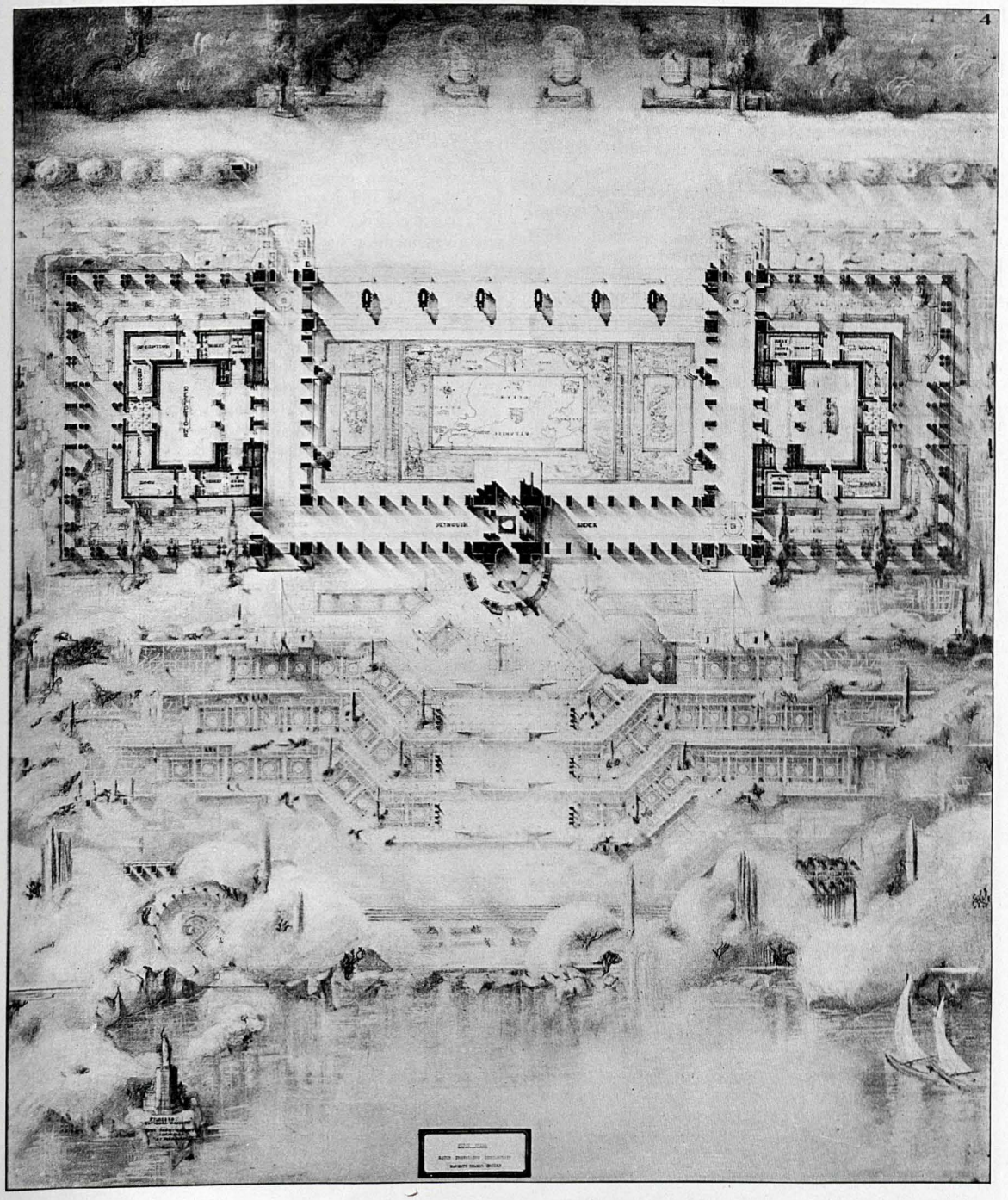


SECTION

ELEVATION AND SECTION OF WINNING DESIGN FOR "A MEMORIAL TO THE PILGRIM FATHERS," BY BARNETT SUMNER GRUZEN

ROTCH TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

(See text on page 473)



PLAN OF WINNING DESIGN FOR "A MEMORIAL TO THE PILGRIM FATHERS," BY BARNETT SUMNER GRUZEN
ROTCH TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

(See text on page 473)

ROTCH TRAVELLING SCHOLARSHIP AWARDED

(Continued from page 473)

It was felt this contestant had created a central axis across the open court in rendu which did not exist in sketch, and eliminated in rendu the forecourt motif shown in sketch. Such major changes are beyond those generally allowed, and additionally they harmed rather than aided the development of the projet.

Of the remaining three drawings, projet marked No. 4 [Barnett Sumner Gruzen] was placed first and recommended for the prize on the following grounds. This projet showed recognition of the grounds as an element of the problem and its arrangement in relation to the buildings, as also the handling of the grading was very ably done. The plan is well balanced and studied on the whole and in its various parts and showed imaginative, able, and sympathetic execution.

The jury wishes to state, however, that had the monument *itself* been detached from the colonnade, the projet both in elevation and plan would have been one of outstanding merit. The balance of merits of this projet, however, sufficiently justified and confirmed this award.

Projet No. 2 [submitted by Carney Goldberg] is to be commended for its simple parti, and particularly for the excellent placement of the monument, and is here recommended for second prize, $100 offered by the Boston Society of Architects. It was felt, however, that the expression of the buildings, the innumerable columns, and the detached arrangement of the gardens precluded his recommendation for first place.

In regard to projet No. 1 [George Lewis], it was felt that although the parti was an excellent one, its promise in sketch had not been fulfilled in rendu, and further that the various elements of the plan and elevation were unduly small.

(*Signed*) { P. A. Cusachs, *Chairman*
Dean Everett Meeks
J. F. Clapp }

THE A. W. BROWN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

(Continued from page 461, Editorial Section)

loggia would undoubtedly be a most agreeable feature of the plan, the rendering of the perspective falsifies the actual design in that it leaves the rear wall of the loggia on the plane of the court rather than twelve feet back of it. Had this wall been rendered with more accuracy the design would have shown the lintels and piers to be too thin. The general scheme is good and is well worked out; the pylons at the ends of the wings are interesting. The planting as indicated is over-decorative; had it been placed in the court as part of the architectural scheme, the court would have appeared more attractive to visitors passing through the loggia.

Third Prize (Eugene P. Nowlen): The treatment of the wall surfaces in this design is extremely simple, but shows good taste as well as restraint; the walls would undoubtedly look well in actual execution. The Jury felt there should have been more study given to the corners where the walls of the wings join the main building. Also, the plan seemed rather broken up in scale, though it is commendable in that it is not treated as the main entrance to the building.

Fourth Prize (Carl C. F. Kressbach): In this design the short axis of the court has been lengthened and made very important by using the passage as a loggia and also by carrying the plan of the court to the lagoon, with an important secondary axis between the wings and the lagoon. While this gives a very decorative plan, the Jury felt the scheme to be altogether too much that of an entrance court. The whole sheet was exceptionally well rendered and made an excellent presentation of the scheme.

The Jury thought there was sufficient merit in certain of the other designs to deserve recognition and accordingly four were given mentions. In the design by Elmer I. Love the scale and arrangement of the plan were particularly commended. The design by William P. LaVallee was given mention because of the simplicity of the design and the quality in presentation, though there was lack of definite decorative wall treatment as well as faulty scale in the plan. The drawing by Joseph N. Arnold showed good design, well presented, but the Jury felt that the covered colonnade was not a true solution of the problem and it particularly wishes to call attention to the lack of structural feeling where the lintels were joined to the end walls. Mention was also given to the design by Simon Breines because of its commendable plan and the simple, chaste character shown in the perspective—a little too simple, however.

Jury of Award { Robert M. Ayres, San Antonio
Hal F. Hentz, Atlanta
H. Van Buren Magonigle, New York
Frank B. Meade, Cleveland
Ralph Milman, Chicago }

BROOKLYN CHAPTER OF THE A.I.A.

On Monday evening, April 28th, the Brooklyn Chapter of the American Institute of Architects held a reception, banquet, and exhibition in the dining hall and recreation room of the Pratt Institute for the Student Affiliation of the Chapter. One hundred-ten were present, seventy-five of which were student affiliates. Guests and speakers were Frederic B. Pratt, President of the Pratt Institute and Honorary Member of the American Institute of Architects; James Monroe Hewlett, First Vice President of the American Institute of Architects; Harvey Wiley Corbett, Fellow of the A.I.A.; James C. Boudreau, Director of the School of Fine and Applied Arts, Pratt Institute; Paul Simonson, Patron of the Brooklyn Chapter Affiliates Atelier; Ralph M. Rice, Vice President of the Brooklyn Chapter, A.I.A., and Lester B. Pope, who acted as toastmaster for the occasion.

There was exhibited at this time work of student affiliates, members of the Brooklyn Chapter Atelier, and work of the student affiliates in a pencil rendering class which has been held by the Chapter during the past season under the instruction of Mr. Ernest Watson. Drawings of the recent student affiliate competition conducted by the Chapter were also exhibited and the awards were made to the prize winners. The awards in this, the sixth annual competition, were as follows: First Prize, $75.00, Paul McDade; Second Prize, $50.00, Charles Macchi; Third Prize, $25.00, Harvey P. Conaway; First Mention, Robert Hillier; Mentions were awarded to W. Parker Dodge, Jacob Sherman, William Leyh, and André Schwob. The problem for this competition was the design for a decorative fountain to be built into or against the lower stories of the main façade of a municipal office building facing a plaza.

This occasion was part of a general program of education and recognition of the younger men of the profession by the Brooklyn Chapter, A.I.A., under the direction of the Committee on Education.

THIRD CHRISTIAN HERALD CHURCH BUILDING COMPETITION

THIS COMPETITION CALLS for photographs and plans of finished churches that have been completed not earlier than 1925. The competition is restricted to new structures; not alterations. These buildings will be judged on the following basis: 1. Excellence of design; 2. Adequacy of building in regard to size and needs of congregation for its worship, religious, educational, fellowship, and recreational activities; 3. Skill in selection and use of materials; 4. Economy in space and convenience of plan; 5. Adaptation to lot and orientation.

Entries from architects of church buildings in the classes specified will be welcomed. They will be judged by a Jury of Awards headed by Francis Laurie S. Mayers, A.I.A., of Mayers, Murray and Philip, New York, and including in its membership Louis La Beaume, F.A.I.A., of La Beaume and Klein, St. Louis, H. J. Maxwell Grylls, F.A.I.A., of Smith, Hinchman & Grylls, Detroit, Dr. Paul H. Vieth, Ph.D., Research Secretary of the International Council of Religious Education and Rev. Louis C. Wright, D.D., Cleveland. Rudolf H. Blatter, A.I.A., consulting architect of Christian Herald Department of Church Planning, will act as professional advisor.

The entries will be judged in Cleveland in connection with the Sixth National Conference of Church Architecture, October 8-12, 1930.

Cash prize awards totalling $1,500.00 will be divided among three classes of entries, classification being on the basis of seating capacity of the church. In addition a grand prize will be given the best of the prize winners in these three classes. As heretofore, each cash prize will be equally divided between church and architect.

A first prize of $250, a second prize of $100, and a third prize of $50, will be awarded in each class. In addition, the Grand Prize Award will include $300 in cash.

The competition closes at midnight, September 30, 1930. For complete information regarding the conditions of the competition address the Christian Herald Building Competition Editor, 419 Fourth Avenue, New York. Announcement of intention to enter the competition should be made as soon as possible, but not later than September 1, 1930.

COMPETITION FOR A GROUP OF MEMORIAL TABLETS

THE PASSAVANT MEMORIAL HOSPITAL announces an open competition to select a design for a group of memorial tablets to be installed in the Entrance Lobby of the Passavant Hospital.

This competition is open to all architects, draftsmen, students, and artists. Any number of designs may be submitted.

The prizes to be awarded in this competition are as follows: First Prize, $200.00; Second Prize, $100.00; Third Prize, $50.00.

Designs are to be submitted on or before June 25, 1930. For information and program of the competition, address Passavant Memorial Hospital, Development Committee, Tribune Tower, Chicago, Illinois.

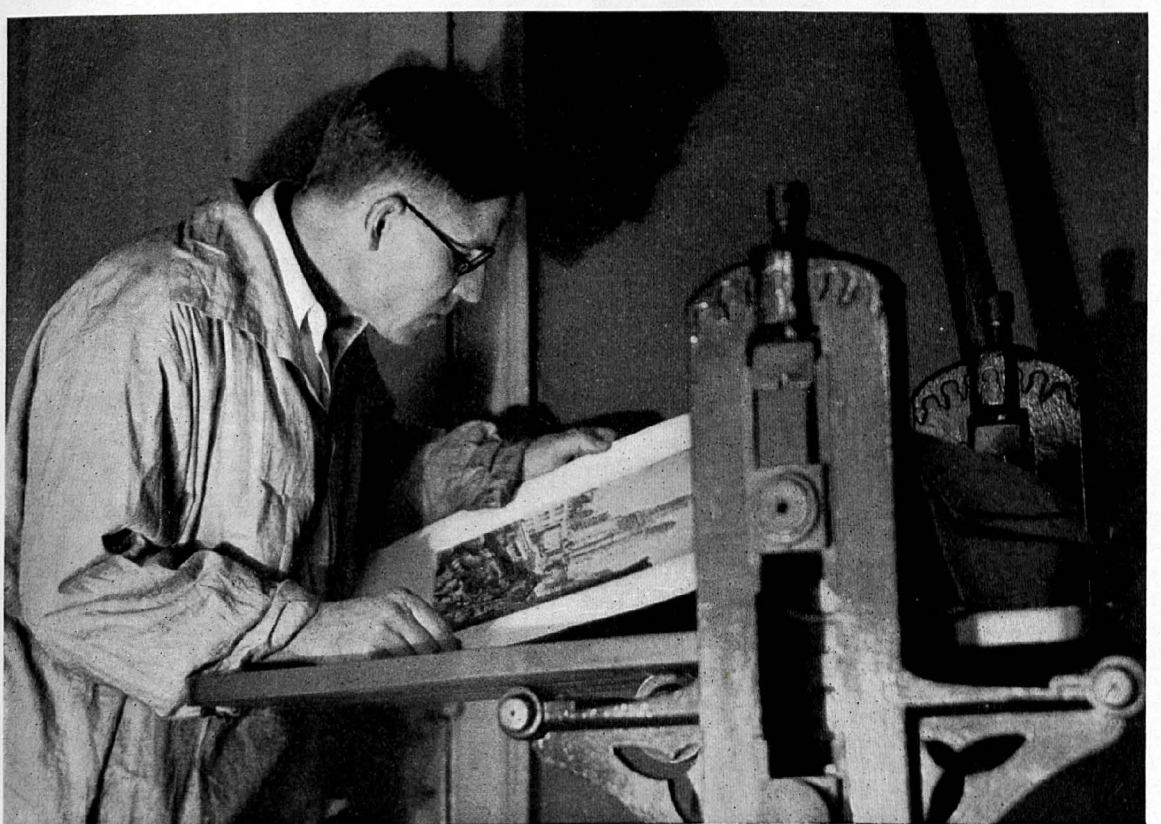
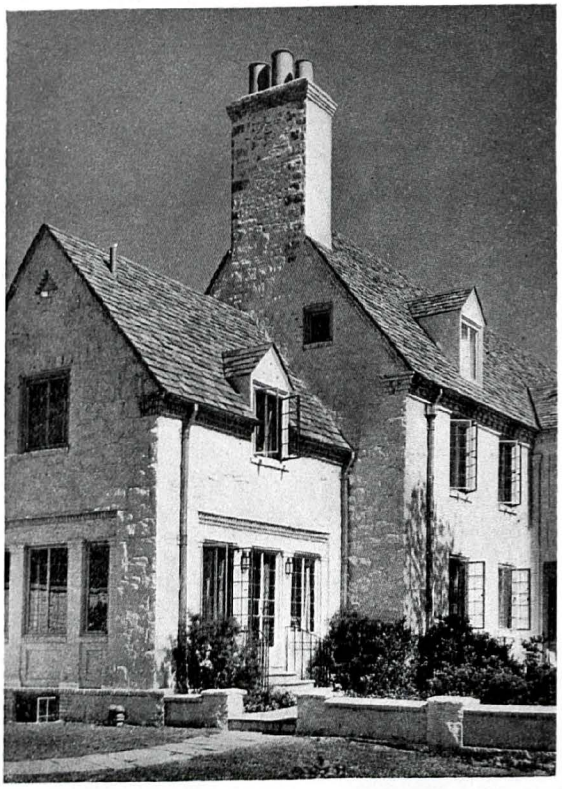


Photo by Doris Day

WILLIAM C. McNULTY INSPECTING A FRESH PROOF OF THE PRINT SHOWN ON PAGE 451 IN THIS ISSUE

THE DRAFTSMAN'S LIBRARY



HOUSE OF LOUIS WILPUTTE, NEW ROCHELLE, N. Y.
JULIUS GREGORY, ARCHITECT
From "American Country Houses of Today"

American Country Houses of Today, 1930, by R. W. Sexton, with introductory text by Arthur C. Holden; 203 plate pages, 9½" x 12½"; price $12.50; published by the Architectural Book Publishing Company, Inc., New York.

Examination of this book is reassuring. American domestic architecture needs no apologies, for the many examples of excellent houses represented here demonstrate that there are architects of distinction and clients of taste to be found for the searching in the more enlightened sections of this country. The wide geographical distribution of the designs encourages the belief that the enlightenment is spreading. The book should be useful to designers of domestic work everywhere. Its photographic illustrations are clear and informative and the accompanying plans make them readily understandable.

Drawing and Painting Self-Taught, by Anson K. Cross and Evelyn F. Cross; 198 pages, 5½" x 8"; published by Anson K. Cross, Boothbay Harbor, Maine.

Mr. Cross, as a teacher of drawing and painting, has gained a wide reputation for his success in making his pupils progress with unusual rapidity. In this book, which is now in the second revised edition, he gives us the fruits of his more than thirty years' experience in developing beginners into competent artists. As its title implies, the book is designed to help students who are working independently without any instructors. It is an extremely sound and helpful volume—one which we can well believe will be of the greatest assistance to many a person who wishes to improve his or her ability to draw. We have had letters in the past from some of Mr. Cross's former pupils and from some who have used his book. Without exception they were enthusiasts for his method of teaching. When a teacher can make his pupils so grateful he must have something real to give them and we are therefore recommending his book and his method without hesitation to any and all who want to draw better.

Our Cities Today and Tomorrow, by T. K. Hubbard and H. V. Hubbard; 295 pages, 7" x 9¾"; price $5.00; published by the Harvard University Press, Cambridge, Mass.

It is a part of the architect's responsibility to his community to exert his influence in the direction of civic improvement, not only through his designs for individual buildings but also in the larger field of town and city planning. This volume by Mr. and Mrs. Hubbard should be in the hands of every practitioner who feels this re-

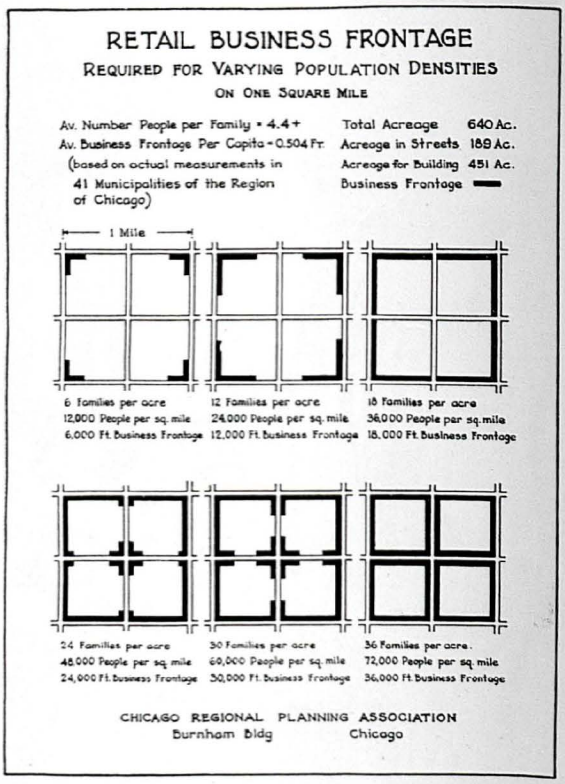


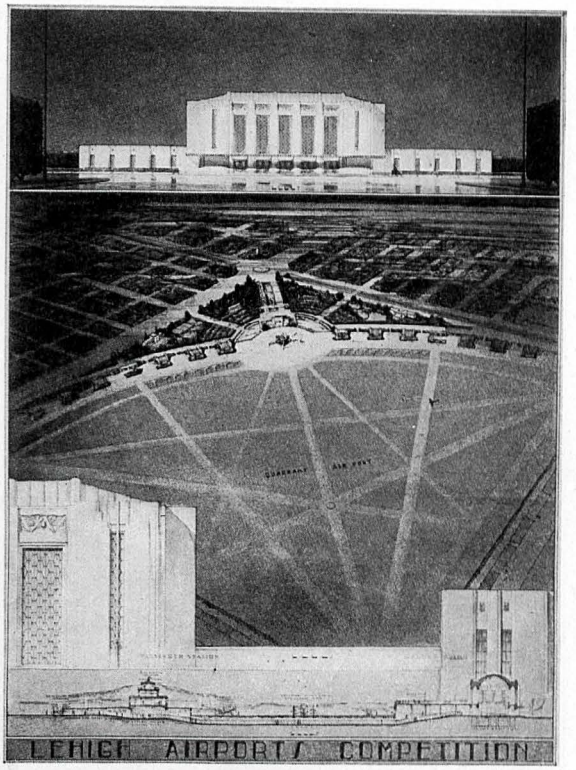
DIAGRAM PREPARED BY CHICAGO REGIONAL PLANNING ASS'N
From "Our Cities Today and Tomorrow"

sponsibility, for it is a comprehensive survey of planning and zoning progress in the United States compiled as the result of months of study and research. No more important book on the subject has been recently produced. Every aspect of city planning has been most intelligently discussed and there is a wealth of information which may help to solve civic planning problems in many communities that are still backward in this important respect. The architect can increase his own prestige and that of the profession in general in no better way than by keeping abreast of city planning developments and becoming a leader in his own community's efforts to improve its livability. This volume will make him better able to do so.

High-lights of Architecture, by Edith Long Thurston; 64 pages, 8¼" x 11"; price $2.50; published by Bridgman Publishers, Pelham, New York; reviewed by O. W. Wilson.

This book, beautifully printed, is an analysis of the stylistic architectural development in the past to the present day in the simplest form. For the student that is interested in the historical evolution of architecture it has little use, but as an outline with all the details of buildings and dates eliminated it does give a vivid description of the most important periods of architecture. One feels, however, that the complexity of the Renaissance styles has not been treated as well as the earlier periods. As the author says, her book is a method of simplification.

ENGLISH DOMESTIC DETAILS
From "High-lights of Architecture"



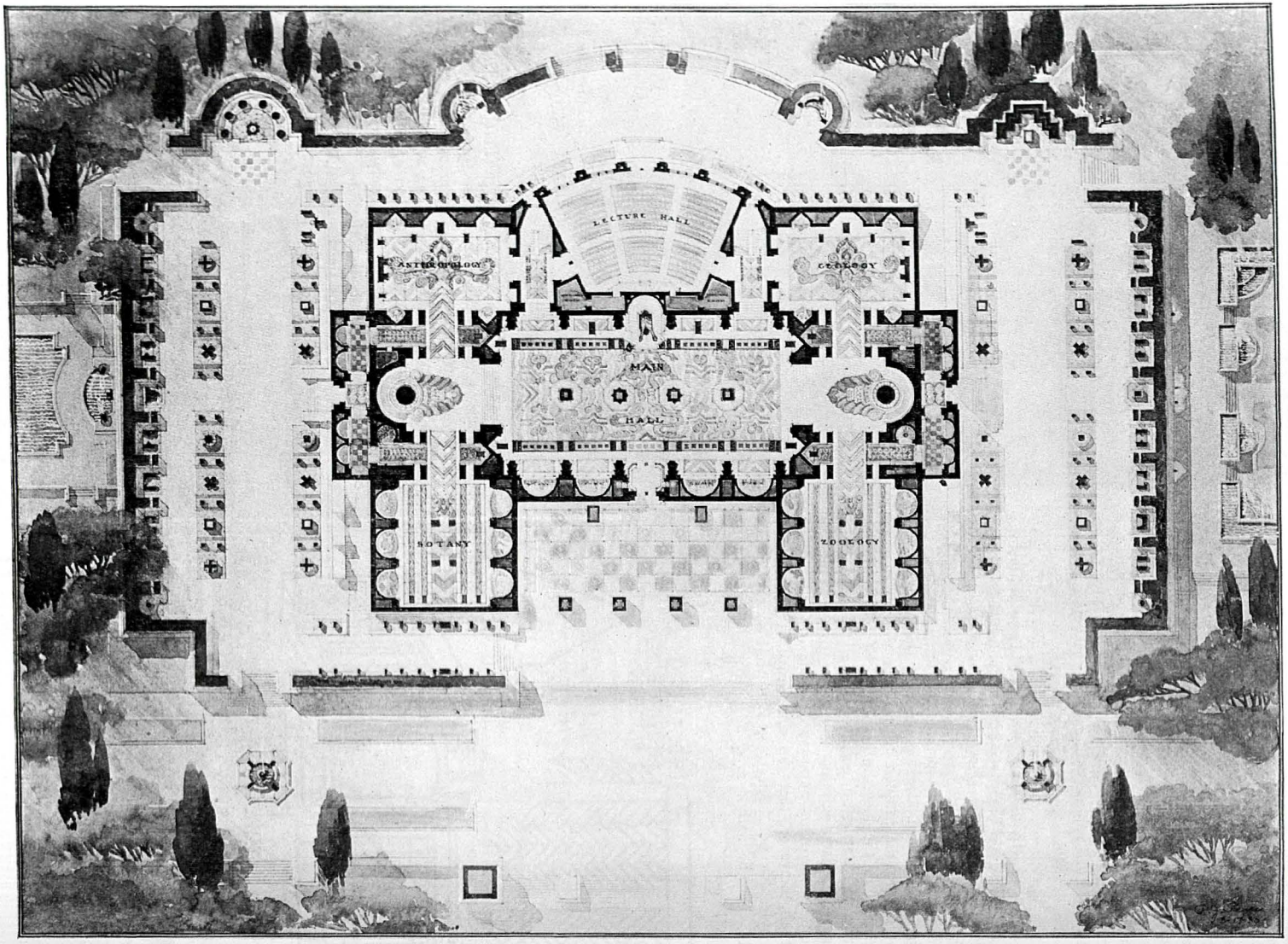
FIRST PRIZE DESIGN BY ZIMMERMAN AND HARRISON
From "American Airport Designs"

American Airport Designs; 88 plate pages (including text), 9½" x 12½"; price $3.00; published for the Lehigh Portland Cement Company by Taylor, Rogers & Bliss, Inc., New York.

The results of the recent Lehigh Portland Cement Company's Airport Competition are presented in this volume in convenient form for reference and constitute a most important contribution to the available literature on the increasingly interesting subject of Airport Design. The four prize winning designs, twelve honorable mention designs, and twenty-six others of interest are illustrated and analyzed for merits and faults by Archibald Black, well known as an air transport engineer and a recognized authority on airports.

Pine Homes and Pine Interiors; 37 pages, 8¾" x 11½"; price $1.00; published by the Shevlin, Carpenter & Clarke Company, Minneapolis, Minn.

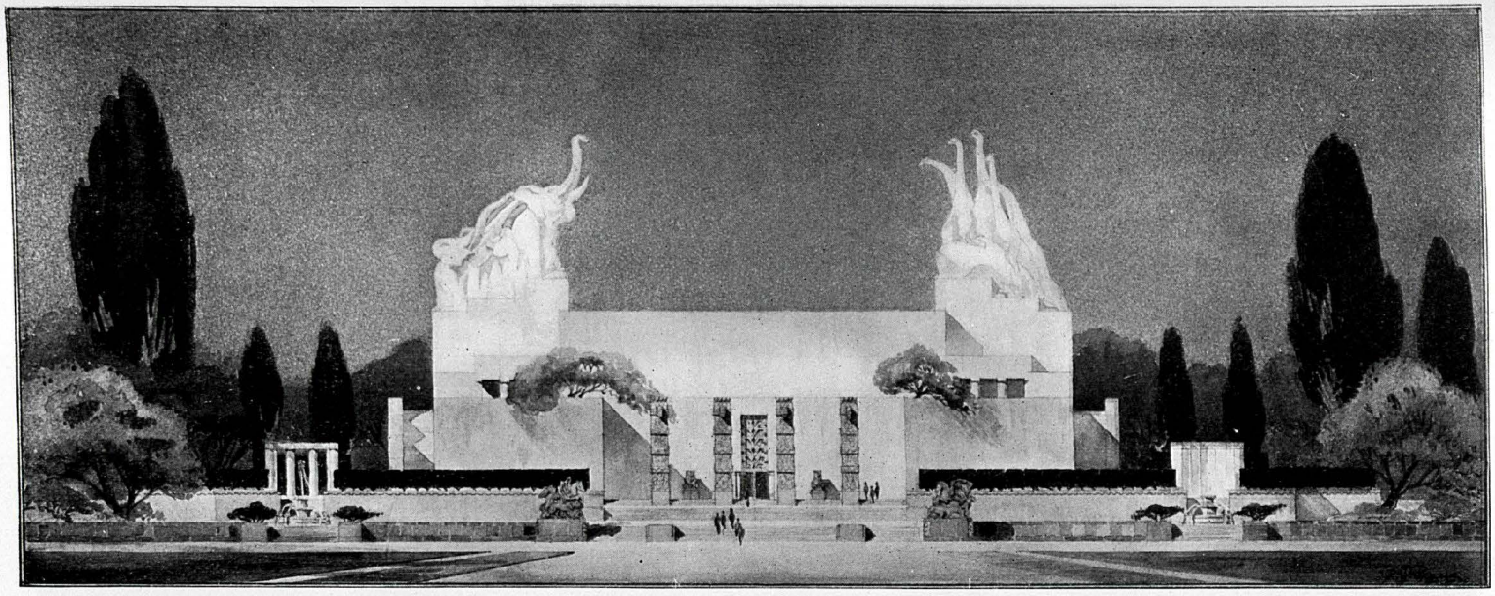
This handsome brochure is more than simply a piece of manufacturer's advertising literature. The well selected illustrations, beautifully presented in natural and convincing color, contain a wealth of information for the architect and designer and may well furnish much inspiration for interior design where the natural beauty of pine is to be employed to full advantage. The text gives a historical background which will aid the designer in using the material as it should be used. We believe any architect of taste will be glad to find room for this publication in his library.



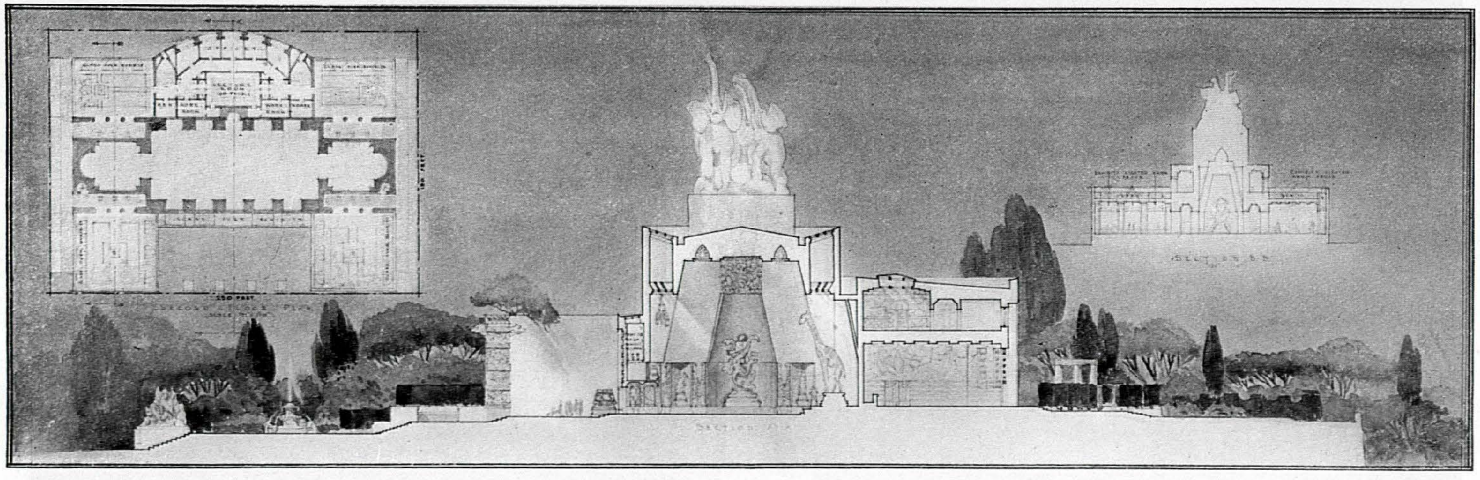
PLAN OF FIRST HONORABLE MENTION DESIGN FOR "A NATURAL HISTORY MUSEUM," BY RICHARD J. PEARCE

LE BRUN TRAVELLING SCHOLARSHIP FOR 1930

(See text on page 385, May issue)



ELEVATION

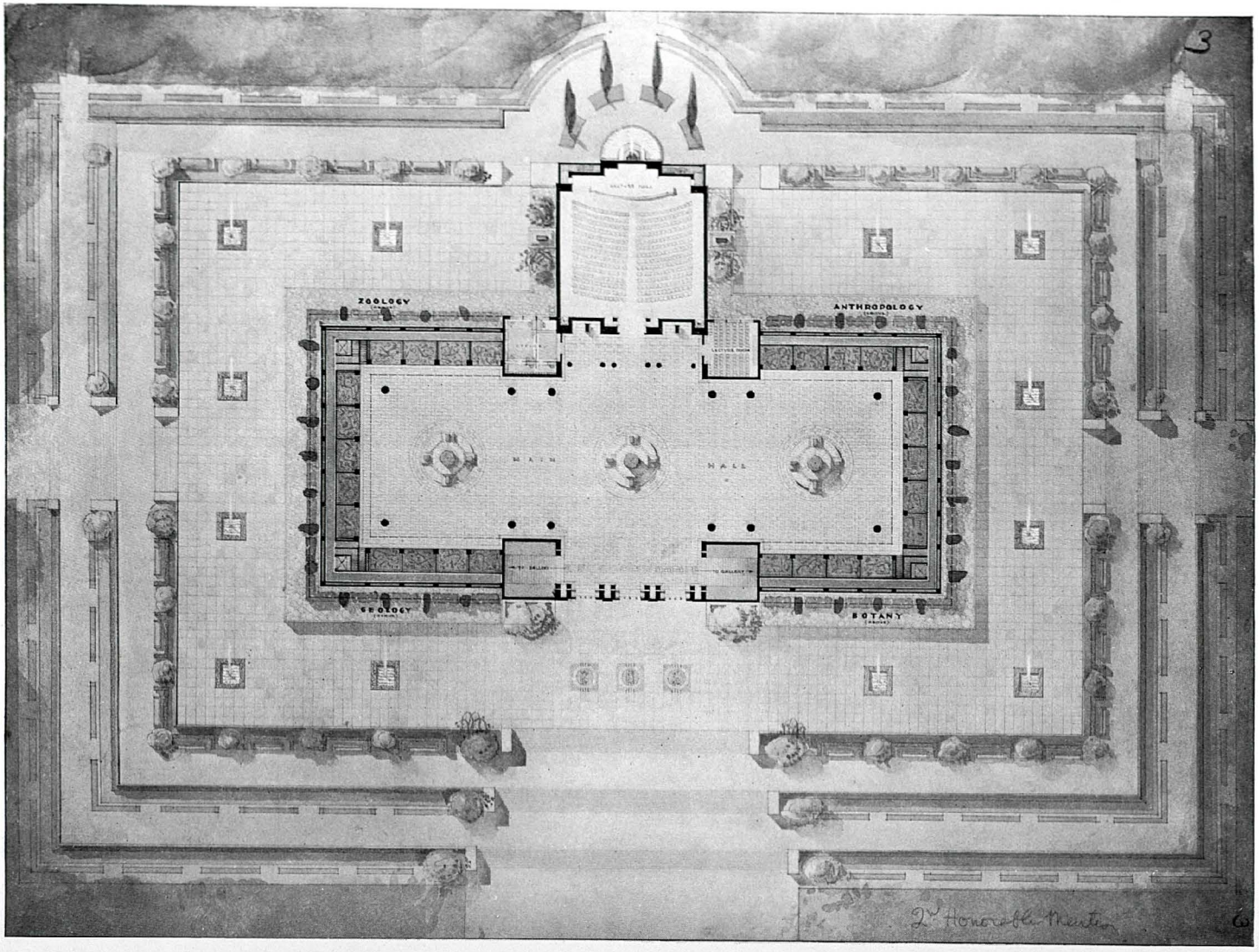


SECTION

FIRST HONORABLE MENTION DESIGN FOR "A NATURAL HISTORY MUSEUM," BY RICHARD J. PEARCE

LE BRUN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

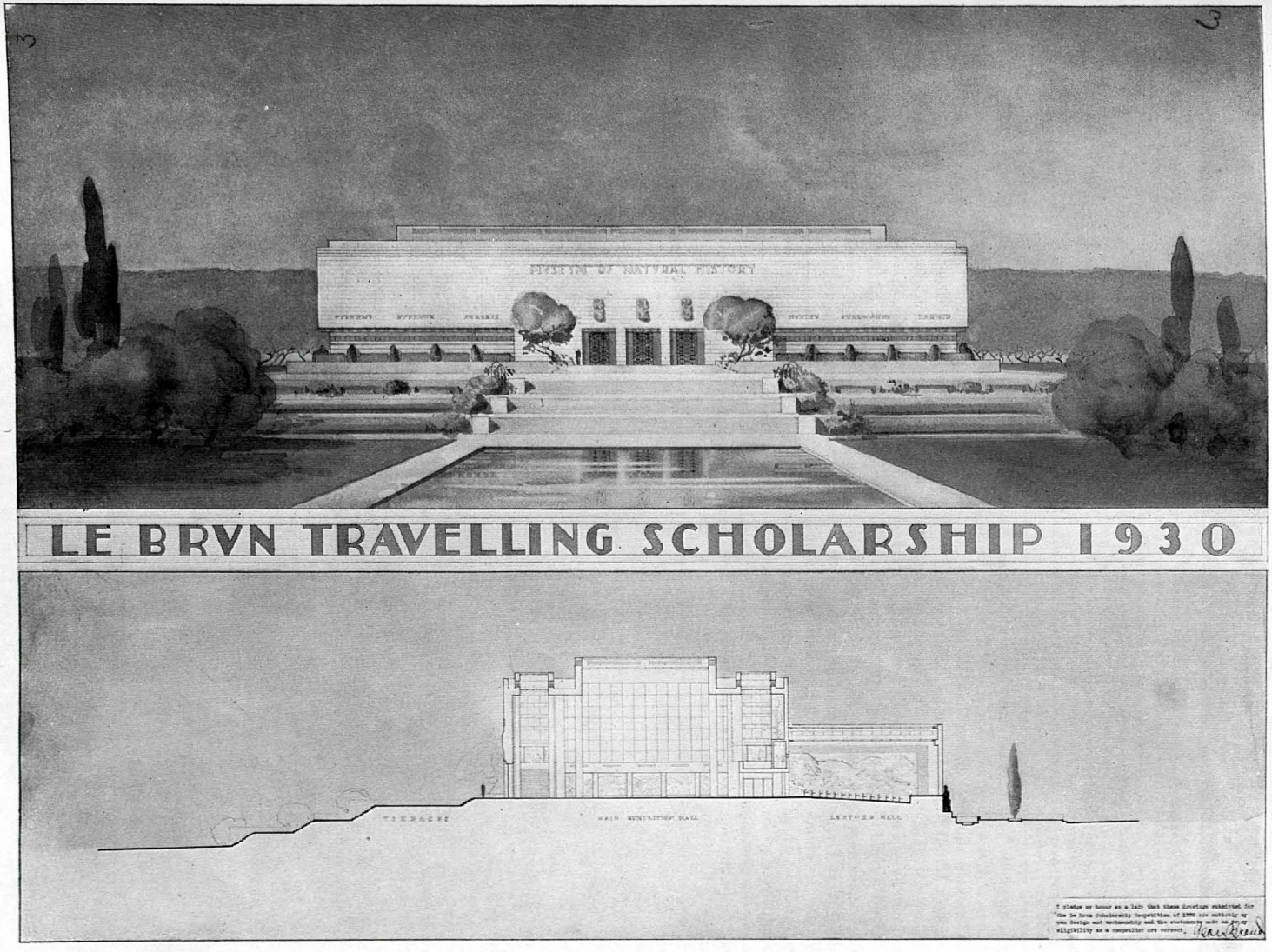
(See text on page 385, May issue)



PLAN OF SECOND HONORABLE MENTION DESIGN FOR "A NATURAL HISTORY MUSEUM," BY JEAN BRAND

LE BRUN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

(See text on page 385, May issue)



SECOND HONORABLE MENTION DESIGN FOR "A NATURAL HISTORY MUSEUM," BY JEAN BRAND

LE BRUN TRAVELLING SCHOLARSHIP COMPETITION FOR 1930

(See text on page 385, May issue)

This department conducts four competitions each month. A prize of $10.00 is awarded in each class as follows: Class 1, sketches or drawings in any medium; Class 2, poetry; Class 3, cartoons; Class 4, miscellaneous items not coming under the above headings. Everyone is eligible to enter material in any of these four divisions. Good Wrinkle Section: a prize of $10.00 is awarded for any suggestion as to how work in the drafting room may be facilitated. No matter how simple the scheme, if you have found it of help in making your work easier, send it in. Competitions close the fifteenth of each month so that contributions for a forthcoming issue must be received by the twelfth of the month preceding the publication date in order to be eligible for that month's competitions. Material received after the closing date is entered in the following month's competition.
The publishers reserve the right to publish any of the material, other than the prize winners, at any time, unless specifically requested not to do so by the contributor.

THE PRIZES IN OUR regular monthly competitions have been awarded as follows:

Class I—John Welker, New York
Class II—William J. Honack, Chicago
Class III—Chicago Office of Rapp and Rapp
Class IV—Thomas H. Liang, Tientsin, China
Good Wrinkle—E. B. Forrester, Arlington, Mass.

The department heading was designed by John Heitmann of Fort Humphreys, Virginia.

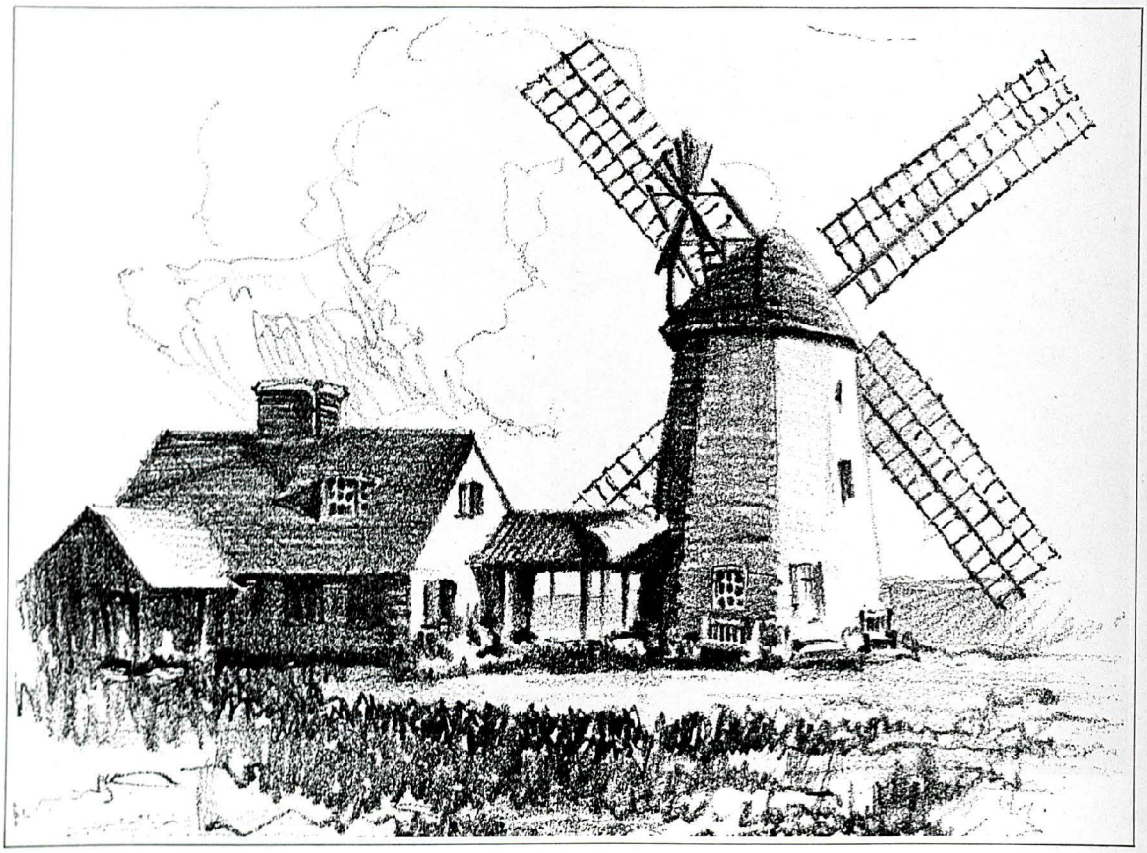
We are delighted to have had contributions this month from far away China and hope our fame will spread to all corners of the globe. Incidentally, Mr. Liang sent in a very swell cover design for PENCIL POINTS as it would appear in Chinese. We'll reproduce it for you next month.

RICHARD WRIGHT, office manager of Carleton Monroe Winslow's office in Los Angeles, sends along the following clipping from the front page of a copy of the *Los Angeles Journal of Commerce*, a local publication circulated among the building trades.

"MORE FUTURISTIC ACTIVITY"

PROSPECTIVE ARCHITECT desires to employ a man who is very clever in prospective rendering. Certified man preferred. Journal of Commerce, Box 26.

The editor didn't have space to make this announcement in the regular news pages so we have to put it here. The two plates of construction details for confessionals on pages 469 and 471 were drawn up by Mr. Knobloch from data supplied by Peter B. Sheridan, of Hazleton, Pa.



WINDMILL LATHROP BROWN, ESQ.—LITHOGRAPH PENCIL DRAWING BY JOHN WELKER
Peabody, Wilson and Brown, Architects
(PRIZE—*Class One—May Competition*)

THE SPECIFICATION DESK

A Department for the Specification Writer

LUMBER AND TIMBER—2

By David B. Emerson

Yellow poplar, frequently shortened to "poplar," and known in New England and parts of New York as "whitewood," is the tallest hardwood tree growing in the United States. It is widely distributed throughout the hardwood regions of the country, but the center of lumber production is now in the Southern Appalachians. The wood is rather light, soft to medium hard, fine textured, easy to work, takes carving very well, finishes smoothly and stays in place very well. The color of the heartwood varies from olive green to yellow or brown, quite often streaked with steel blue. The sapwood is white, and in second growth trees it is very thick. This wood is largely used for interior finish. It can be given a natural finish, and it takes paint and enamel very well.

Sycamore is a widely distributed tree, but the main supply comes from the river bottoms of the Ohio and Mississippi Valleys. The wood is moderately hard, heavy, stiff and strong, and is inclined to warp in seasoning. The color of the heartwood is pale brown tinged with red, and the sapwood is nearly white. When quarter sawn the rays show conspicuously, giving it a beautiful flaky grain, and some of the lumber is ribbon grained. This wood is used for furniture and interior finish. On account of the variations of color which are encountered in this wood, it should always be specified to be selected for uniformity of color, or the effect will not be at all pleasing. Some so-called "English sycamore" is sold in this country. This wood is not a sycamore, but is a maple, therefore does not resemble the true sycamore.

Beech is rather hard, heavy, and strong, works well, but is not always easy to season. The color is white or reddish and the wood is intermediate between sycamore and hard maple in most of its properties. It is principally used for furniture and for flooring. Beech flooring ranks very high, its wearing quality is equal to that of birch and is second only to hard maple. For very good, low cost floors, a mixture of beech, birch, and maple is sold, and it makes a good floor where utility rather than beauty is the main consideration.

Locust, which is the wood of the yellow or black locust, is yellow or greenish yellow in color, very hard, heavy, strong, and extremely durable. This wood is very little used, except where a wood is wanted to be placed in contact with the soil, and for tree nails or pins in heavy timber construction.

Holly is a small Southern evergreen hardwood. The wood is chalky white and of the same consistency as maple. It is used almost exclusively for inlays and marquetry in furniture, veneered doors, and similar work.

In addition to the native hardwoods a large variety of hardwoods is imported, mostly from tropical countries, and is used almost exclusively for furniture and high class interior finish.

Mahogany, from the Indian *mohagoni*, has been the premier cabinet wood for the past two hundred years. It is said to have been introduced into England by Sir Walter Raleigh in 1595, but does not appear to have come into general use until about 1720. It was extensively used by all the great Eighteenth Century cabinet makers; Chippendale used practically nothing else. This wood was introduced into the American colonies about the middle of the Eighteenth Century, and Savary, Goddard, and Phyfe made the larger part of their best furniture of mahogany.

The principal commercial sources of mahogany are the West Indies, Southern Mexico, Central America and the Peruvian Amazon district. Tabasco and Honduras are the best of the Mexican and Central American woods; both are available for interior work and are probably the best on the market owing to their density and texture. Cuban is not feasible for interior work being almost entirely second growth. San Domingo is commercially exhausted. The wood varies greatly in density, color, and figure, but in general it is easy to work, holds its place remarkably well, takes a beautiful polish, has a high natural luster, and the color deepens with age. In consequence of this deepening of color, all stains applied to mahogany gradually lose their life and color, but this deterioration of color in the stain is taken care of by the aging of the wood. Some mahogany is quite free from figure with close flecked grain, others have a marked grain known as "plum pudding" or "ocean figured," "fiddle back" (similar to well marked maple), and "curl." Curl is a freak in the growth of the tree, and the rich effect of the grain is very often enhanced by cutting veneers at an obtuse angle to the line of the tree trunk.

African mahogany is a near relative of the true mahogany, growing in tropical West Africa. It comes in larger sizes, is of a coarser texture than the true mahogany and has other distinguishing features. It is soft in texture, carries a good percentage of figure, often very highly figured and in consequence is in demand for large panels. The chief defect in this wood is "wind breaks," that is the fibres are frequently broken in spots due to the action of high winds. African mahogany does not color with age.

Vermilion wood, sometimes called East Indian mahogany, is a dyewood of the mahogany family, coming in various shades of red, as its name would indicate. This wood was, and I think still is, controlled by one lumber company in New York City; others will quote on it, but their product is generally African padauk, which is inferior in quality and texture. Padauk grows in the East Indies, Andaman Islands and Africa, it comes in various shades of red and has been frequently used as a substitute for the true mahogany. In some respects it is suited for work which can not be executed in mahogany,

as on account of its toughness it admits of fret carving which is not possible with mahogany.

Prima vera, also known as white mahogany, is a pale yellow or nearly white wood of medium density, often more or less feather-grained, and capable of taking an excellent polish. This grows in Southern Mexico and Northern Central America. This wood can be used for any of the various uses of true mahogany.

Several of the reddish Philippine woods, including bataan and red lauan have been sold as Philippine mahogany, but they are not related to the mahogany family. Of late they have been sold under their true names and some very good cabinet work has been done with them. The principal sources of supply of rosewood are Brazil and Madagascar. The first comes from Northeastern Brazil. It is moderately hard and heavy, easy to work, takes a high polish and is fragrantly scented. The color varies considerably, but the typical color is a chocolate brown streaked with black. Madagascar rosewood is stronger than Brazilian and less fragrant. These woods are used in very limited quantities for furniture veneers. Some years ago rosewood was quite a popular wood for furniture and piano cases, but has entirely lost its vogue. It is an excellent wood, as the furniture of the mid-Nineteenth Century will prove, and certainly should be more popular.

Satinwood comes from Ceylon and the West Indies. Both woods are hard, close-grained, heavy, and of very fine uniform texture, the color varying from a bright glossy yellow to brown, some of the wood being very beautifully figured. The West Indian satinwood is of an oily nature, and gives off a pronounced odor of cocoanut when it is being worked. Both woods are used for fine furniture and interior finish. Satinwood was very popular in England in the latter part of the Eighteenth Century as its color and texture were particularly suited to the light delicate designs of Hepplewhite and Adam, and to the color decorations of Pergolisi and Angelica Kaufman.

Teak is the best known and most highly valued timber of the East Indies. The principal sources of supply are Burmah, Siam, Java, and the Straits Settlement. The wood is moderately hard, tough and strong, is usually coarse textured, easy to work, carves readily and holds its place exceptionally well. The color is a reddish brown or olive brown, and becomes dark upon long exposure. The wood looks and feels oily and gives off quite a disagreeable odor when it is being worked, but this is not noticeable after the wood is polished. This wood is used not only for furniture and interior finish, but is also an excellent flooring wood. On account of its water repellent qualities teak flooring stands up better under scrubbing and continued moisture than any other wood flooring known.

There are several varieties of true ebonies, all of which are related to the American persimmon. The colors vary from jet black to streaked and patchy. The wood is very hard, heavy, fine textured and takes a lustrous polish. The Gaboon ebony from Africa is most typical of the black variety, which is practically the only kind used to any extent in furniture and cabinet work. The principal uses of the wood are for inlays, marquetry and small articles of cabinet work.

Kingwood, sometimes called *bois violet*, is a variegated purplish and black wood somewhat lighter in color than rosewood and more strongly marked, growing in the dry region in East Central Brazil. The use of this wood is limited almost entirely to inlays and marquetry.

Zebrawood, which comes from Gaboon Africa, is so-called because of the dark brown or blackish stripes on a pale reddish brown background. The wood is of medium density and has good cabinet qualities.

Tulipwood is a well known wood of Northeastern Brazil. It is hard, heavy, fairly easy to work and takes a beautiful polish. The wood is a yellowish brown with longitudinal stripes of pinkish red. When freshly worked the wood is quite fragrant.

In the foregoing list I have not tried to describe all the woods growing in this country and imported from other countries, but merely to pick out and describe those which have a direct bearing upon the building and furniture industries, which are of particular interest to the reader.

Not a little importance attaches to the methods of sawing lumber. The two methods of sawing are flat sawing, sometimes called plain sawing, and quarter sawing. Flat sawing is done in one direction across the annual rings, and quarter sawing is done by sawing the log in quarters and then sawing the quarters with the surface parallel to the medullary rays and at right angles to the annual rings. Quarter sawn lumber shrinks less in width, is less inclined to warp, in some instances wears more evenly and has a much better figure than flat sawn. With some woods flat sawing brings out the figure better than quarter sawing, the most notable examples being pine, ash, Douglas fir, and cypress. Bird's-eye maple should always be flat sawn.

Veneers are either sliced, sawed or rotary cut. Rotary cutting is done by machine around the log, like the unrolling of a spool of very wide ribbon. Rotary veneers give very much wider sheets than are possible with sliced or sawed veneers. The standard thickness for face veneers for panels is 1/28 inch for walnuts (American, French, Italian, and Circassian), mahogany, and the various tropical woods; 1/20 inch for oak (quartered or plain, American, English, and Austrian), the former generally being sliced and the latter sawed. Veneers for stiles and rails of doors should be at least ⅛ inch thick, sliced or sawed and for outside doors ¼ inch thick. It is very important that lumber and timber should be thoroughly dried before using, for several good reasons, as follows:

Dry lumber is nearly twice as strong as green lumber. Lumber which is thoroughly dry is not nearly as liable to the attacks by insects as green lumber, nor will it prove as fertile for the growth of dry rot. Dry lumber shrinks much less than green lumber, and will not warp or cup, nor will it become crooked when placed into use. Dry lumber is ready for paint or any other finish. To obtain the best results both air drying and kiln drying should be used. The various hardwoods, oak, mahogany, maple, etc., should be thoroughly air dried before kiln drying. One inch stock should be dried at least fifteen months, two inch stock at least eighteen months and heavier stock two years and over according to size.

Care should always be exercised in the selecting of woods for various purposes, to see that they have the proper qualities for the uses to which they are to be put, especially where they are liable to be subject to decay. The most durable (rot resisting) softwoods are the various cedars, redwood, cypress, and highly resinous long leaf pine—in the order named; and the most durable hardwoods are black locust, chestnut and white oak in the order named.

This is not the whole story of lumber and timber, nor is it likely to ever be written, but so long as man continues to seek the beautiful, wood will be sought as a decorative medium for the enriching of buildings and the making of beautiful furniture and I seriously doubt if any material is ever likely to supplant it in its true field.

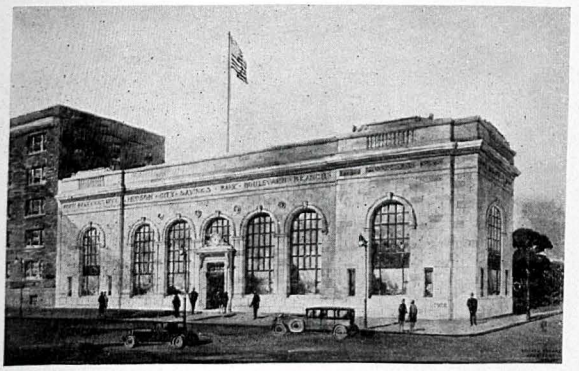
NATIONAL ENGINEERING INSPECTION ASSOCIATION

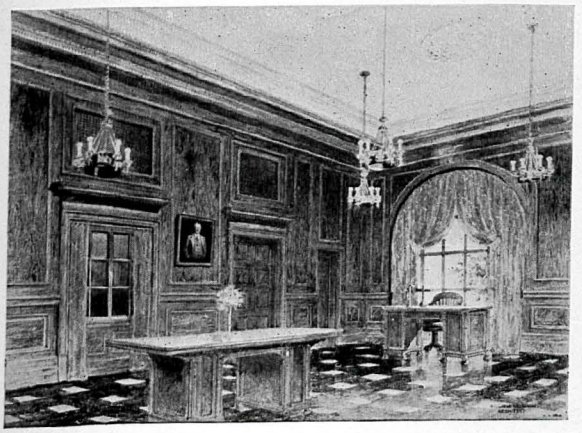
In December last, a group of Inspecting Engineers and representatives of Testing Laboratories from all sections of the country met in Detroit, Michigan, and formed a preliminary organization among those engaged in the practice of testing and supervising the manufacture and use of various engineering materials for construction work of Federal, State, and City Governments; public service corporations; railroad and highway construction and maintenance; bridges; office, manufacturing, educational and other building projects.

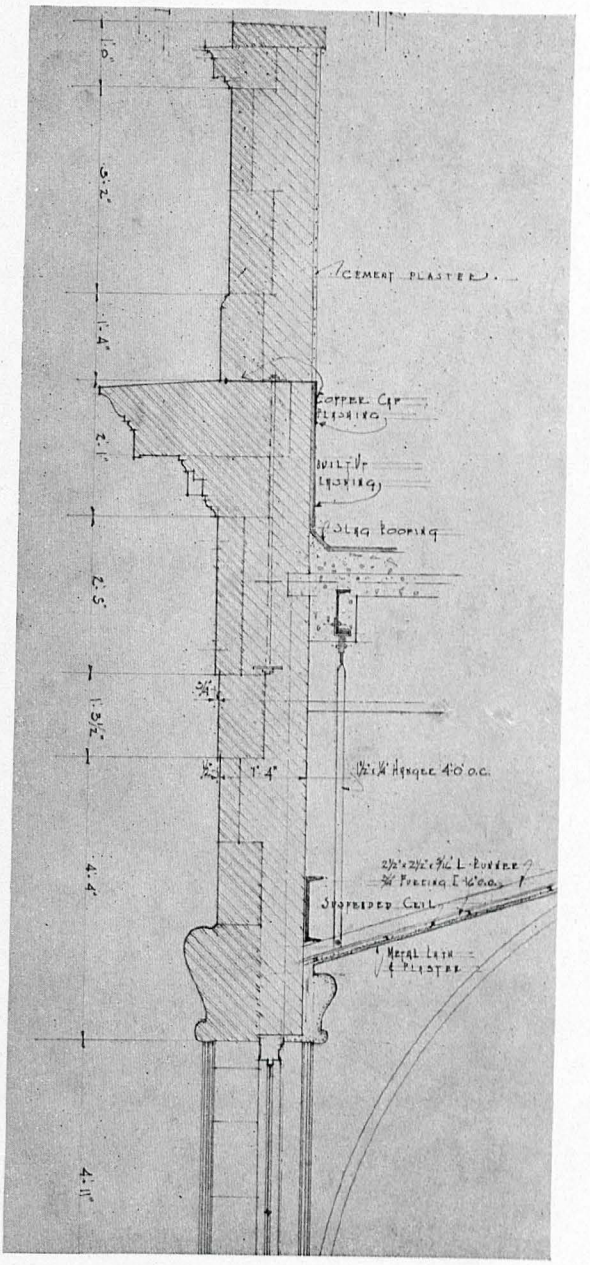
At a second meeting held April 3rd and 4th, also at Detroit, the success of the preliminary gathering was continued and there was finally concluded the formation of the National Engineering Inspection Association. The officers elected were: Watson Vredenburgh, President of Hildreth & Company, Inc., New York, as President; J. D. Stoddard, Vice-President of The Detroit Testing Laboratory as Vice-President, and B. H. Witherspoon, President of the Pittsburgh Testing Laboratory as Secretary-Treasurer. The Board of Directors include the Officers and a representative from each of the four geographical sections of the country as follows: Henry Gulick, President of Gulick-Henderson Company, New York, for the Eastern Section; James H. Herron, President of The James H. Herron Company, Cleveland, for the Mid-Western Section; F. B. Porter, President of the Southwestern Laboratories, Fort Worth, Texas, for the Southen Section; Abbot A. Hanks, President of Abbot A. Hanks, Inc., San Francisco, Calofirnia, for the Western Section.

The Association adopted complete Constitution and By-laws, and Code of Ethics. The former states the object of the Association is, "to promote a proper understanding and cooperation among those engaged in and concerned with Engineering Inspection; to establish practices which will prove beneficial to proper service and to develop and encourage better and more effective inspection methods."

The charter membership consists of twenty individuals, partnerships or corporations distributed throughout the country, seven from the Eastern Section, seven from the Mid-Western and Southern Sections and six from the Western Section.

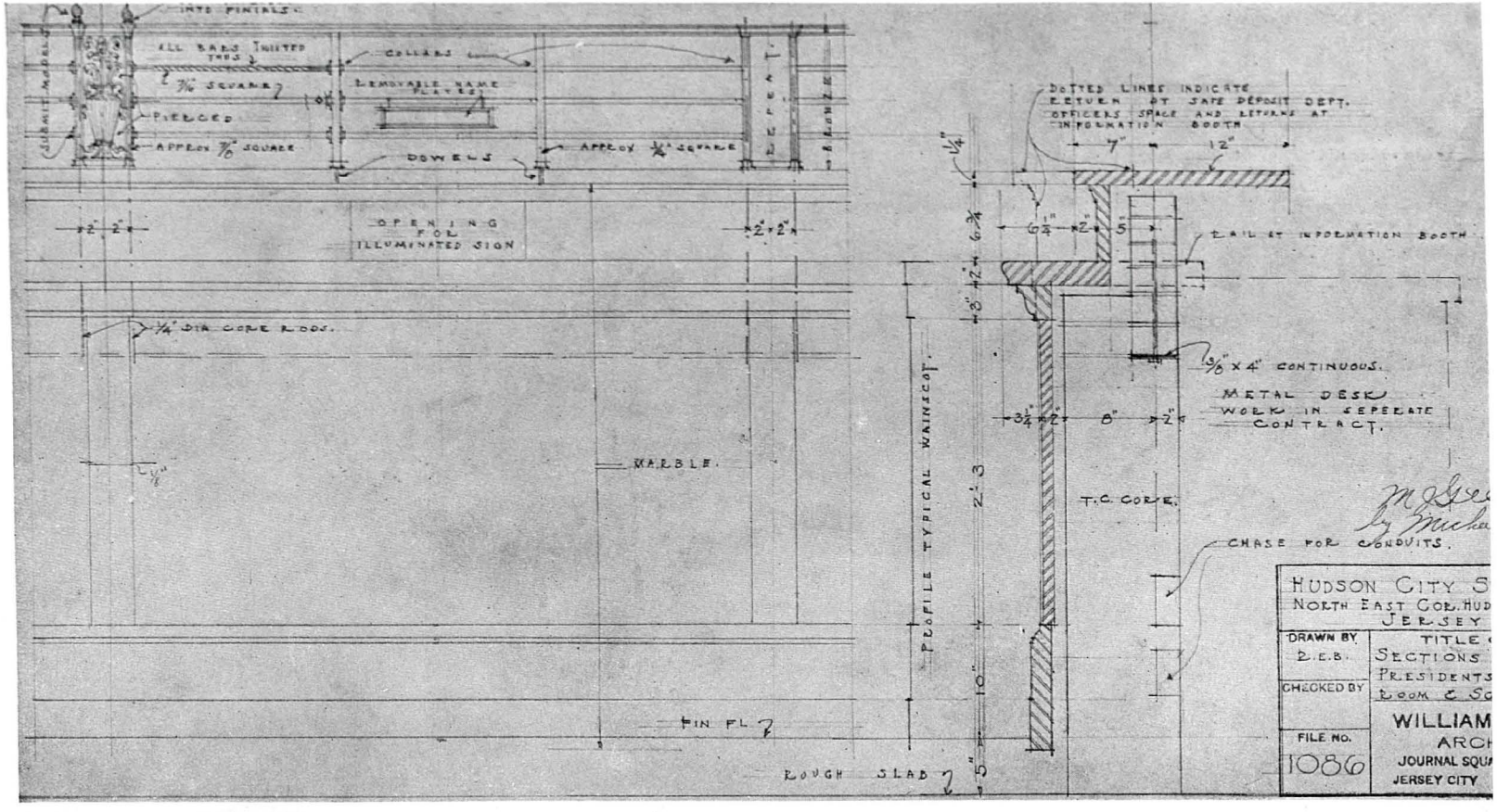






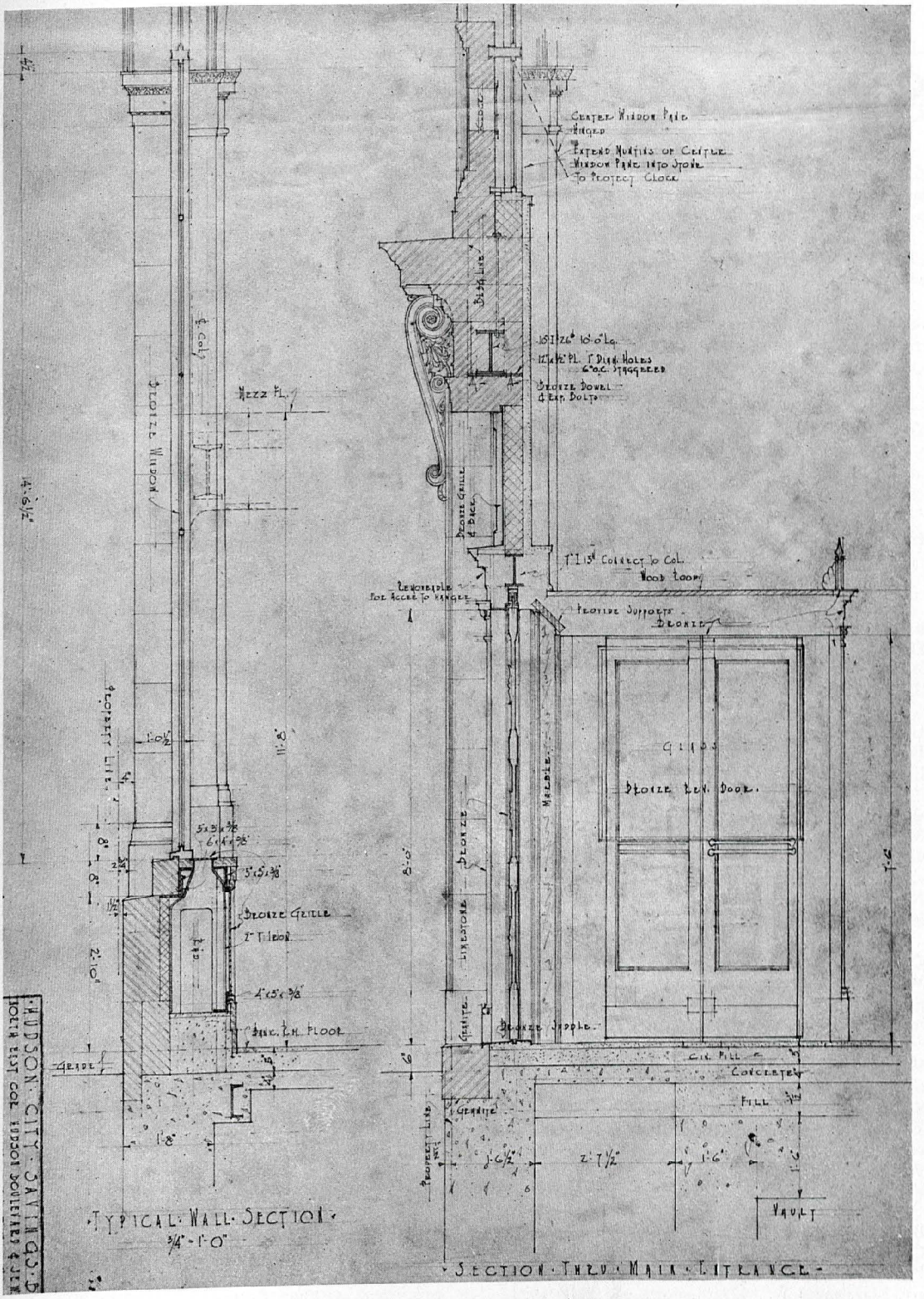
HUDSON CITY SAVINGS BANK, JERSEY CITY, NEW JERSEY—WILLIAM NEUMANN, ARCHITECT
PERSPECTIVE, INTERIOR, AND CONSTRUCTION DETAILS OF UPPER PART OF TYPICAL WALL SECTION

(See other construction details on following pages)



CONSTRUCTION DETAILS—BANK COUNTER WITH LOW SCREEN

HUDSON CITY SAVINGS BANK, JERSEY CITY, NEW JERSEY—WILLIAM NEUMANN, ARCHITECT



CONSTRUCTION DETAILS—LOWER PART OF TYPICAL WALL SECTION AND SECTION THROUGH ENTRANCE
HUDSON CITY SAVINGS BANK, JERSEY CITY, NEW JERSEY—WILLIAM NEUMANN, ARCHITECT

SERVICE DEPARTMENTS

THE MART. In this department we will print, free of charge, notices from readers (dealers excepted) having for sale, or desiring to purchase books, drawing instruments and other property pertaining directly to the profession or business in which most of us are engaged. Such notices will be inserted in one issue only, but there is no limit to the number of different notices pertaining to different things which any subscriber may insert.

PERSONAL NOTICES. Announcements concerning the opening of new offices for the practice of architecture, changes in architectural firms, changes of address and items of personal interest will be printed under this heading free of charge.

QUERIES AND ANSWERS. In this department we shall undertake to answer to the best of our ability all questions from our subscribers concerning the problems of the drafting room, broadly considered. Questions of design, construction, or anything else which may arise in the daily work of an architect or a draftsman, are solicited. Where such questions are of broad interest, the answers will be published in the paper. Others will be answered promptly by letter.

FREE EMPLOYMENT SERVICE. In this department we shall continue to print, free of charge, notices from architects or others requiring designers, draftsmen, specification writers, or superintendents, as well as from those seeking similar positions. Such notices will also be posted on the job bulletin board at our main office, which is accessible to all.

SPECIAL NOTICE TO ARCHITECTS LOCATED OUTSIDE OF THE UNITED STATES: Should you be interested in any building material or equipment manufactured in America, we will gladly procure and send, without charge, any information you may desire concerning it.

Notices submitted for publication in these Service Departments must reach us before the fifth of each month if they are to be inserted in the next issue. Address all communications to 419 Fourth Avenue, New York, N. Y.

THE MART

B. C. Holland, 731 Berea Avenue, Gadsden, Alabama, has the following copies of PENCIL POINTS for sale: December, 1926, and December, 1927; February, May, August, and December, 1928; all of 1929. $5.00 for the lot, f.o.b.

Joe E. Smay, University of Oklahoma, Norman, Oklahoma, has for sale or trade, the following copies of PENCIL POINTS: May, August, and September, 1929. He would like to obtain April, July, 1928, and April, August, 1927.

Bernard Rowntree, Carmel-by-the-Sea, California, has the following copies of PENCIL POINTS for sale: February, March, April, May, June, July, August, September, and October, 1926; February, May, and September, 1927.

M. E. Gluckman, 735 Walton Avenue, New York, N. Y., would like to have two copies of the May, 1926, issue of PENCIL POINTS.

William J. Honack, 753 No. Central Avenue, Apt. C3, Chicago, Ill., has for sale a book, *Lettering* by Thomas Wood Stevens, with 110 full-page plates. Almost new, price $2, former value $3.25. Also European type folding easel, excellent condition. Cost $7.50; sell for $3.50.

F. C. Stanton, 1512 Northern Life Tower, Seattle, Washington, has for sale the following books, in excellent condition: Barnes' *Estimating Building Costs*, $2.50; Sullivan's *Autobiography*, $1.50; Pichel's *Modern Theatres*, $1.50; Holland-Parker's *Ready-Written Specifications*, $2.50; Sexton-Betts' *American Theatres of Today*, $6.00; A.I.A. *Handbook of Practice*, $2.50; *White Pine*, Vols. III and IV, $2.50; Hopkins' *Farm Buildings*, $1.50.

Library of Architecture and Allied Arts, Lillian T. Burkman, Librarian, 453 South Spring Street, Los Angeles, Calif., will pay fifty cents each for the following copies of PENCIL POINTS: January, 1921; November, 1922; February, May, and July, 1923; January, and May, 1924.

John W. Knobel, 16 Suydam Place, Brooklyn, N. Y., wants a copy of the November, 1925, issue of PENCIL POINTS.

James N. Holden, Newstead, Paget West, Bermuda, would like to have a copy each of the special hotel numbers of *The Architectural Forum*, of November, 1923, and December, 1929.

A. B. Saville, 1170 Mountain Street, Montreal, Que., Canada, would like to obtain a copy of the November, 1929, issue of PENCIL POINTS.

Attention Mr. Osvald Ojma! Mr. Leopold Hoggblod, 1147 Park Avenue, New York, New York, is anxious to get in touch with his old friend, Mr. Osvald Ojma, from Finland. 'Phone Atwater 1782.

The following copies of *White Pine Monographs* are wanted: Vol. II, Nos. 1, 3, 4, and 6; Vol. III, Nos. 1 and 4. Address Box No. 612, PENCIL POINTS PRESS, Inc., 419 Fourth Avenue, New York.

University of Texas Library, E. W. Winkler, Librarian, Austin, Texas, would like to have the following magazines: *Architectural Record*, August, 1928; *Architectural Review*, February and June, 1920; November, 1919; August, 1923; *Architecture and Building*, February, 1928; *Buildings and Building Management*, July 13, 1925; *Western Architect*, August, 1928.

PERSONALS

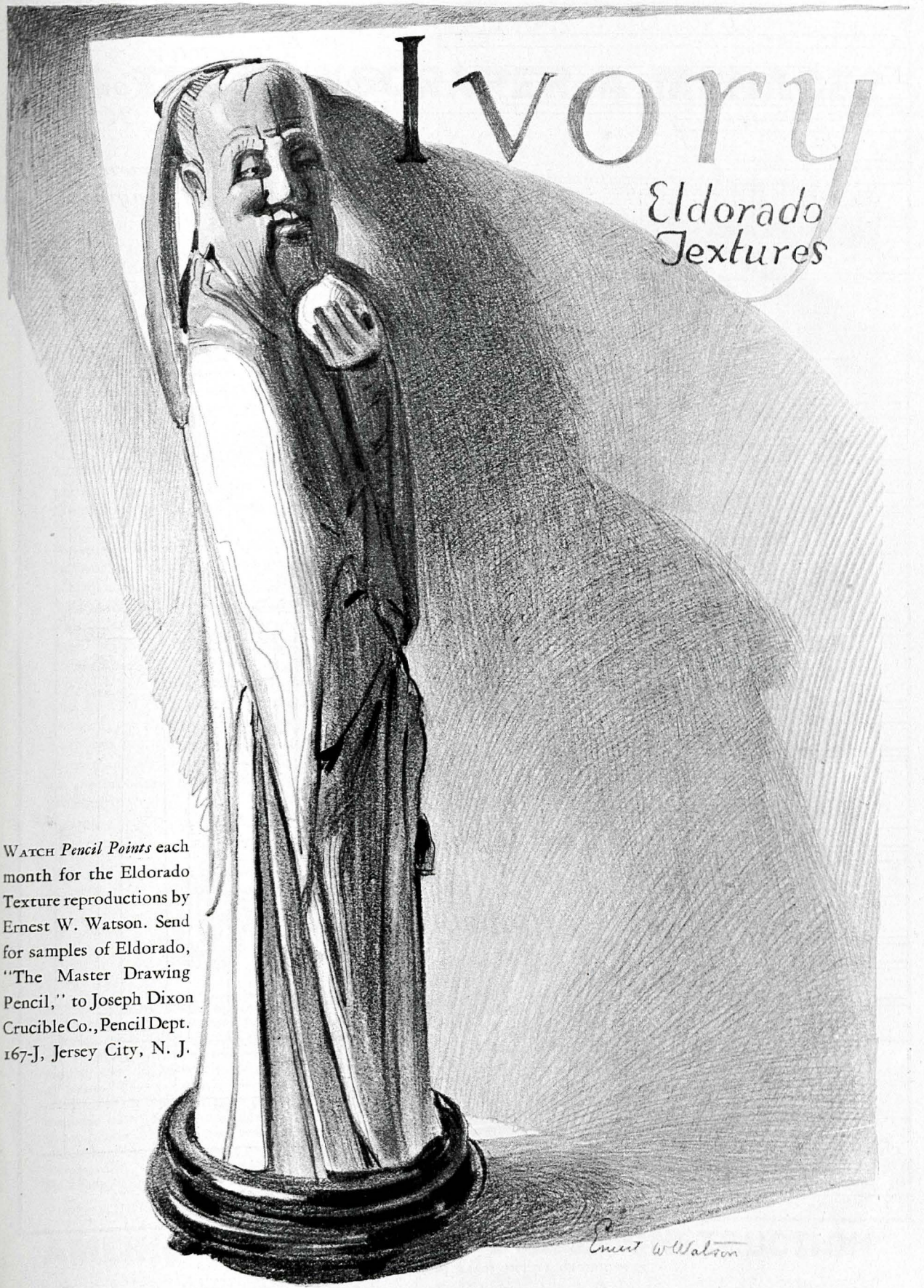
A. J. DAIDONE and S. L. GRANT have formed a partnership for the practice of architecture under the firm name of Daidone & Grant, 189 Montague Street, Brooklyn, N. Y.

P. A. BARTHOLOMEW, ARCHITECT, and W. H. KIRCHENBOWER, Associate, have removed their offices from the Keenan Bldg. to 2206 Clark Bldg., Pittsburgh, Pa.

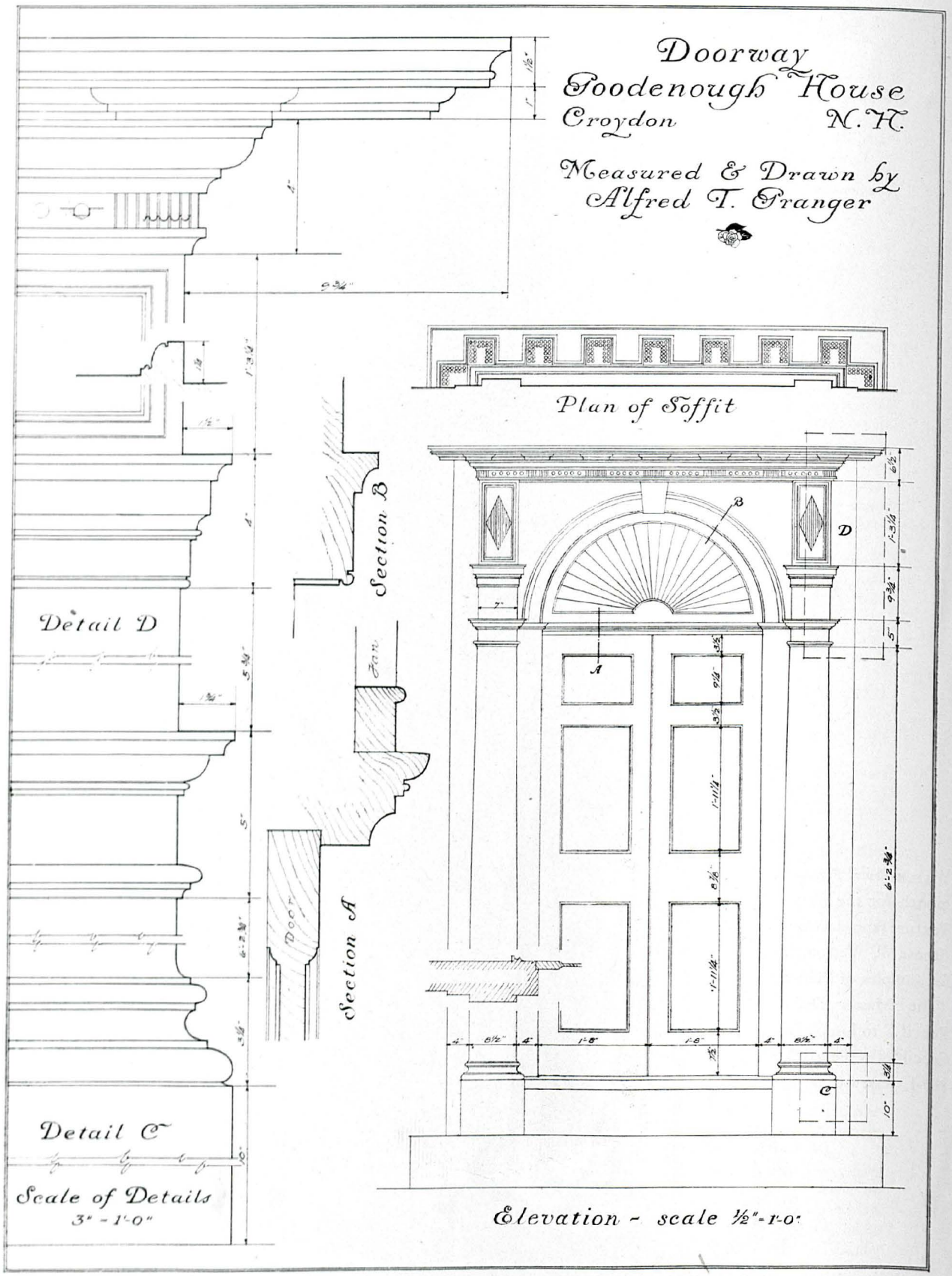
WALLIN & COMER, ARCHITECTS, of Savannah, Ga., have dissolved partnership. Arthur F. Comer has opened his own office at 909-910 Realty Building, Savannah, Ga.

NICKLAS & RODRICK, ARCHITECTS, have moved their offices from 1227 Prospect Avenue to Room 812 in the Leader Building, Cleveland, Ohio.

FREE EMPLOYMENT SERVICE ITEMS WILL BE FOUND ON PAGE 84, ADVERTISING SECTION



WATCH *Pencil Points* each month for the Eldorado Texture reproductions by Ernest W. Watson. Send for samples of Eldorado, "The Master Drawing Pencil," to Joseph Dixon Crucible Co., Pencil Dept. 167-J, Jersey City, N. J.



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IS THE SKYSCRAPER A MENACE?

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THE SKYSCRAPER—a study of its economic height—by W. C. Clark and J. L. Kingston. 164 interesting pages of facts, charts, tables and drawings. *Published by the American Institute of Steel Construction, New York.* $2.

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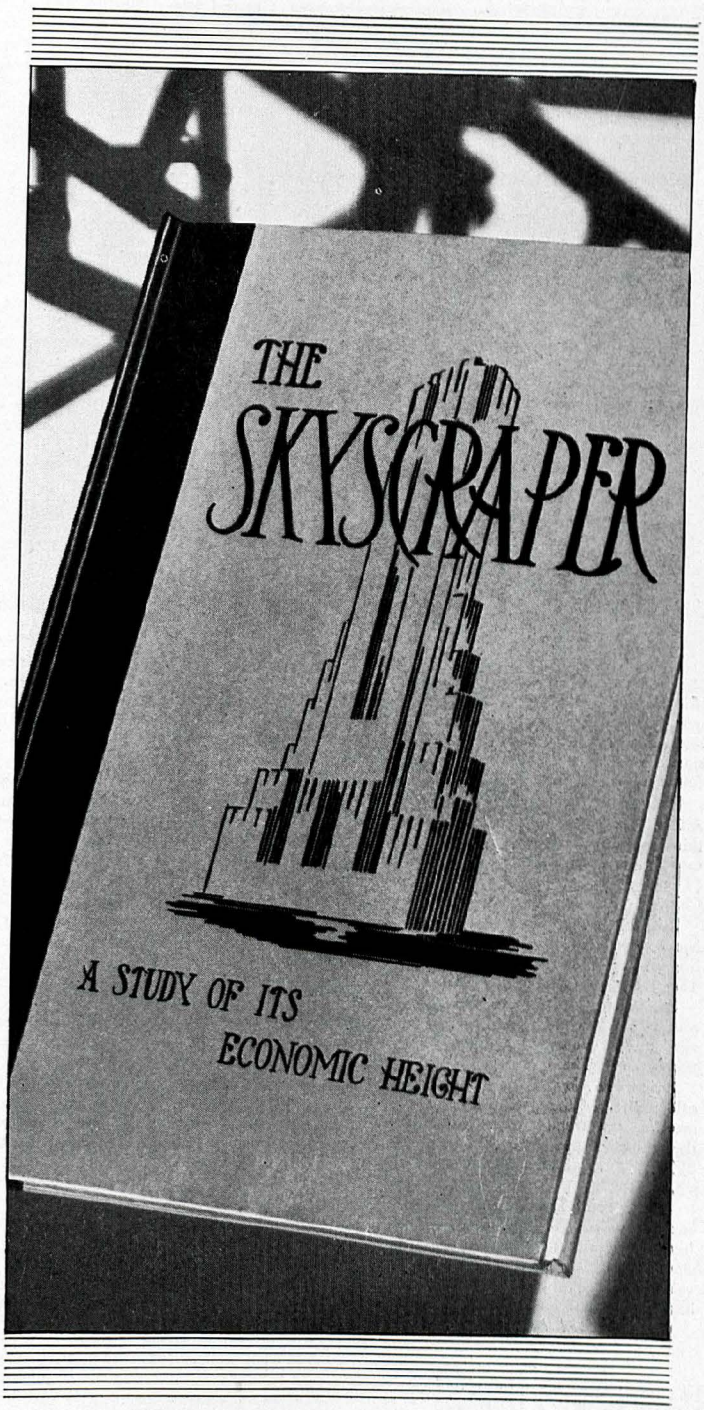
IS THE skyscraper an economic fallacy? A fire hazard? An assault on public health and safety? Shall it rise still higher or be banished from the face of the earth?

Into the raging controversy comes this clear, calm brief for the skyscraper. While admitting that the extremists are not all on one side, the authors recognize in the attacks of many *antis* "the eternal prejudice against 'the new' . . . which less than a century ago caused German doctors to protest against a railroad on the ground of danger to the health not only of those who dared to ride on it, but also of those unfortunate citizens who could hardly escape injury to health from observing the trains racing along *at 20 miles an hour.*"

Which side of the question are you on—and how far? Here's red meat for the *antis* as well as the *pros* and information so authoritative and comprehensive that no steel man, no architect, builder, executive or metropolitan realtor can afford to be without it.

Send check to the New York Office for your copy before edition is exhausted.



The co-operative non-profit service organization of the structural steel industry of North America. Through its extensive test and research program, the Institute aims to establish the full facts regarding steel in relation to every type of construction. The Institute's many publications, covering every phase of steel construction, are available on request. Please address all inquiries to 200 Madison Avenue, New York City. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas and San Francisco.

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PUBLICATIONS

OF INTEREST TO THE SPECIFICATION WRITER

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

Gypsteel Floor and Ceiling Construction.—A.I.A. File No. 4-k-1. Catalog 30B, just issued, presents complete information for architects and engineers on the subject of Gypsteel precast floor and ceiling construction. Specifications, engineering data, blue print designs and construction details. 32 pp. 8½ x 11. Structural Gypsum Corporation, Linden, N. J.

All-Tile Bathroom Accessories.—A.I.A. File No. 23-i. New bulletin showing a new and up-to-date line of accessories and incorporating a number of new items and improved models. 8 pp. Standard filing size. The Mosaic Tile Co., Zanesville, Ohio.

Pennvernon Window Glass.—A.I.A. File No. 26-a-1. Attractive new illustrated brochure contains an interesting description of a new process in the making of window glass. Separate sheet with specifications and other data accompanies document. 16 pp. 8½ x 11. Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh, Pa.

Evans Vanishing Door.—A.I.A. File No. 28-b-33. Catalog K illustrates and describes modern door equipment for school lockers and wardrobes, lavatories, telephone booths, etc. Many detail drawings showing construction and installation. 48 pp. Standard filing size. W. L. Evans, Washington, Ind.

Peelle Freight Elevator Doors.—A.I.A. File No. 33-g. New edition of Catalog G contains much useful information for architects and engineers on counterbalanced truckable freight elevator doors, bi-fold doors, tel-co doors, canopy doors, dumbwaiter doors, one-piece vertical sliding doors, electrical and mechanical inter-locking systems, safety appliances, pneumatic and electric door openers. Blue print sections, outline specifications. Indexed. 64 pp. 8½ x 11. The Peelle Co., Flushing and Stewart Aves., Brooklyn, N. Y.

Lupton Detention Windows for Hospitals and Jails.—A.I.A. File No. 16-e-1. Bulletin No. 303, just issued, gives descriptive data, with details and specifications covering this type of steel window especially adapted for installation in hospitals, sanatoriums, jails, etc. 12 pp. Standard filing size. David Lupton's Sons Co., Allegheny Ave. and Tulip St., Philadelphia, Pa.

Allen on Interior Fire Protection.—A.I.A. File No. 29-e-2. New data book prepared especially for architects presents detailed information on interior fire protection equipment including cabinets, hose racks, fire hose units, Siamese connections, standpipe systems, fire line valves, extinguishers, etc. Specifications, dimension drawings and tables. 24 pp. 8½ x 11. W. D. Allen Manufacturing Co., 566 West Lake St., Chicago, Ill.

Yeomans Horizontally Split Case Centrifugal Pumps.—A.I.A. File No. 29-d-5. Bulletin No. H.S.-1200 just issued covers this line of single and multi-stage pumps. Construction details, capacity and friction tables, specifications, piping diagrams, etc. 12 pp. 8½ x 11. Yeomans Brothers Co., 1433 Dayton St., Chicago, Ill.

Jefferson Illuminating Glassware.—Catalog No. 30-G, just issued, lists and illustrates a wide range of decorative glass lighting shades and enclosing globes. 18 pp. Standard filing size. The Jefferson Glass Co., Follansbee, W. Va.

Majestic Verti-Fold Door.—A.I.A. File No. 17-a-2. Illustrated folder with descriptive data and detail drawings covering this new type of door for garages, warehouses, factories, etc. Standard filing size. The Majestic Co., Huntington, Ind.

Showers by Elkay.—Attractive new brochure printed in colors pictures the possibilities of this type of steel shower unit in meeting the trend toward colorful bathrooms and the vogue for the shower type of bathing facilities. Specifications. 12 pp. 8½ x 11. Elkay Manufacturing Co., 4710 Arthington St., Chicago, Ill.

Steel Joist Data Book.—A.I.A. File No. 13-g. Useful reference document for architects, engineers and draftsmen on the subject of Ingalls steel trusses for floor and roof construction. Included are blue print details, specifications and tables of loading values. 28 pp. 8½ x 11. Ingalls Steel Products Co., Birmingham, Ala.

Published by the same firm, "Steel Joists." Bulletin prepared to acquaint architects and engineers on the properties and functions of steel joists as a structural unit, outlines the history, characteristics and design of steel joist construction. 16 pp. 8½ x 11.

Incinerators (Chimney-Fed).—A.I.A. File No. 35-j-41. Catalog No. 18 describes the principle and design of Kernerator chimney-fed incinerators for residences, apartments, stores, hospitals, schools, apartment hotels, clubs and other buildings. Also covers heavy-duty garbage and rubbish destructors and gas-fired incinerators. Specifications, standard layouts and other useful working data. 22 pp. Standard filing size. Kerner Incinerator Co., 1225 No. Water St., Milwaukee, Wis.

Residence Air Conditioning Systems.—Illustrated publication describing Hot-Kold, a gas-fired electrically-operated residence heating and ventilating system. Includes data on actual heat losses and directions for estimating gas consumption. 32 pp. The General Iron Works Co., Cincinnati, O.

Published by the same firm, "Gas-Fired Factory Unit Heating Systems." Bulletin gives descriptive data covering small gas-fired unit heaters equipped with thermostatic control for use in industrial plants.

Fairhurst New Unit-Fold Folding Partitions.—Architect's filing folder with set of specification and detail sheets covering Fairhurst's new unit-fold and improved duo-fold folding partitions for schools, churches, hotels, clubs, public buildings, and a new type of school wardrobe. Standard filing size. Park, Winton & True Co., 101 Park Ave., New York, N. Y.

Everfast Window Cleaning Safety Devices.—A.I.A. File No. 27-a-2. Catalog B illustrates and describes this type of safety device together with specifications and methods of installation. 8½ x 11. 16 pp. R. J. Dickey & Sons, Inc., Columbus, Ind.

Stedman Ray-Proof Rubber.—New illustrated brochure describes the application and advantages of ray-roof rubber, a scientific light repellent for floors, walls and ceilings for X-ray departments of hospitals, laboratories, etc. Construction details, specifications. 12 pp. Stedman Rubber Flooring Co., South Braintree, Mass.

Terra Cotta Futurities.—First of a series of publications under this title presents a brief discussion by Harvey Wiley Corbett on the future development of new decorative qualities in wall surfaces with terra cotta. Several designs of interlocking blocks developed on suggestion of Mr. Corbett are illustrated. Standard filing size. Federal Seaboard Terra Cotta Co., 10 East 40th St., New York, N. Y.

Herwig Exterior Lighting Fixtures.—Catalog No. 30 lists and illustrates a complete line of cast iron and bronze exterior lighting fixtures for apartment buildings, bungalows, churches, garages, residences, warehouses, country clubs, public buildings and filling stations. Indexed. 40 pp. The Herwig Co., 1753 Sedgwick St., Chicago, Ill.

Cohoes Pipe Handbook.—A.I.A. File No. 29-b-2. Useful reference book for architects and engineers on the subject of Cohoes pipe, couplings and nipples. Engineering data, tables, etc. 48 pp. Cohoes Rolling Mill Co., Cohoes, N. Y.

Pease Blue Printing Machinery and Drafting Room Furniture.—Catalog M-29 illustrates the latest styles of steel and wood drafting room tables, drawing storage cabinets, vertical plan files and the latest models of Pease blue printing machines. Also covers blue print papers, cloths and other drafting room items. Indexed. Price list. 100 pp. The C. F. Pease Co., 813 N. Franklin St., Chicago, Ill.

Published by the same firm, "Peerless Model 30 Blue Printing Equipment." New brochure illustrates and describes the design, construction and operation of a new model of continuous blue printing equipment. 24 pp. Standard filing size.

Reinforced Concrete Floors for Residences.—Illustrated publication presents helpful design and construction information on the subject of reinforced concrete floors for residences or small buildings. Also describes methods for developing floor finishes and laying floor coverings. Construction details, tables. 16 pp. Concrete Reinforcing Steel Institute, Tribune Tower, Chicago, Ill.

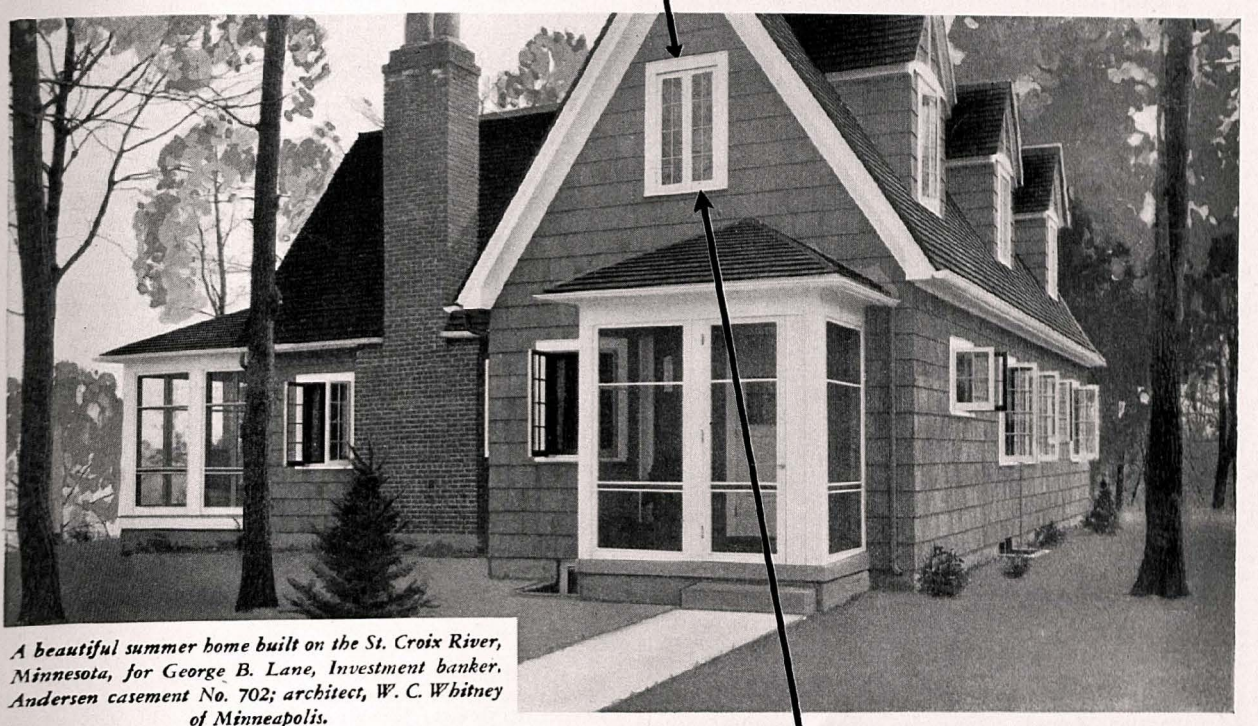
Weis Metalunit Stall Door and Hardware.—A.I.A. File No. 29-h-32. Attractive bulletin with color chart and illustrations announces and describes the Metalunit, a combination of a flush or panel type door with hardware for use on lavatory stall partitions of marble, vitrolite, glass, slate, alberene stone, terrazzo, etc. Specifications. 12 pp. Henry Weis Manufacturing Co., Inc., Elkhart, Ind.

Terra Cotta Buildings Superior for Floodlighting.—A.I.A. File No. 9. New illustrated brochure discusses the advantages of terra cotta for floodlighting purposes. Profusely illustrated. 16 pp. Standard filing size. National Terra Cotta Society, 230 Park Ave., New York, N. Y.

Published by the same firm, "Terra Cotta Stores and Store Fronts." A.I.A. File No. 9. New publication dealing with the adaptability of terra cotta for modern stores and store fronts illustrates numerous buildings of this type in which this material has been used. 16 pp. 8½ x 11.

Pullman Unit Sash Balances.—A.I.A. File No. 27-a-1 Catalog No. 40 contains specifications, detail drawings and complete descriptive and installation data covering this type of window equipment. 18 pp. Standard filing size. The Pullman Mfg. Co., Rochester, N. Y.

Architects welcome this new frame with locked sill-joint . . . of genuine white pine



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Wanted: Man with several years' architectural training to act as local salesman for progressive building material house located in Davenport, Iowa. Salary to start around $45 to $50 per week according to experience and ability. Excellent prospects for better earnings depending on sales ability. Answer by letter in first instance. Box No. 600, care of PENCIL POINTS.

Position Wanted: Thoroughly experienced architectural man, designer, wishes connection with office in the east or middle west. Box No. 601, care of PENCIL POINTS.

Position Wanted: Architectural designer and draftsman, wide experience on various types of buildings, capable and reliable to carry job through from sketches, general practical working drawings, scale and full-size details. Location immaterial. Box No. 602, care of PENCIL POINTS.

Position Wanted: Architect would like position as office executive to take charge of production from sketches to supervision or any part thereof; energetic and efficient job manager, expert draftsman, capable designer and specification writer, twenty-one years continuous architectural experience on commercial, residential, school, church, and governmental buildings. Consider any location. Box No. 603, care of PENCIL POINTS.

Position Wanted: Architectural designer, age 30, married, nine years' experience. University education. Can talk as well as draw and can get and manage work. Permanent location wanted where I can make a home and money. Will purchase part interest if cash required is not too much. Box No. 604, care of PENCIL POINTS.

Position Wanted: Architectural designer and draftsman who has been long connected with leading architectural firms as designer and all-round man, would like to associate or become partner with an established architect who can secure the work and take care of the business end of the office. Box No. 605, care of PENCIL POINTS.

Position Wanted: Young man wishes part-time position in architect's office. One year's office experience, good tracer and letterer. Salary secondary. Box No. 606, care of PENCIL POINTS.

Position Wanted: Young man, 18, wishes position as junior draftsman, letterer or tracer in an architect's or decorator's office. In final year at Mechanics Institute. Willing to start at low salary. Box No. 607, care of PENCIL POINTS.

Position Wanted: Architectural designer and executive with thorough experience in design, working drawings, details, construction and superintendence on all kinds of buildings. Modern design. M.I.T., Boston, Mass. Traveled and studied abroad. Perspectives, oil color. Commensurate salary. Box No. 608, care of PENCIL POINTS.

Position Wanted: Young lady desires position as technical designer in architectural or engineering office. Conscientious worker, several years' experience in Hamburg, Germany. References. Miss Margerite Watrous, Executive Secretary, N. Y. Chapter of A.I.A., Miss Anita Berg, c/o Wiese, 707 Vanderbilt Avenue, Brooklyn, N. Y. Telephone, Nevins 6431.

Position Wanted: Young draftsman, 26 years of age, willing worker, wishes permanent connection with architect, preferably in North Carolina. Architectural School graduate. One year's experience as ornamental steel draftsman. References. Samples of work, etc. Available June 15th. Box No. 610, care of PENCIL POINTS.

Position Wanted: Architectural draftsman, ten years' experience mostly on schools, college groups, residences and banks. Can carry job from sketches to complete working drawings and details. Age 28. Salary $60.00 per week. R. H. Owens, Box No. 845, Bristol, Va.

Position Wanted: Draftsman-superintendent desires position with architect or contractor. Thirty years' experience on all types and classes of buildings. Specialized in schools and churches, nineteen years in last position as chief draftsman and superintendent. Southeast Texas location preferred. J. D. McClelland, 221 Euclid Avenue, New Castle, Pa.

Position Wanted: In or near New York by South American two-year student in architectural drawing at Mechanics Institute. Proficient in detail work and lettering. Moderate salary. Sixto M. Cardenas, 3301 Broadway, Apartment 8, New York, N. Y.

Position Wanted: Young man, 18, recent graduate of Crane Technical High School of Chicago, desires position with an architect of Chicago or vicinity. Willing to work hard. Salary secondary. Melvin L. Schultz, 2924 Thomas Street, Chicago, Illinois.

Position Wanted: English speaking Latin architect desires position. Ten years' experience Latin practice. Thoroughly versed in all phases of architectural work. Age 38 and married. Would consider also position as Assistant or Secretary to Chief Architect. English-Spanish stenographer. Tact and personality. Salary $60.00 per week. L. A. Betancourt, Avenida Serrano 97, Havana, Cuba.

Position Wanted: Stenographer, intelligent and accurate, desires position in small architect's office. $20.00 per week. Box No. 609, care of PENCIL POINTS.

Free Lance Work Wanted: Architectural designer, experienced, quick sketches, perspectives in color, plans, details, by fixed charge or on time basis. Box No. 611, care of PENCIL POINTS.

Wanted: Architect with wide experience in high class residential work and registered in Pennsylvania and New Jersey, would like to get in communication with young college graduate who has good connections and can get commissions. Edmund D. Salter, 2938 Haverford Road, Ardmore, Pa.

Position Wanted: Neat, accurate, fast draftsman. Eight years' general New York experience. Country residences, court houses, apartments and hotels. Field, office experience on latter type. Eight years' schooling at Columbia and New York Universities. References from recognized offices of national reputation. Salary secondary if position is permanent and nature of work equal to that engaged on heretofore. Box No. 614, care of PENCIL POINTS.

Position Wanted: Competent office woman and secretarial stenographer. Ten years' experience in architect's office. Good architectural background. Box No. 613, care of PENCIL POINTS.

Position Wanted: Architectural designer and draftsman, detailing, perspectives and renderings. All types of architecture, old and modern. Eight years' actual office experience. Five years in New York City and three years abroad. Box No. 615, care of PENCIL POINTS.

Position Wanted: Stenographer-secretary, who has had extensive experience in architects' offices, desires position in New York City. Box No. 616, care of PENCIL POINTS.

Position Wanted: Student of architecture desires position as junior draftsman. One year at New York University and know a little perspective. Salary of no great consideration. John Soshowski, 533 East 12th Street, New York, N. Y.

Position Wanted: For four young men, graduates of Vocational School in architecture, experienced in tracing, perspectives and working drawings. Salary secondary. Box No. 617, care of PENCIL POINTS.

Wanted: Architectural draftsman. Geo. Issenhuth, 226 Dakota St., Huron, S. D.

Position Wanted: Registered architect, twelve years' private practice and office manager New York City and middle west, wishes to make connection with reputable architectural office as office manager or in executive capacity. University graduate, extensively travelled, A.I.A., thoroughly versed in all phases of architectural practice. Box No. 618, care of PENCIL POINTS.

Position Wanted: Graduate architect, registered in New York State, five years' experience on high class country residences, cooperative apartments, hospitals, churches, and public buildings. Experience has involved designing, carrying plans through to completion and superintending. Salary can be arranged. Box No. 619, care of PENCIL POINTS.

Position Wanted: Draftsman-designer, twenty years' experience. Charge of office six years. Proficient in all architectural projects, sketches, working drawings, details. Locate anywhere. Age 40. Active, dependable. References. Box No. 620, care of PENCIL POINTS.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of PENCIL POINTS published monthly at Stamford, Conn., for April 1, 1930.

State of New York }
County of New York } ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared W. V. Montgomery, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the Corporation publishing PENCIL POINTS and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, The Pencil Points Press, Inc., 419 Fourth Avenue, New York City.

Editor, R. F. Whitehead, 419 Fourth Ave., New York City.

Managing Editor, None.

Business Manager, W. V. Montgomery, 419 Fourth Avenue, New York City.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

The Pencil Points Press, Inc., 419 Fourth Avenue, New York City.
Ralph Reinhold, 419 Fourth Avenue, New York City.
L. F. Nellis, 419 Fourth Avenue, New York City.
W. V. Montgomery, 419 Fourth Ave., New York City.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders, and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is ..... (This information is required from daily publications only.)

W. V. MONTGOMERY,
Business Manager.

Sworn to and subscribed before me this first day of March, 1930.

CURVILLE C. ROBINSON,
Notary Public.

(My commission expires March 30, 1930.)

THE GEOMETRY OF ARCHITECTURAL DRAFTING

ATTENTION OF OUR readers is called to the omission from this issue of the usual installment of Mr. Freese's series *The Geometry of Architectural Drafting*. Part 11 of this valuable series will appear in the July issue of PENCIL POINTS.

PRATT ARCHITECTURAL CLUB

THE FIFTH ANNUAL MEETING and dinner of the Club was held at the Fraternity Club on the night of May 14th and a large crowd of members found it the excuse to make merry in proper fashion. The following officers were elected for the coming year: *President*, George F. Axt, '16; *Vice President*, Clarence Crocheron, '09; *2nd Vice President*, Frank E. Ward, '21; *Secretary*, Burton F. Hall, '29; *Treasurer*, Donald W. Lockhard, '20; *Asst. Secy.*, W. G. Pederson, '27; *Asst. Treasurer*, A. H. Johnson, '26; *Members of Board of Governors*, Harold H. Bulmer, '25, Dan. O. Larsen, '12, H. L. Skidmore, '08.

Following the meeting and dinner the guests were privileged to hear from Wm. H. Gompert, Class of '91;

Fred Wright, Director of Physical Training, told of the plans for the new Men's Club and drive for the Swimming Pool Fund at the Institute; Fred Mellor, President of the Construction Club; and last, the speaker of the evening, Harry C. White of the General Electric Company, who gave a discourse on *Modern Light and Modern Lamps, Used Outwardly and Inwardly in Scientific and Medical Pursuits*. Mr. White's talk and demonstration was the finest we have ever had the pleasure of hearing and it is not exaggerating to say that he received an ovation when he finished. Due praise is to be given to H. Eugene Child, '14, Chairman of the Dinner Committee, and our old reliable Frank Price who acted as Toastmaster and told his innumerable and inimitable stories.

ADDRESSES WANTED

ANYONE KNOWING the correct addresses of the following will confer a favor by sending them to this office; THE PENCIL POINTS PRESS, Inc., 419 Fourth Ave., New York.

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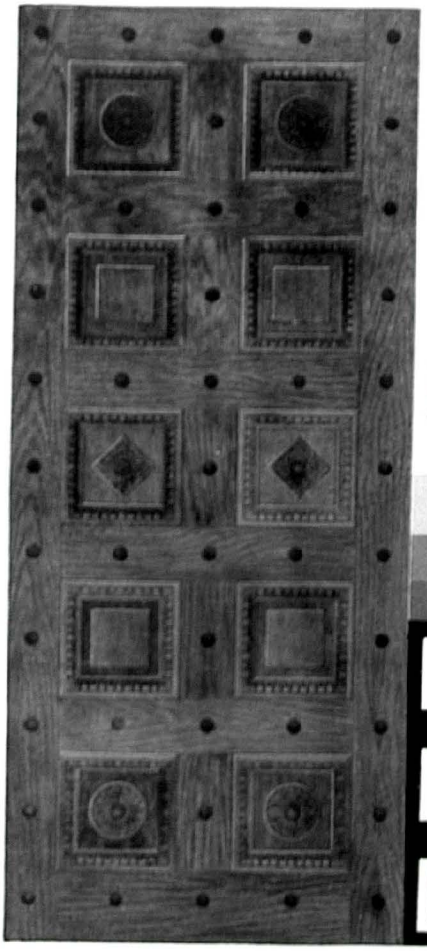

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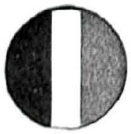

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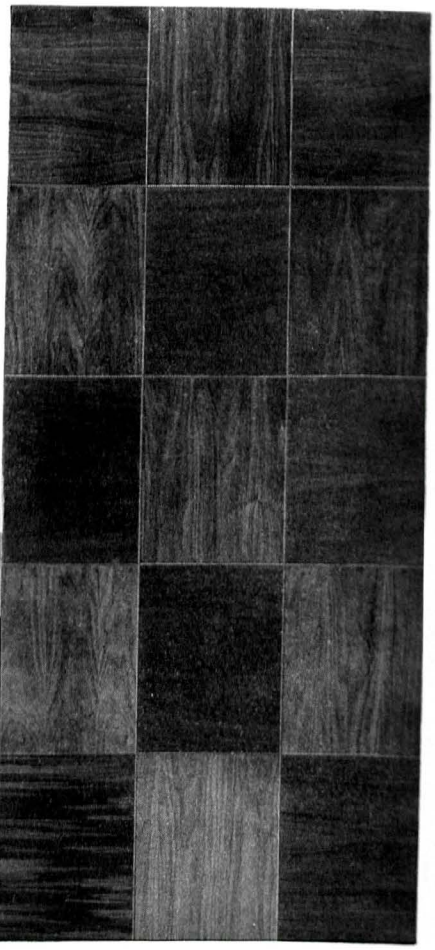

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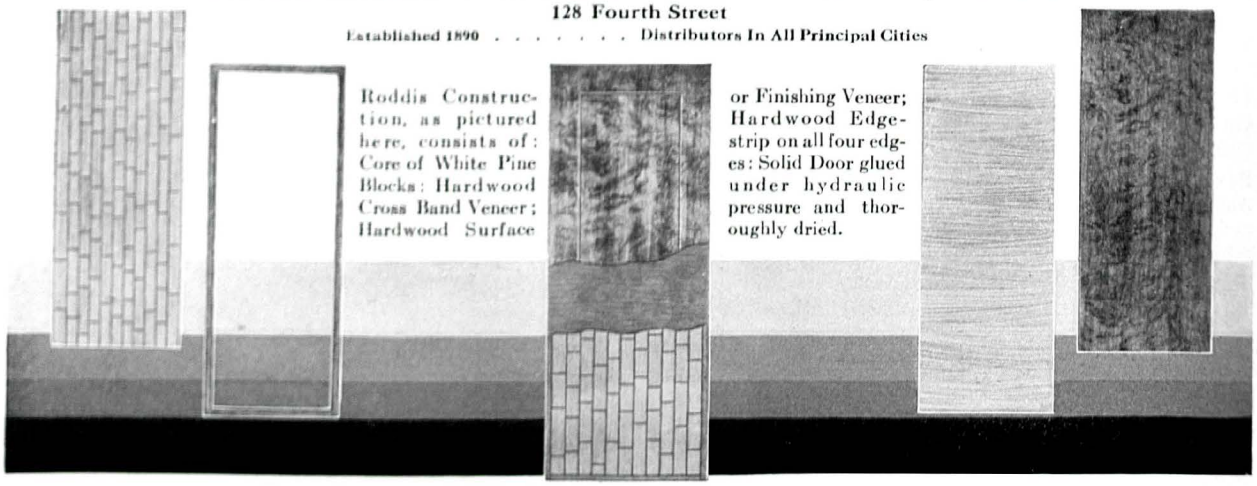

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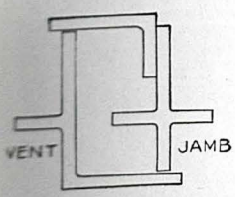

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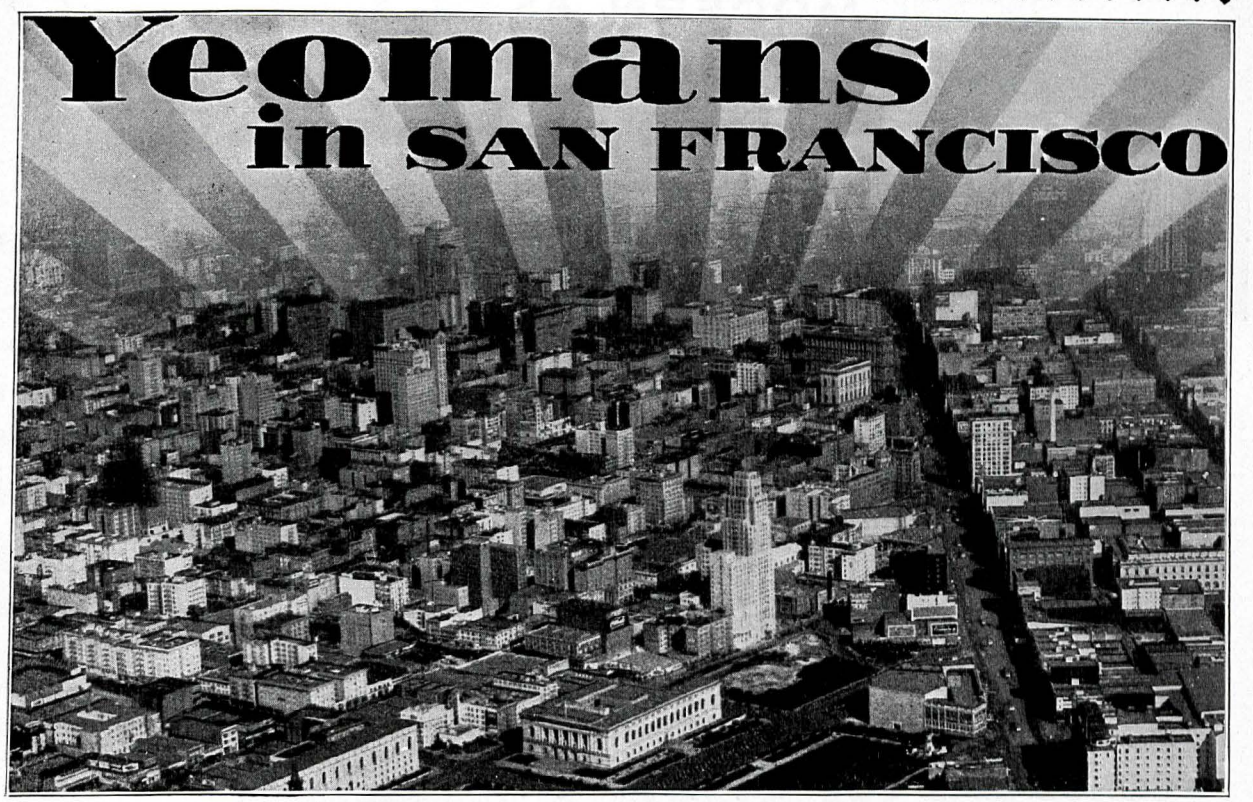

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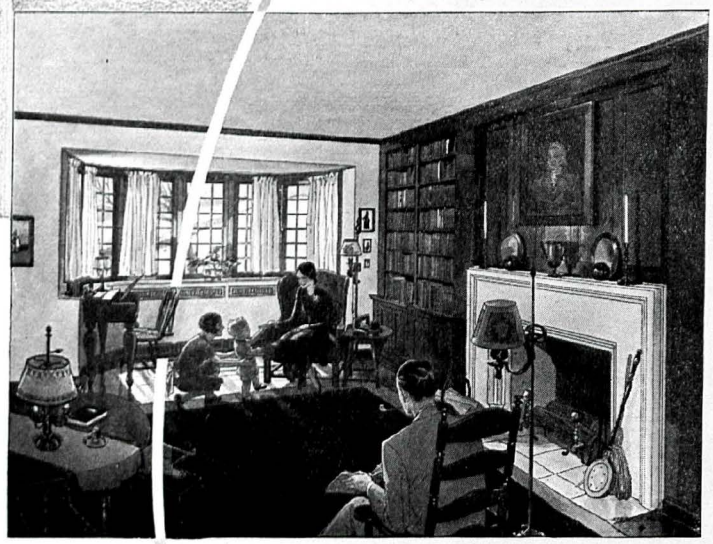

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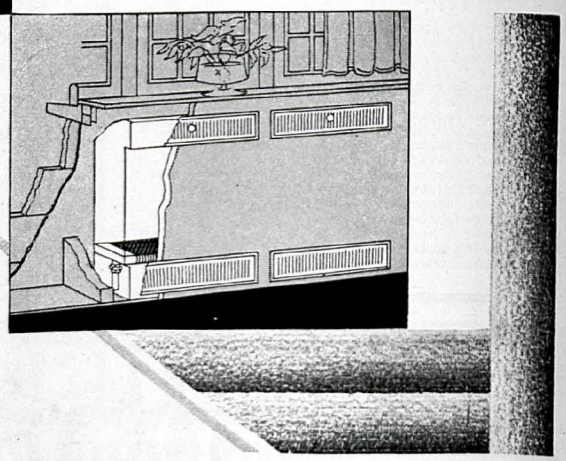

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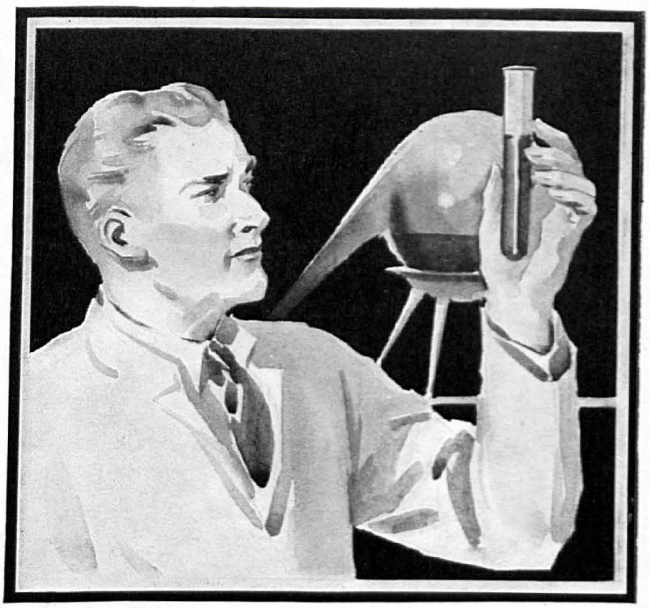

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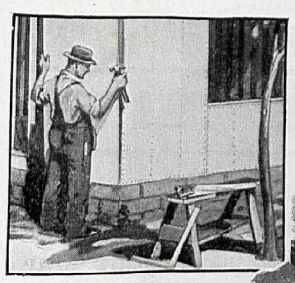

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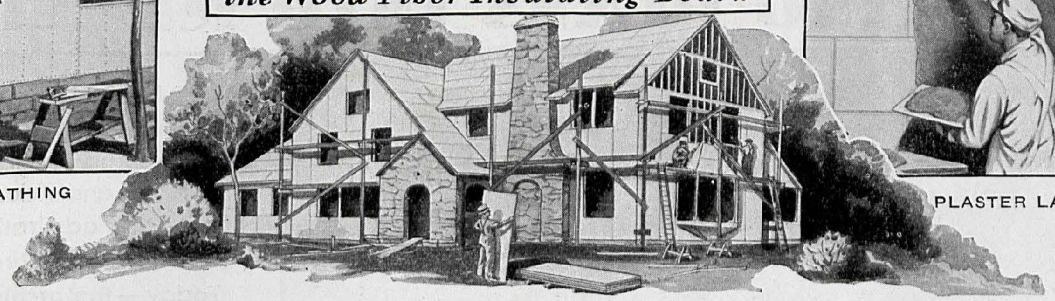

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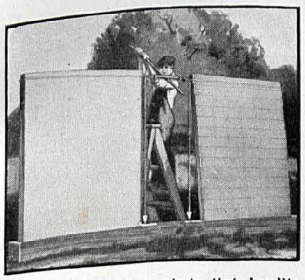

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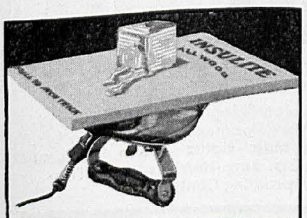

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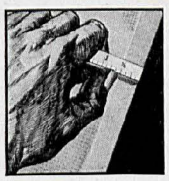

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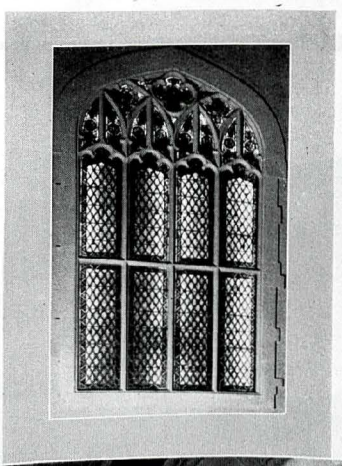

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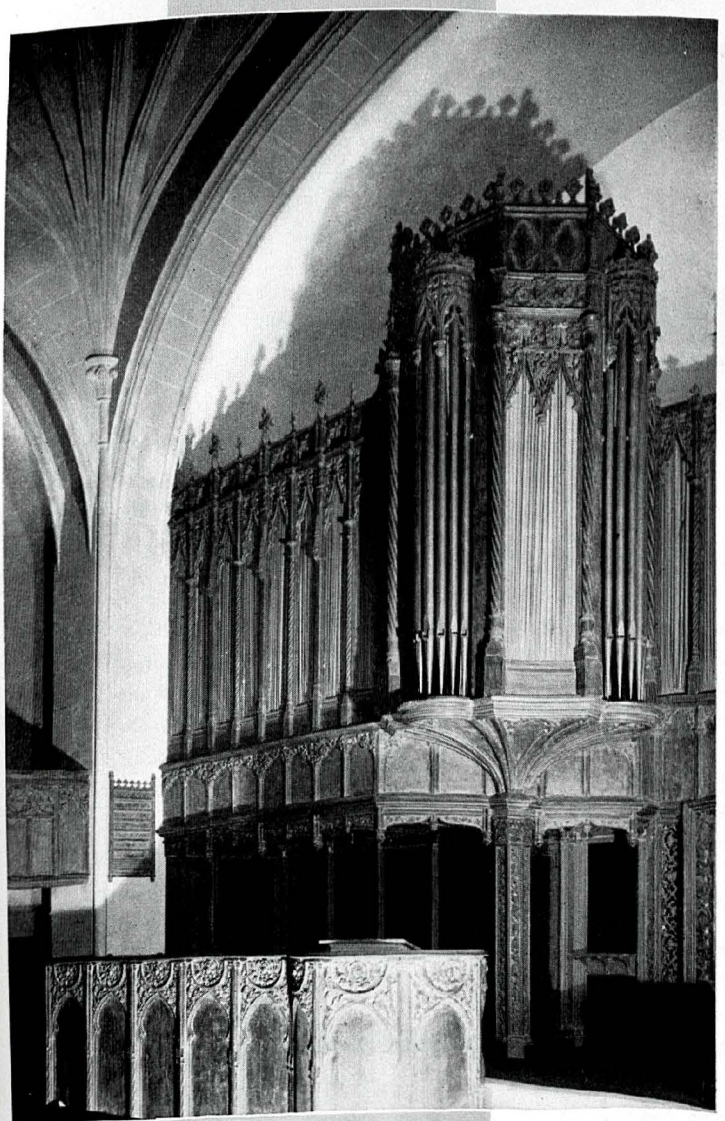

TILLION & TILLION
Architects

Effective use of Woodkast in Manhattan Towers *Chancel*

THE architects of Manhattan Towers, the new twenty-three story church and apartment hotel in New York, were confronted with a problem of materials in the design of the chancel. A rich effect of English Gothic wood carving was the one they sought to obtain. Natural wood could not be used because of its excessive cost, so a composition was sought which would be both dignified and durable.

The choice of Jacobson's Woodkast was a fortunate one. With this medium, the rich effect of a profusion of English Gothic carving was obtained at not too great expense and with the minimum of fire risk.

Woodkast is a composition material developed after years of experiment to simulate either old or new wood, in any open grain. In our latest catalogue are pictured a number of designs in which Woodkast is available, many of them reproduced from authentic examples of fine old wood carving. In case none of these are suitable for a particular job, new models can be made at a nominal charge.

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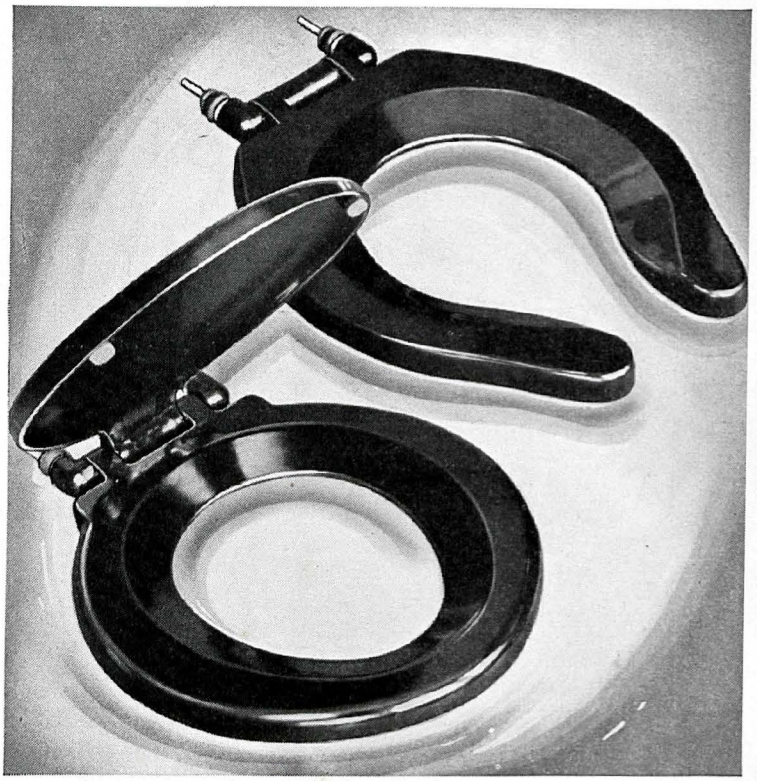

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With a hard, glossy smooth surface that is as easily washed as a china dish, Bakelite Molded is a most sanitary material for toilet seats. In addition it has the advantage of being stain-proof and non-inflammable, and so strong that there is little or no chance of splitting, warping or chipping.

Bakelite Molded seats are installed in many important buildings, among them being the State Bank of Chicago, Graham, Anderson, Probst & White, Architects, and the Chicago Medical and Dental Arts Building, D. H. Burnham & Co., Architects. These seats are available in types suited for Hotels, Office Buildings, Factories and Homes, and are made by the San Duro Mfg. Co., Rockford, Ill.

Bakelite Materials are also used for other building equipment including switch and outlet plates, doorknobs and escutcheons, floor plates, lighting fixtures and paneling and trim.

Write to us for a full list with the names of manufacturers.

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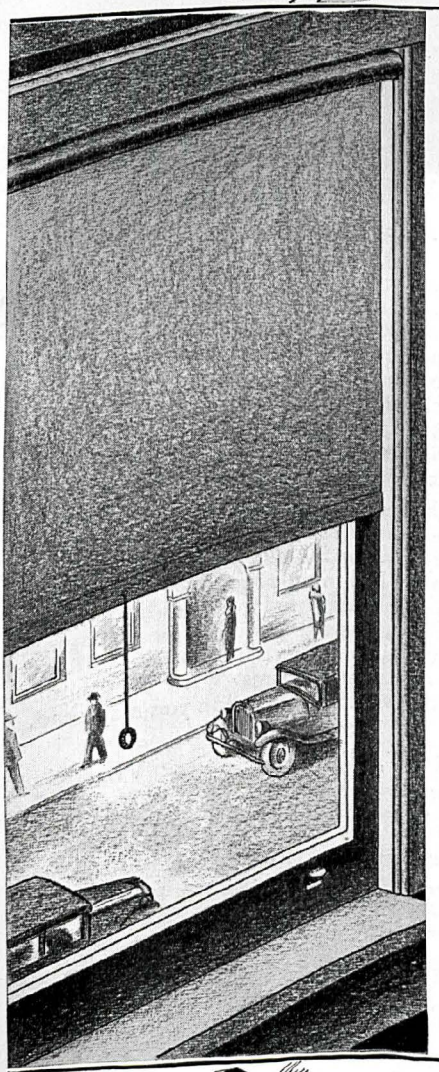

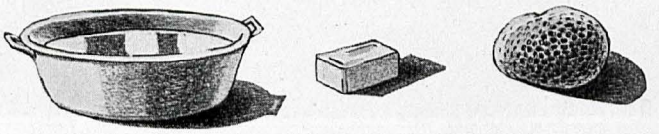

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SO EASY TO CLEAN. Dirt washes right off Kemitex Shade Cloth. With sponge, soap and water, Kemitex, no matter how badly soiled, may be quickly and easily restored to original beauty and cleanliness. No scrubbing is necessary, for dirt may get ON but never IN Kemitex insulated shade-cloth.

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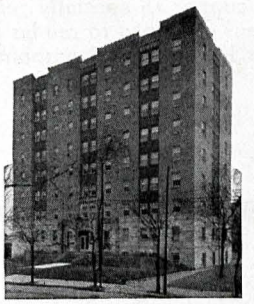
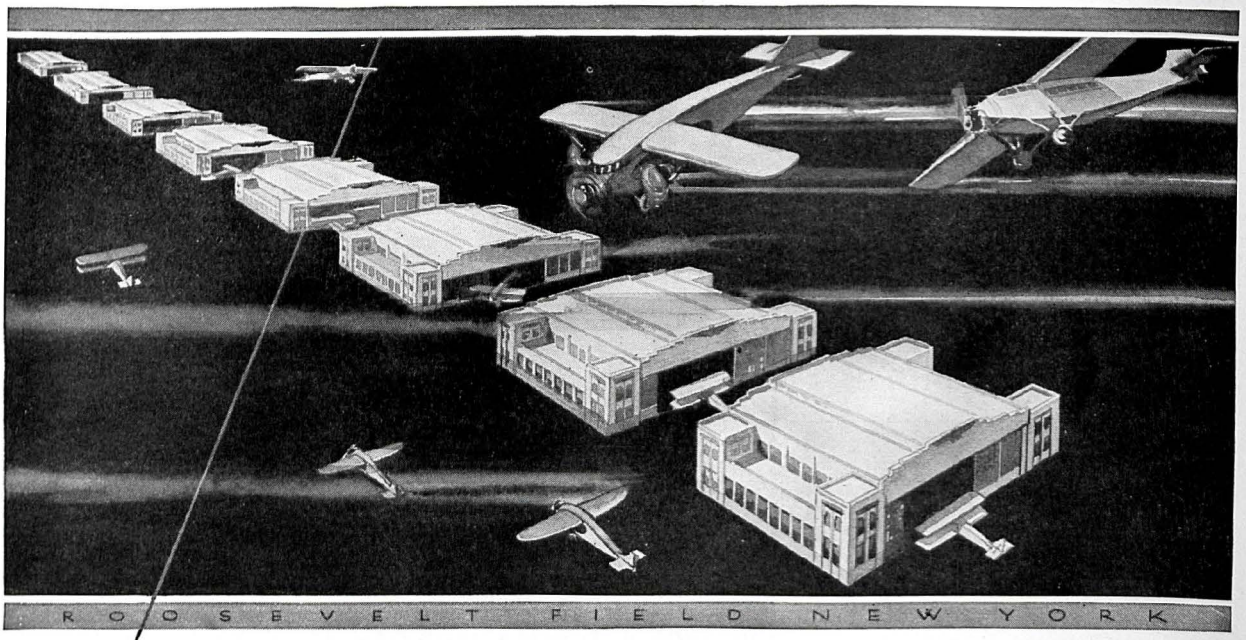


On the basis of comparative tests, Kemitex was selected for Ambassador Apartments of Pittsburgh—Marks & Kahn, Architects.

KEMITEX

A CHEMICALLY IMPREGNATED SHADE CLOTH



Architect, Kenneth Franzheim, New York, N. Y.

These Hangar Roofs Must Last!

For the metal roof decks of eight new hangars at famous Roosevelt Field more than fancied durability is the requirement, so special roofing sheets were specified to be made of COP-R-LOY, the Copper Alloyed Steel, by the architect, Mr. Kenneth Franzheim.

Durability for roofing, spouting, gutters, pipe for plumbing and heating systems, is obtained in COP-R-LOY at economical cost. COP-R-LOY is priced slightly higher than plain mild steel to cover the cost of adding pure ingot copper to specially refined Wheeling Steel, but it is thus equipped to render from two to several times longer life than steel without copper content.

Practically every test to determine relative corrosion resistance of steel made to various formulae, has established the unquestioned ruggedness of steel alloyed with copper, such as COP-R-LOY. When durability at any cost is the watchword, architects and engineers closely in touch with metallurgical practice, specify copper alloyed steel; and a great many write COP-R-LOY into their specifications because its superiority is one of their facts gleaned from observation and experience.

So these eight new hangars for famous Roosevelt Field, *likewise hangars at the new Curtis Airports at Valley Stream, L. I., and Baltimore, Md.,* are to have roof-decks of this fire-proof, lightning-proof and exceptionally durable COP-R-LOY, effecting business-like economy that is in accordance with good business judgment. You, too, can benefit in building by the use of COP-R-LOY in one or more of its many forms. Write for a booklet that may give you just the suggestion you may need.

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Save with Steel

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THE COPPER ALLOYED STEEL

Of the many products made of COP-R-LOY by the manufacturer of this modern rust-resisting steel, you should know particularly about COP-R-LOY Pipe, for plumbing, heating, refrigeration, irrigation, sprinkling systems; also for railroads, for oil development and many industrial purposes. It is made in all customary sizes with both black and galvanized finishes. Identified by distinctive marking, it is sold by leading distributors in all parts of the country. Specify COP-R-LOY Pipe for fullest satisfaction and trouble-free service.

Many products made of COP-R-LOY, the Copper Alloyed Steel, are available today through other manufacturers and their distributors. For such products requiring flat rolled sheets or tubular form of metal, COP-R-LOY was selected to increase their value and to put their cost within practical and economical limits. A list will be supplied with names of the manufacturers, upon request.

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FROM · MINE · TO · MARKET

Von Duprin

Self-Releasing Fire and Panic Exit Latches

The Advantage of the Separate Specification

There are two ways in which panic bolts are commonly specified. Some architects include them with the finishing hardware; others make them a separate item of the specifications.

The latter method has the very definite advantage of helping the building owner get what is specified. The former always tempts the occasional unscrupulous dealer to substitute cheaper devices as part of the finishing hardware contract.

Sweets
Pages C3130-C3135

It is to prevent this that we protect all hardware dealers by selling every reputable dealer at the same fair prices.

As a further means of insuring the delivery of the genuine, we urge that you specify panic devices separately from the finishing hardware—and, of course, by name.

VONNEGUT HARDWARE CO.
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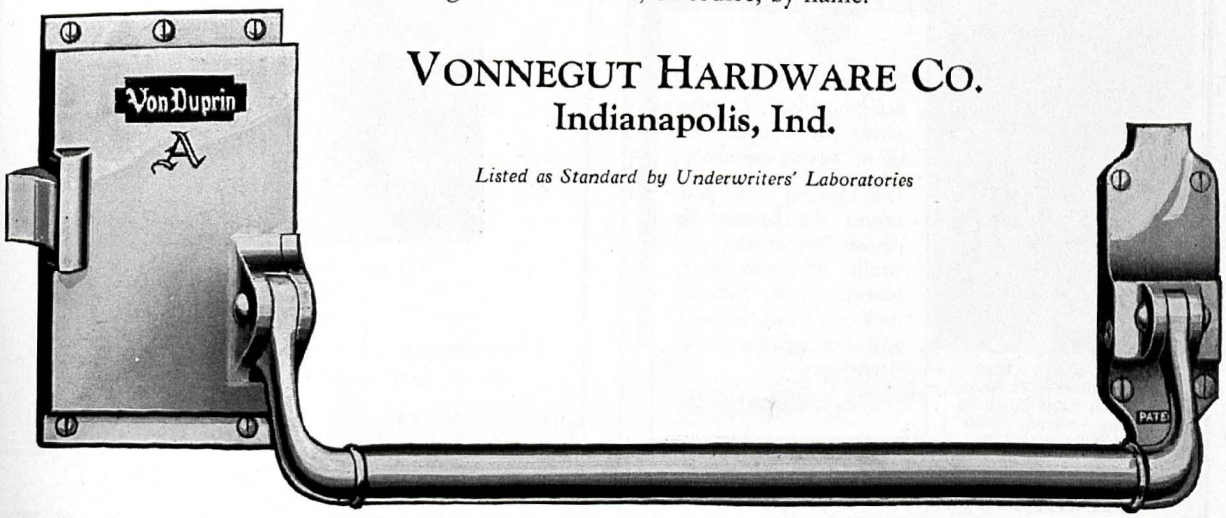
Listed as Standard by Underwriters' Laboratories



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GEORGE B. POST & SONS, *Architects* THOMPSON, STARRETT CO., *General Contractors*

Westinghouse Elevators are the natural selection wherever excellence is demanded. The foundation of service in the National Town and Country Club is based on the performance of the elevators — smooth landings, ease of control, speed and safety — in these, Westinghouse Elevators excel.

Westinghouse Elevators are the logical highways of modern architecture

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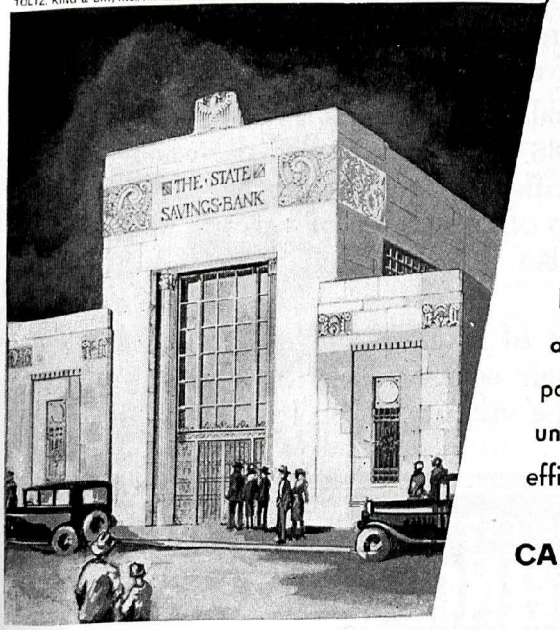

A conspicuous feature in the success of Carnegie Beams is their adaptability to all construction requirements, regardless of size or type of architecture. For the towering skyscraper challenging the ingenuity of the most skilled structural steel designers, or the small building requiring only a few tons of steel, Carnegie Beams offer a simplicity of detail, an ease of fabrication and erection, and a flexibility of design never before possible in structural steel. Carnegie Beams possess many unique advantages for those interested in economical and efficient steel construction. They merit your investigation.

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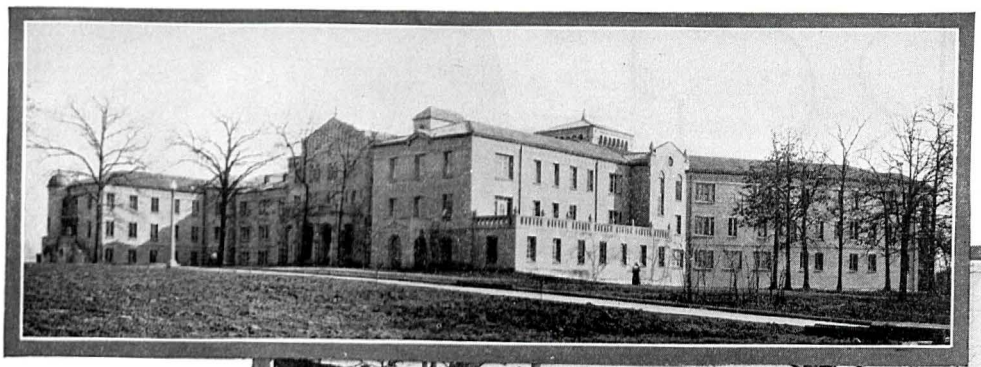
CARNEGIE BEAMS



Above: Mother House of St. Mary's Sisters, Third Order of St. Francis. *Right:* Villa Duchesne, Sisters of the Sacred Heart. St. Louis County.

Both are by O'Mears & Hills, *Architects*; Elliott & Barry Engineering Co., *Heating Contractors*.

ILLINOIS HEATING SYSTEMS

ILLINOIS HEATING SYSTEMS

TO THE ARCHITECT, engineer, contractor, owner—ILLINOIS *Heating Systems* give complete satisfaction in every type of building. They combine the advantages of quick, positive steam circulation, easy control of room temperatures, noiseless operation, durability of apparatus, fuel economy [approximately one-third over ordinary systems], and a minimum of operating expense.

ILLINOIS *Systems* are balanced systems. All valves and specialties are of ILLINOIS manufacture and designed to operate as a unit. This offers great advantages over assembled systems made up of specialties of various manufacture and design. It also gives unified responsibility and guarantee.

The outstanding merit of ILLINOIS *Heating Systems* is further evinced by their selection for these two magnificent institutions in the vicinity of St. Louis.

Write for Bulletin 22
AIA30c2 *Vapor Details*

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ILLINOIS ENGINEERING COMPANY

ROBT. L. GIFFORD President INCORPORATED 1900

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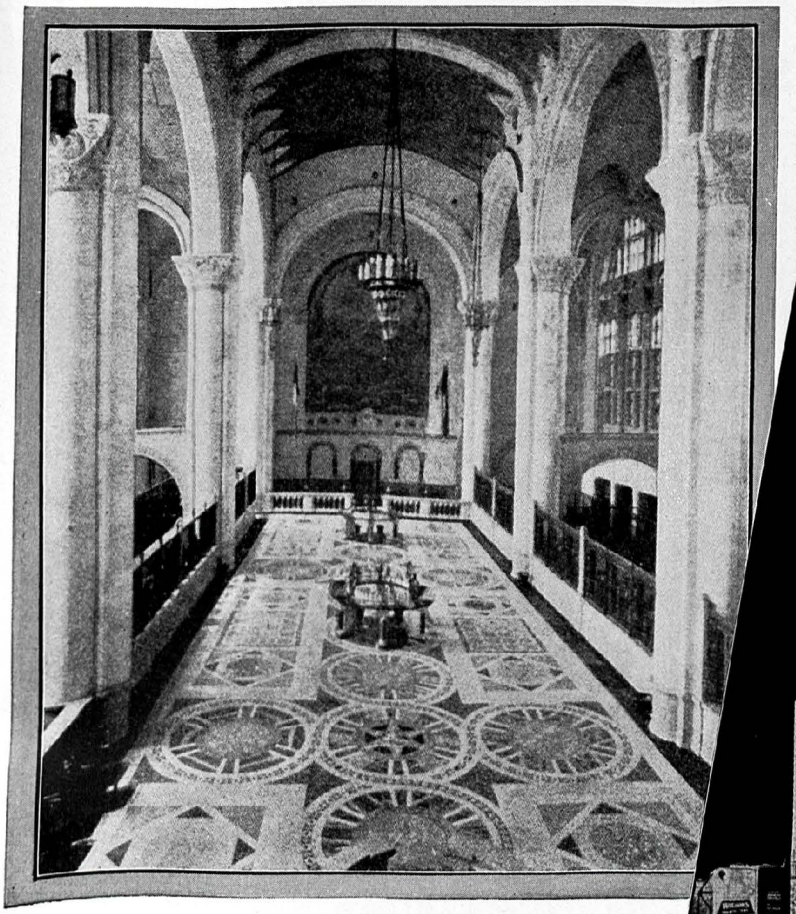

THE WILLIAMSBURGH SAVINGS BANK BLDG. BROOKLYN, NEW YORK

HALSEY, McCORMACK & HELMER, . . . *Architects*

FRANK SUTTON, ... *Consulting Engineer*

JOHNSON Room Thermostats control the direct radiators, separately, in the main banking room, offices, work spaces, etc. in this building.

Pneumatic push buttons are installed to control the vestibule, elevator lobby, entrance halls and additional banking room radiators.

The Johnson System controls each ventilating apparatus in the building: Johnson Cold Air Thermostats placed in the cold air inlet control the first row heater coils; a Johnson Warm Air Thermostat in the fan discharge controls the inner row of the heater coil.

In connection with each ventilating fan apparatus there is placed in the cold air inlet one copper louvre damper, operated by an electric magnetic switch. This switch is connected to the electric wiring to the motor of the fan; and when the fan is turned on to operate it opens the cold air in the louvre damper, and when the fan is stopped, it closes it. This arrangement of pneumatic electric control also applies to all vent fan apparatus.

Humidity control is obtained by humidostats placed in the fan discharge controlling three-way valves in the hot water line entering the spray nozzles. The hot water in connection with each fan apparatus is heated by a closed heater and in addition to controlling the three-way valve we also operate a steam diaphragm valve on the steam inlet to the closed hot water heater; thus preventing overheating of the water in the closed heater when the three-way valve closes off the hot water and is recirculating water from the air washer storage pan which lies at the bottom of the air washer.

SUCH wide-range completeness and thoroughness again emphasizes Johnson leadership, and the recognized value of automatic control for the heating and ventilating apparatus in a building.

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BRANCHES IN ALL PRINCIPAL CITIES

JOHNSON HEAT & HUMIDITY CONTROL

Cork Insures Silence

THE University of Washington is justly proud of this fine library. There is beauty here, and quiet. A pleasant place in which to study. Distracting sounds—clatter of feet and scraping of chairs—are silenced with the hand-laid floor of Armstrong's Cork Tile.

In this library, in other libraries . . . and in churches, hospitals, and schools . . . silence is important. That is why the answer is Armstrong's Cork Tile. The resilient tiles silently cushion every step.

An Armstrong Cork Tile Floor breathes the quiet dignity and old world beauty that distinguishes a skilfully designed hand-laid floor. Three shades of rich brown, natural colorings of clean baked cork, allow the architect to plan appropriate designs in keeping with *any* type of interior.

Nor are considerations of a more practical nature lacking in the selection of a floor of Armstrong's Cork Tile. Here are offered warmth, foot-comfort, and ease of cleaning. And permanence—a long life with no loss of appearance or cushioning resiliency. In short, all the quality and dependability that architects have learned to expect in a material sold under the name Armstrong, whether it be linoleum, corkboard insulation, or any other product.

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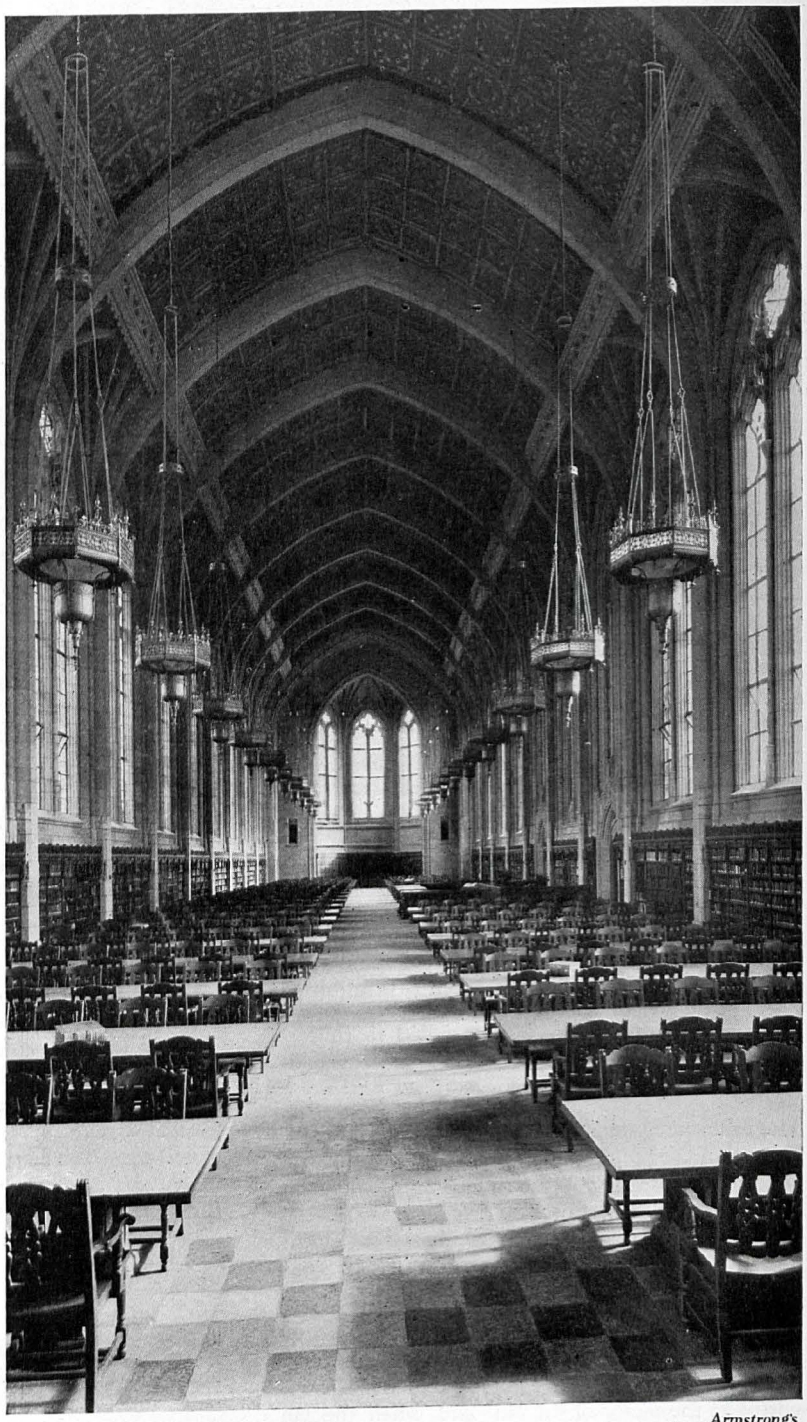
Let us send you samples of these beautiful tiles. Also, our booklet, "Custom-Built Floors of Cork," which will give you all the facts about Cork Tile, and Linotile, too, another hand-laid Armstrong Floor. Address Armstrong Cork Company, Custom Floors Department, Lancaster, Pennsylvania.



Main reading room in University of Washington Library, Seattle, Washington. The floor is Armstrong's Cork Tile. Bebb & Gould, architects.

Armstrong's (A) Product

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MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM

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This Company is the leading manufacturer of Black and Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates for every known purpose. Sold by leading metal merchants. Our booklet, *Anti-Corrosive Metal*, describing the enduring qualities of KEYSTONE Copper Steel, will interest architects, engineers, contractors, sheet metal workers, and builders.

Save with Steel

CONTRIBUTOR TO TRADE RESEARCH DIVISION, NATIONAL ASSOCIATION OF FLAT ROLLED STEEL MANUFACTURERS

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by Starrett & Van Vleck

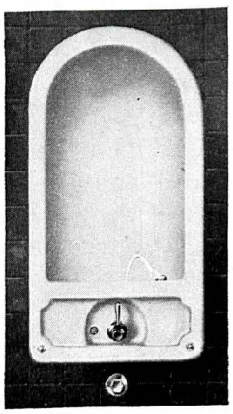
RENDERING *by* Hugh Ferriss

FOUNTAINS *by* Halsey Taylor

Abraham & Strauss Building
Brooklyn

THE New Abraham and Strauss Department Store Building in Brooklyn as it will look when completed is shown above in a rendering by Hugh Ferriss. The architects, Starrett & Van Vleck, ever mindful of the comforts and conveniences such a structure should insure the public, selected only the finest equipment throughout. In this superbly modern, block-long edifice Halsey Taylor Drinking Fountains safeguard the health of shoppers and employees alike, No. 626 recess type, as illustrated, in color, being used.

For schools, hospitals and industrial buildings too, architects everywhere recognize that Halsey Taylor Drinking Fountains meet the time-tested traditions of their profession and that they can specify them with fullest confidence. »The Halsey W. Taylor Company, Warren, Ohio.



No. 626
An attractive recessed Vitreous China Wall Type Fountain used in the building shown.

See Sweet's Architectural Catalog~ 14 pages

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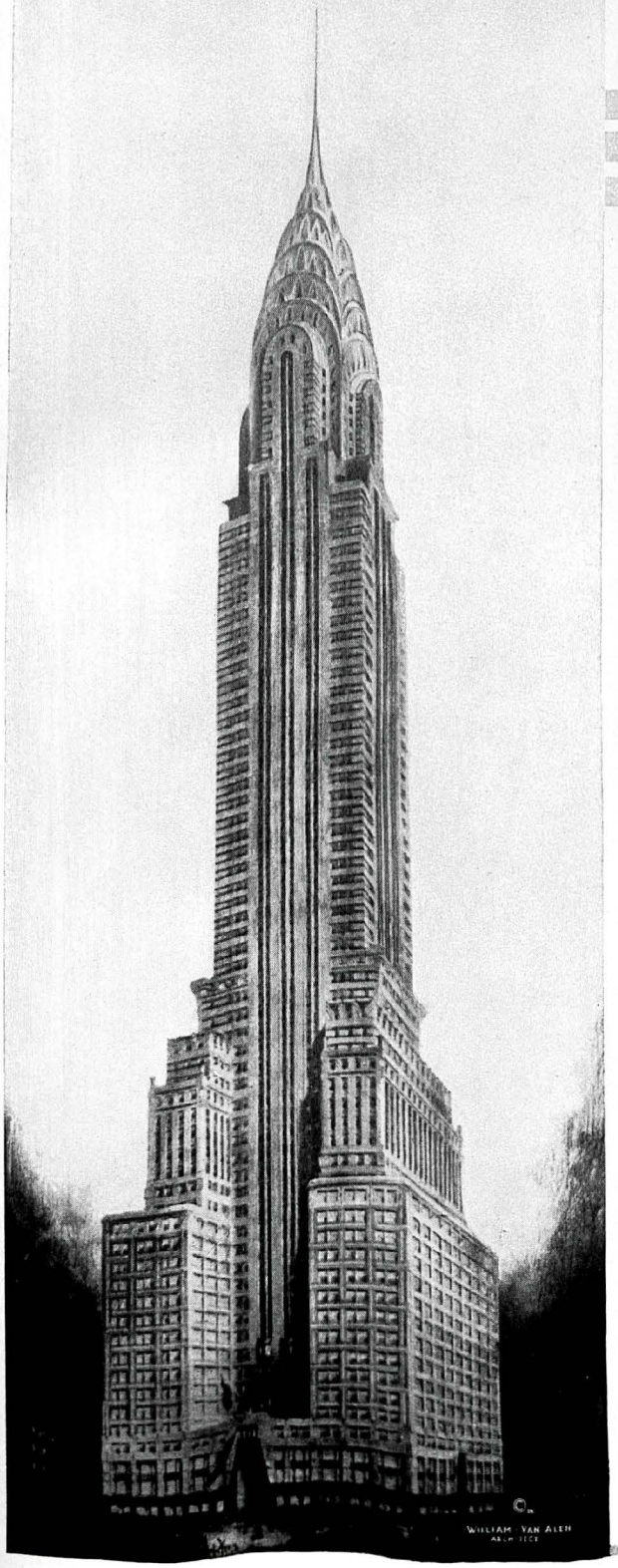
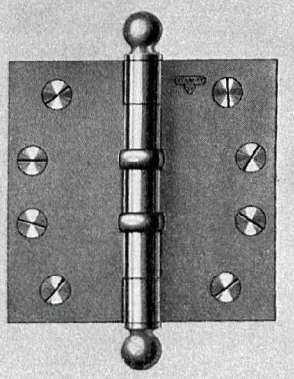
Drinking Fountains
THE SPECIFICATION FOR SANITATION



STANLEY
BALL BEARING
HINGES



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Stanley Ball Bearing Hinges swing the doors of the highest building in the world.

In the selection of materials for the Chrysler Building, Architect William Van Alen has built for permanency. To assure smooth, trouble-free operation of the doors for the life of the building, Stanley Ball Bearing Hinges were used throughout.

In your own work you will find our "Architects Manual of Stanley Hardware" most useful. Send for a copy.

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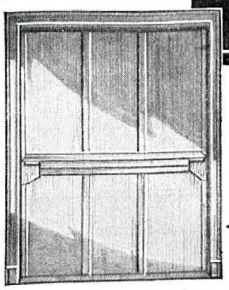

SECURITY DOORS . . . *OF COURSE*

IT is especially significant that SECO Power-operated Freight Elevator Doors were chosen for the General Motors Research Laboratory Building, Detroit—where added speed, complete operating reliability and security are paramount features. The doors open automatically as the elevator car reaches the floor level.

SECO Heavy-duty Doors are rigidly and heavily constructed, with extra heavy trucking bars . . . are evenly counterbalanced and truckable . . . and because of their specially-lubricated ball-bearing sheaves and anti-friction shoes, they operate quietly, quickly and easily.

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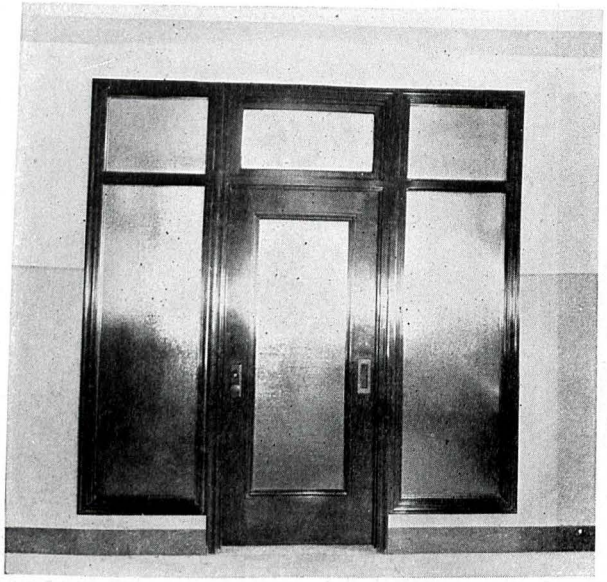
SECURITY DOORS

Make good freight elevators more efficient

Hollow Metal Doors by Art Metal

in Detroit's David Stott Building

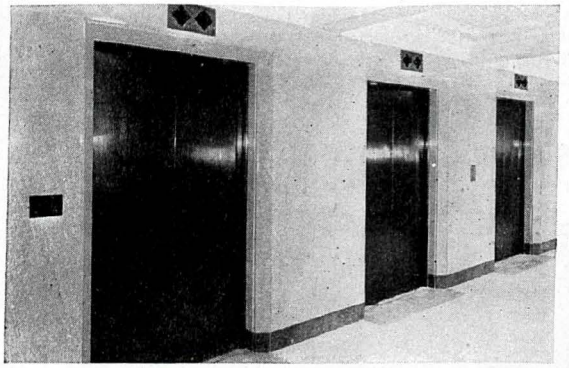


300

stair and corridor doors. Simple, permanent as the building itself . . . and fire-resisting as well. These are the qualities that led to the selection of Art Metal for the doors and trim in this new 35-story Detroit skyscraper.

210

bi-parting, steel elevator doors. These Art Metal units, while conforming to the character of the architectural design, deliver efficient and lasting service. Elevator banks similar to this one are used in each of the 35 floors. On the first floor six Art Metal cast bronze units add beauty to the lobby.



For more than forty years, Art Metal has been supplying hollow metal and bronze doors, as well as other equipment for office buildings, banks and public buildings throughout the country. The experience gained in these years of service is available to architects and builders. Any contract, regardless of size or diversification, receives competent and expert attention. A letter to us will bring a representative qualified to consult with you on any architectural metal installation. Address your request to the Art Metal Construction Company, Jamestown, New York.

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JAMESTOWN - NEW YORK

BRONZE AND STEEL INTERIOR EQUIPMENT
FOR BANKS, LIBRARIES AND PUBLIC BUILDINGS
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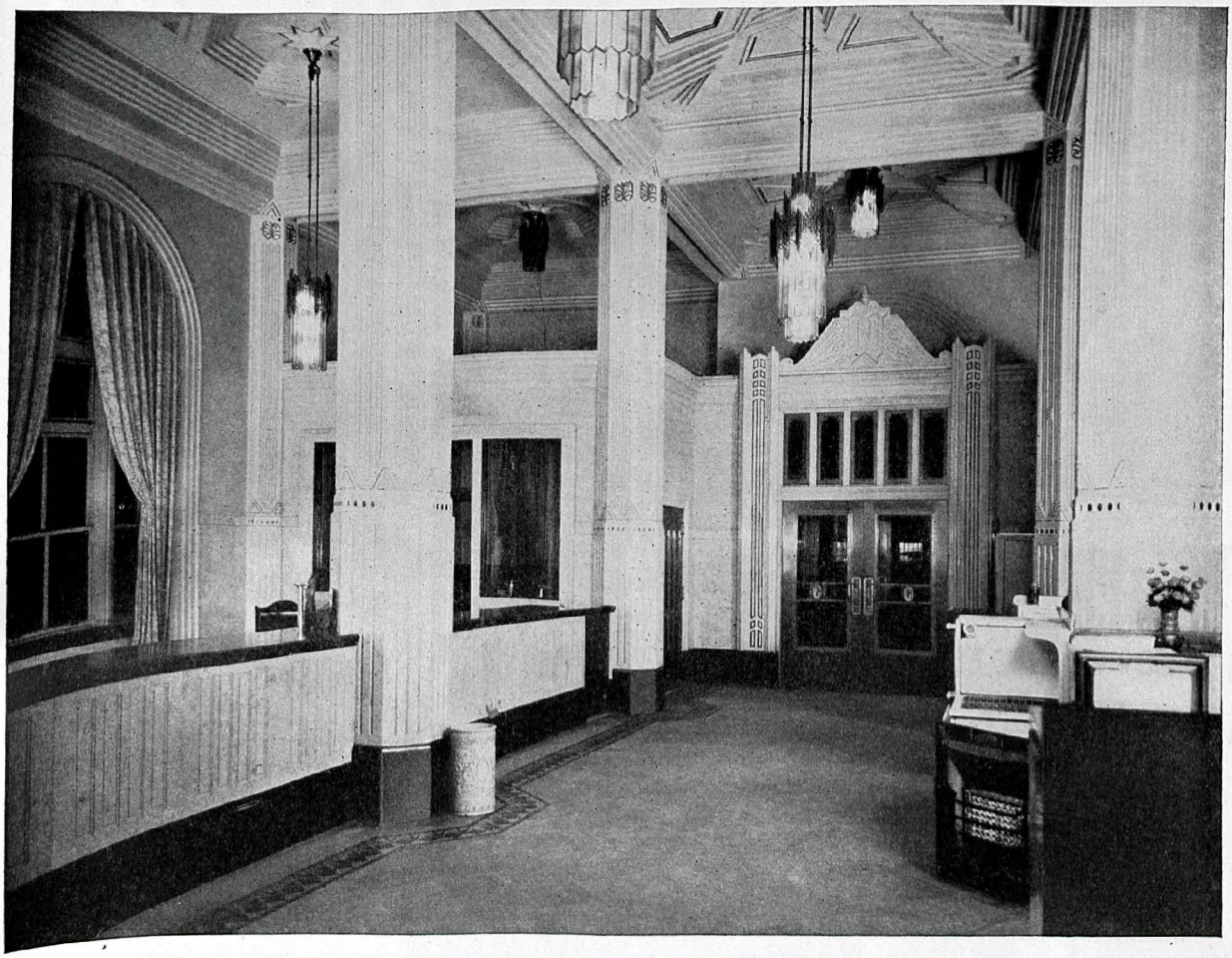

The Modernistic Movement

PLATE I

THIS interior of the Oklahoma Natural Gas Building at Tulsa, Okla., represents the modern trend in architecture. It was designed by A. M. Atkinson of Tulsa. The marble is Rose Tavernelle, with Belgian Black base and deal plates. It was finished in our Dallas shops and installed by their workmen.

VERMONT MARBLE COMPANY—PROCTOR, VERMONT

Branches in the Larger Cities

See Sweet's Catalog for Specifications and Other Data

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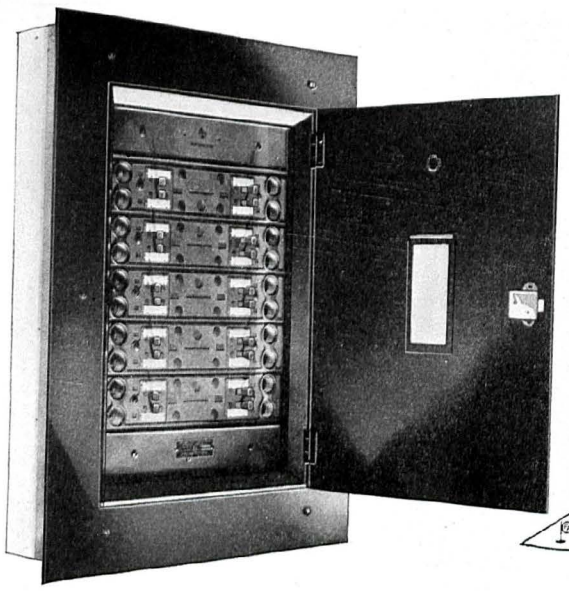

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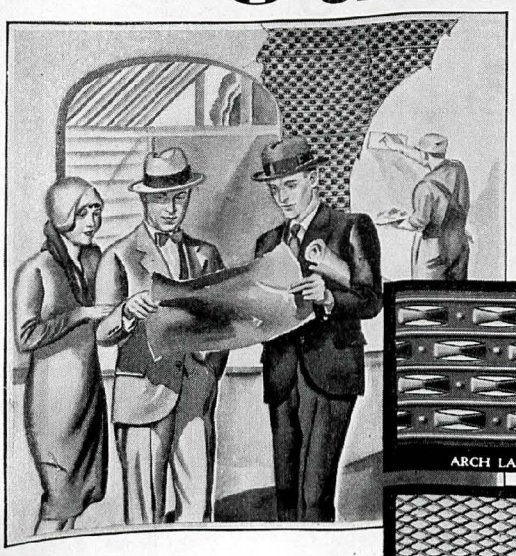
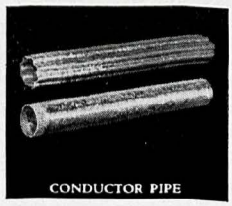
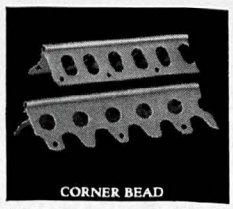
IN HOME CONSTRUCTION FOR MORE THAN 39 YEARS

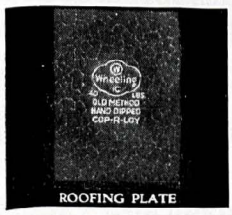


ARCH LATH


CONDUCTOR PIPE


DIAMOND LATH

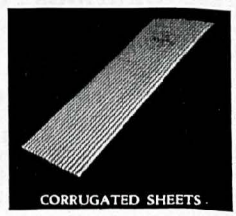

CORNER BEAD



ROOFING PLATE


BAR RIB LATH


SPANISH TILE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COP-R-LOY is a refined steel to which, while molten, pure copper has been added. In its making, the essentials of strength and malleability are *combined* with greater durability—a quality of vital importance wherever there is a tendency of metals to deteriorate. It is a modern development of mild steel, with ability to withstand atmospheric conditions several times longer than steel without copper content.

Save with Steel

Wheeling
CORRUGATING COMPANY

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WHEELING BUILDING PRODUCTS
Now Made of
COP-R-LOY
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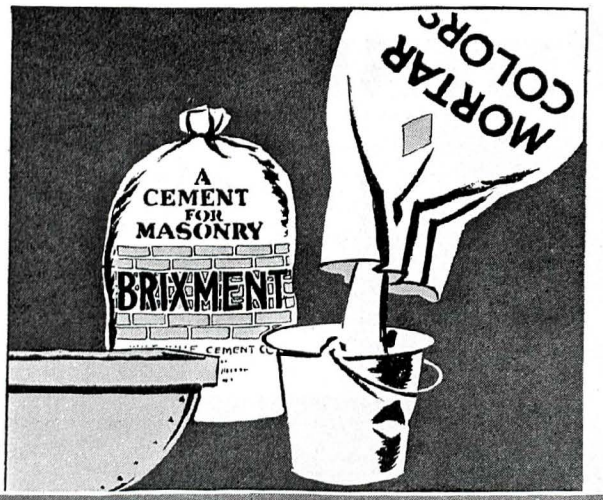
THE COPPER ALLOYED STEEL

From lath for plastering to durable steel tiles for roofing there is now one high standard of service identified by the Wheeling registered trade mark. From 39 years' experience in the construction field Wheeling announces a signal improvement in building products—the use of a more durable steel, especially alloyed against corrosion and wear.

You specify *safely* and with saving when you use the Wheeling trade mark as your guide to these efficient and longer lasting essentials made of COP-R-LOY, the Copper Alloyed Steel.

WHEELING CORRUGATING COMPANY, Wheeling, W. Va.
Branches: New York Buffalo Philadelphia Chicago Kansas City St. Louis Richmond Chattanooga Minneapolis Des Moines Detroit Columbus, Ohio



PREVENT FADING OF MORTAR COLORS

FADING of mortar colors is usually caused by the presence of strong acids or alkalies in the mortar itself.

Brixment mortar never causes fading because it contains none of these injurious chemicals.

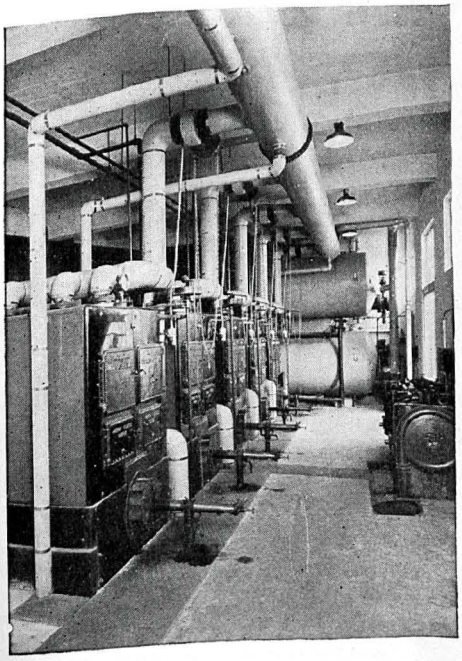
An added protection is the water-repellent quality of Brixment which prevents moisture from penetrating the joint and leaching out the pigment.

Brixment is therefore recommended and endorsed by leading color manufacturers themselves. Louisville Cement Company, Incorporated, Louisville, Kentucky.

CEMENT MANUFACTURERS SINCE 1830

BRIXMENT

• In California's newest school



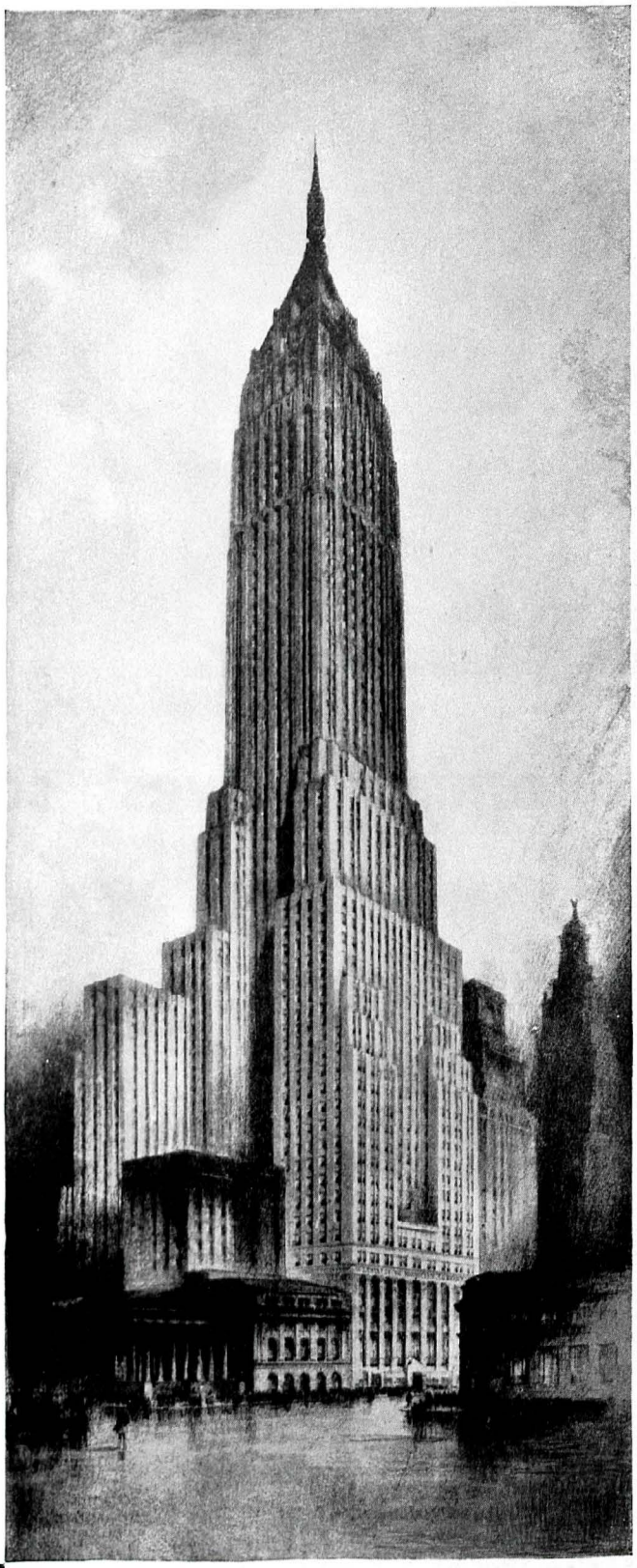
MODERN WARMTH protects the pupils

The new East Oakland High School is a fine example of the thorough planning and construction that goes into most public buildings today.

Naturally when it came to heating equipment only the most efficient plant could be considered. That is why a battery of five Ideal Redflash Boilers was installed—one of the largest low pressure heating installations on the Pacific Coast.

AMERICAN RADIATOR COMPANY

40 WEST 40th STREET, NEW YORK, N. Y.



BANK of MANHATTAN BUILDING

New York City

Framework of Bethlehem Wide-Flange Structural Shapes

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STEEL COMPANY

General Offices: Bethlehem, Pa.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Buffalo, Pittsburgh, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

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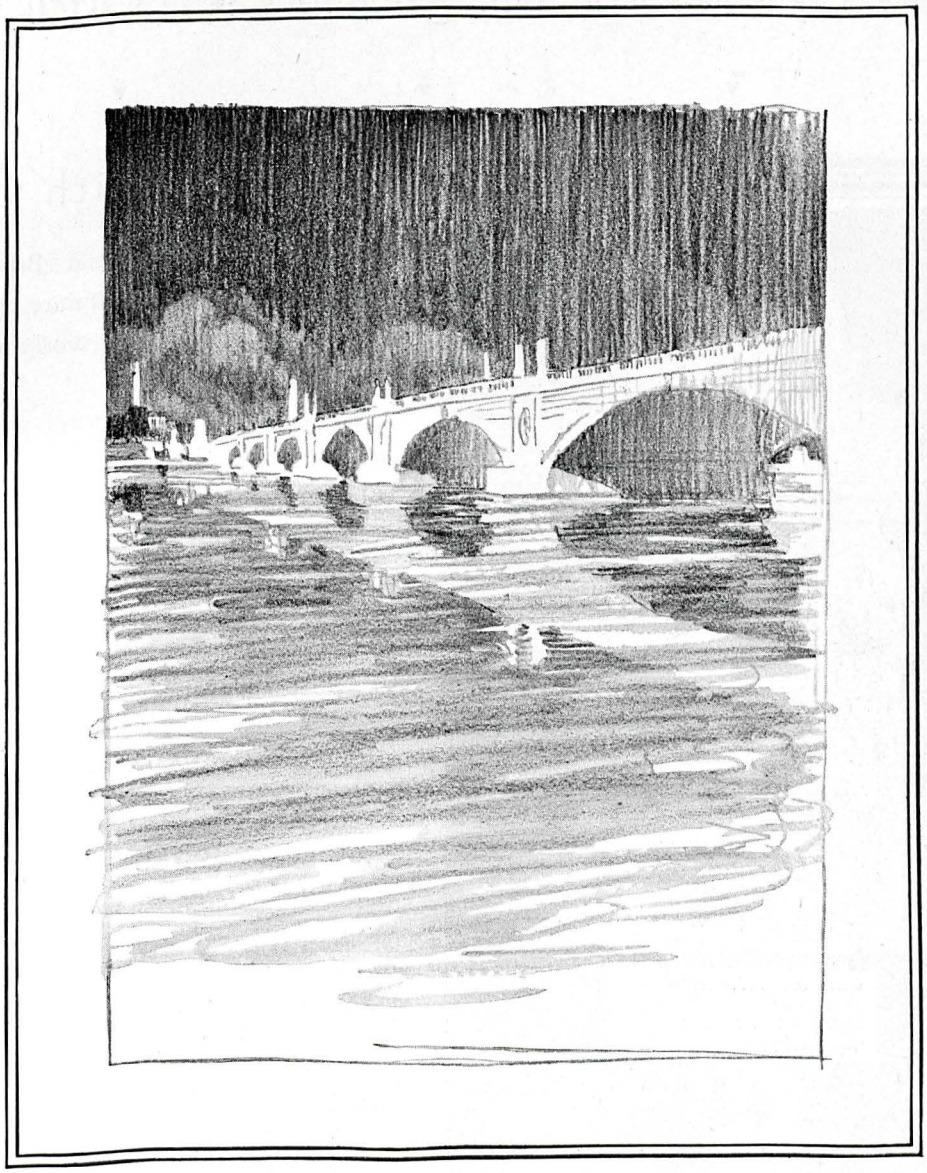
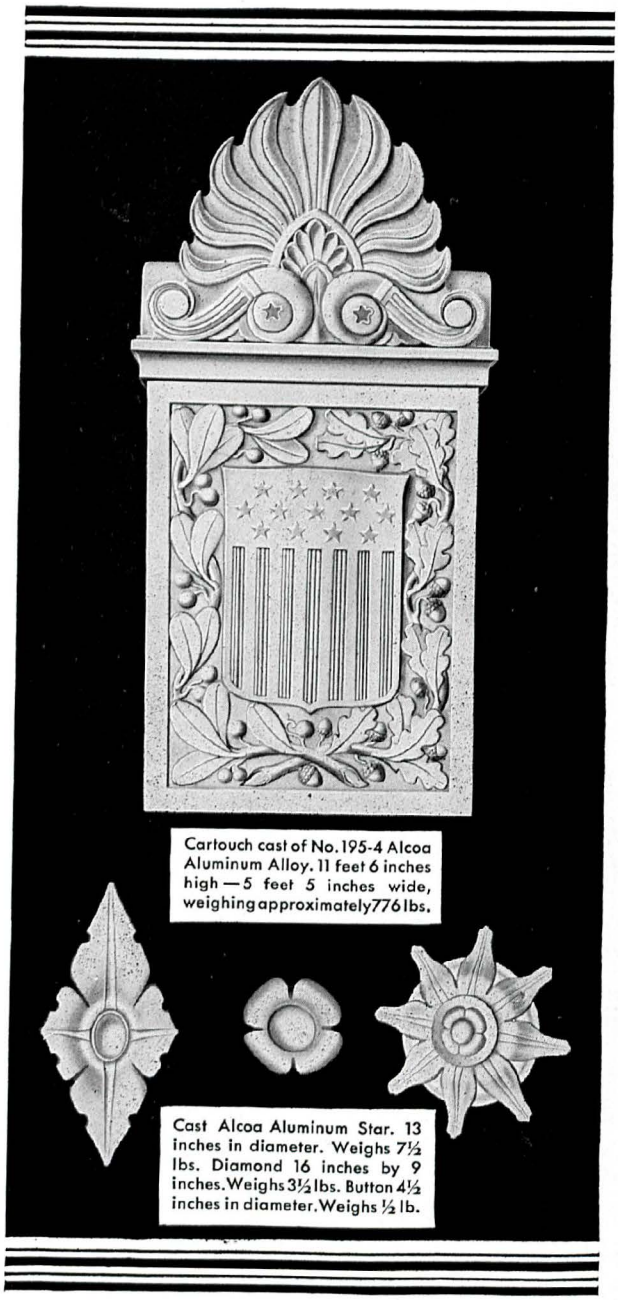
BETHLEHEM



Bascule draw span for Arlington Memorial Bridge at Washington, D. C. McKim, Mead and White, architects. Phoenix Bridge Company, Phoenixville, Pennsylvania, contractors for bascule span. Decorative castings, balustrade, balustrade cap, base and rail, etc., of Alcoa Aluminum. See next two pages for particulars.

Draw Span of Arlington Memorial Bridge



Cartouch cast of No. 195-4 Alcoa Aluminum Alloy. 11 feet 6 inches high — 5 feet 5 inches wide, weighing approximately 776 lbs.

Cast Alcoa Aluminum Star. 13 inches in diameter. Weighs 7½ lbs. Diamond 16 inches by 9 inches. Weighs 3½ lbs. Button 4½ inches in diameter. Weighs ½ lb.

Lightness with Strength

The Arlington Memorial Bridge, of which McKim, Mead and White are the architects, is one of the outstanding works of monumental architecture.

About 50,000 pounds of cast Alcoa Aluminum are being used on the bascule draw span for the cartouch and keyblock, for decorative castings, for balustrade, balustrade cap, base and rail, and for bed molding and torus molding. By using Alcoa Aluminum for these parts of the draw span, a dead-weight saving of approximately 100,000 pounds will be secured. Any other metal that might have been used would weigh roughly 3 times as much as the Alcoa Aluminum.

For decorative purposes, the cartouch here illustrated, was used on each side where the bascule leaves meet. The small ornaments, of which there are hundreds, were used in the load-carrying substructure of the lift section.

By using the light, strong Alloys of Alcoa Aluminum for both structural and decorative architectural purposes you are assured of maximum strength, coupled with extreme light weight. Alcoa Aluminum is much easier to truck and erect. In addition, Alcoa Aluminum does not require painting as a protection against rust. Alcoa Aluminum cannot rust and it therefore will not

relieved of 100,000 lbs. dead-weight

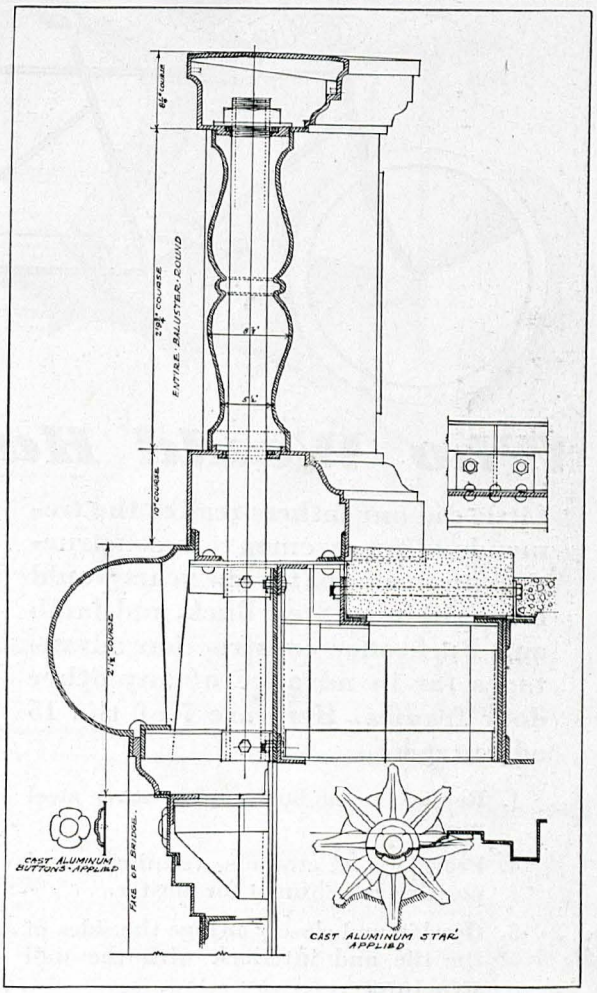
streak adjoining surfaces. This modern metal possesses great ductility—a characteristic that eliminates many of the difficulties encountered in erecting other metals. Alcoa Aluminum can be easily fitted into the irregularities in stone work.

On commercial and institutional buildings Alcoa Aluminum is being extensively used for spandrels, cornices, doors, grille work, newels, ornamental fences, panels, skylight and window frames, ventilators and sheet roofing.

Specifications

These aluminum cast items were made to Navy Specifications No. 46-A-1a, which correspond to Alcoa Aluminum high tensile strength Alloys No. 195-4. This Alloy is specified where tensile strengths are required higher than those offered by No. 43 Alcoa Aluminum Alloy, which is customarily used on architectural work.

Our nearest office will be glad to talk with you about the architectural use of Alcoa Aluminum and its light, strong Alloys that have been developed for use in this field. Address ALUMINUM COMPANY *of* AMERICA; 2406 Oliver Building, PITTSBURGH, PENNSYLVANIA.



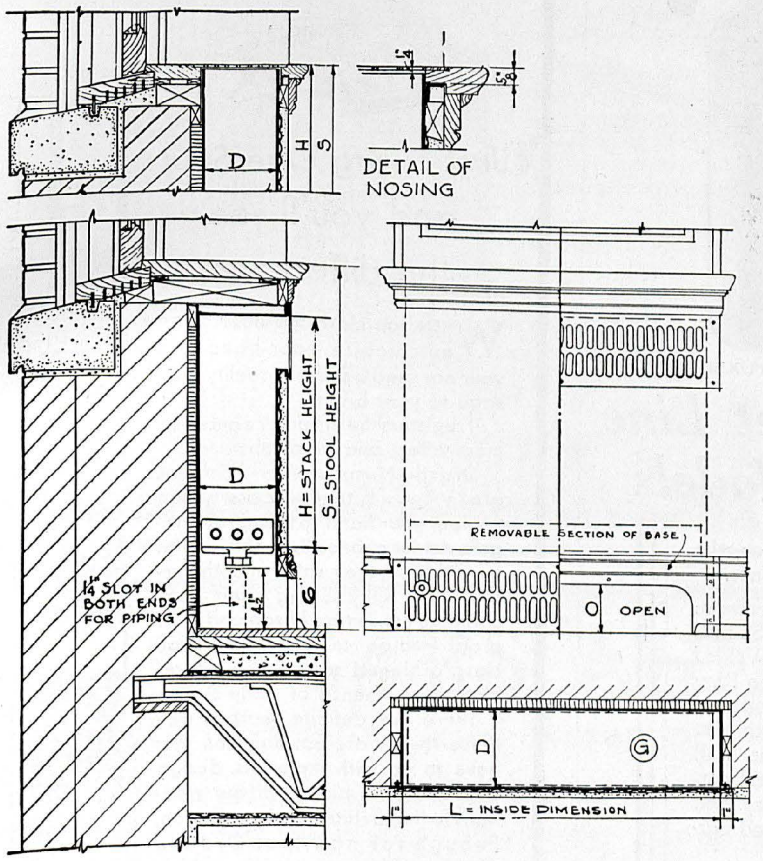
ALCOA

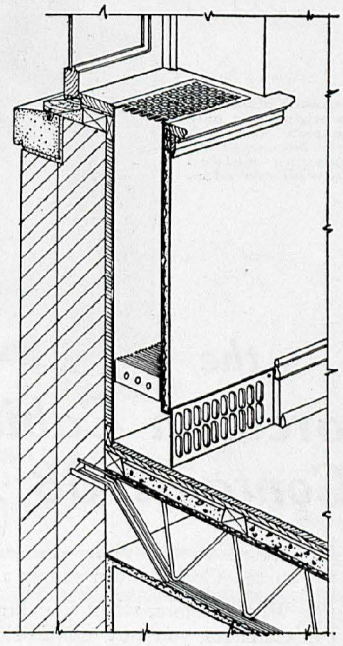
ALUMINUM

Completely recessed with plaster front*

. . . another type of installation possible with Trane Concealed Heaters

NOW SOLD IN THE PRICE RANGE OF CAST IRON





*Architects, engineers and heating contractors are invited to mail the coupon for complete construction and installation details about all three major types of the Trane Concealed Heater that sells in the price range of cast iron radiators.

NOTES

This detail includes heater with complete cabinet for plaster front installation. Any combination of inlets and outlets. Stool outlet grille may be furnished or be by others.

PLANS — (G) Complete cabinet, back and side spot welded together, with metal front.

PIPING — Space of 6" allowed below heater for piping connections. For end connections enclosed, allow additional length in cabinet and vertical baffle to close stack.

DIMENSIONS —

S—Stool height from architect's or engineer's drawings.
H—Stack height — Top of outlet less 6".
D—3½", 5½", 7½", inside dim.
O—3¾".
L—Inside dimension.

INSTALLATION — Recesses of proper depth and length to be called for on plans by architect or engineer. Allow for anchoring grounds. Allow space for insulation at back if desired. Metal front is provided with holes for anchoring metal lath or blocking for wood or marble front.

TRANE
CONCEALED HEAT

THE TRANE COMPANY, Dept. 6
302 Cameron Ave., La Crosse, Wis.
Also Trane Co. of Canada, Ltd., Toronto, Ont.

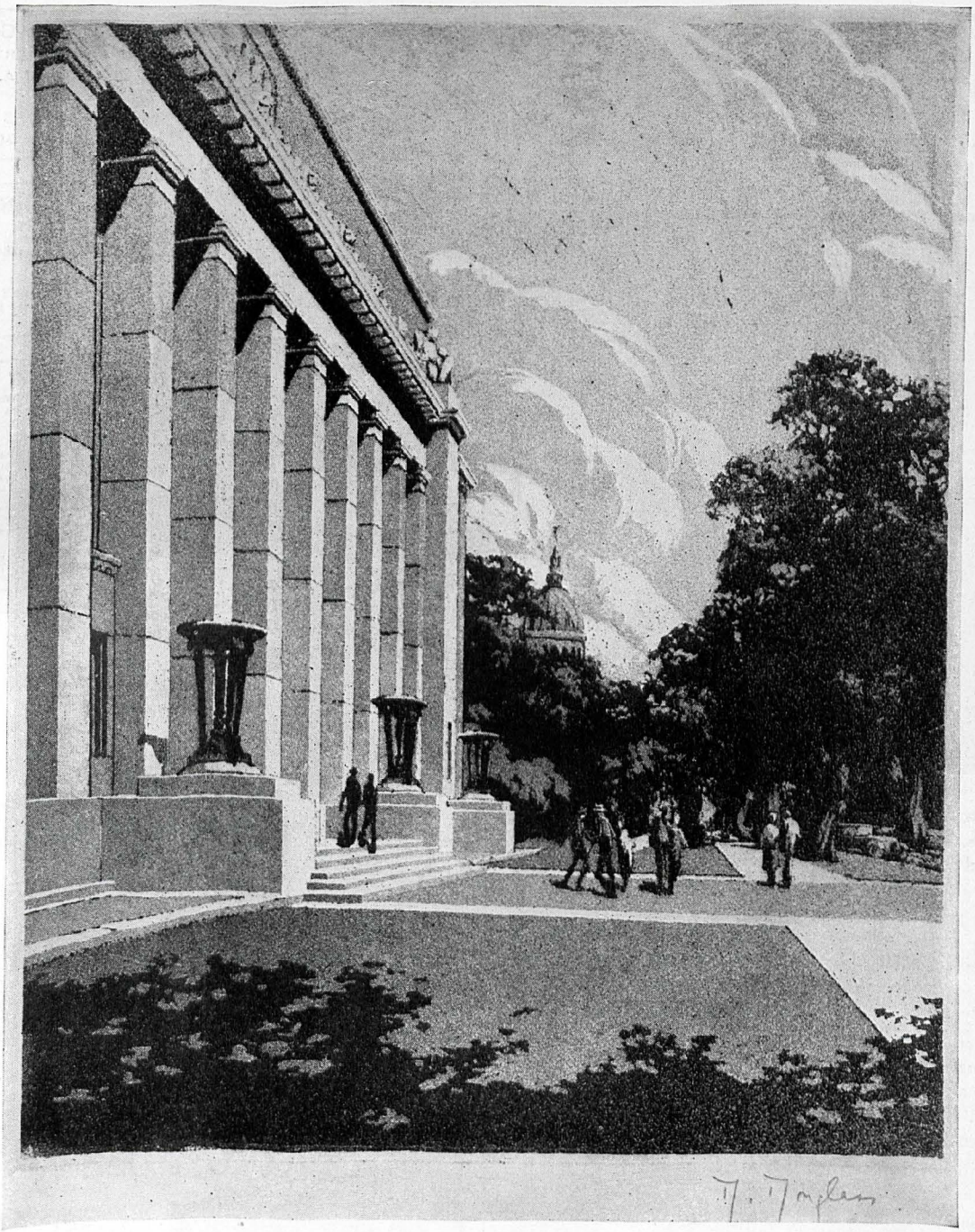
Send architectural details and complete information on Trane Concealed Heaters for large buildings.

Name.....

Company.....

Street and No.....

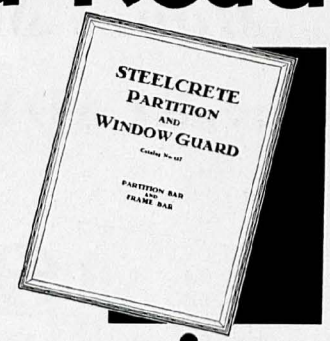
City.....State.....

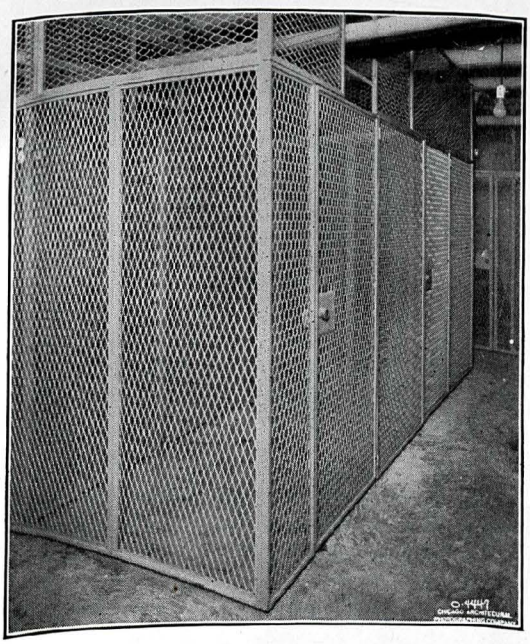


Not Until You Read this Booklet

Will You Appreciate the Amazing Advance in

Partition Construction





BEAUTY that is PERMANENT

The mesh is not woven or welded—but drawn *from a solid plate of steel—stronger and more rigid than a like weight of solid metal. Nothing to ravel. Steelcrete is free from objectionably sharp edges. Many architects are specifying Steelcrete Window Guards because they are ornamental as well as unusually strong and rigid. Can be attached permanently, or hinged if required. For specifications of Steelcrete and Framing Materials, see Sweet's Catalog, Volume A, Page 370.*

Partitions and guards need no longer be an eyesore to be useful. Open Mesh work—specially fabricated for your client's needs—can now be "made to measure", close at hand.

For Steelcrete announces the first improvement in Open Mesh partitions that has taken place in the last thirty years! By the use of integral units—Steelcrete Mesh, Frame and Partition Bar with accessories—construction has been *standardized*, assembly speeded up, costs reduced.

And this standardized service has been *nationalized.* Nearby is a Steelcrete Shop, ready to cooperate with you, and execute Open Mesh projects at lowest cost to your client. The thousand and one places where Steelcrete Partitions, Window Guards, Lockers, etc., can profitably serve industry are the thousand and one reasons why "Frame Bar Handbook" should be in your file. It tells the full story of this important service. Send for your copy today.

THE CONSOLIDATED EXPANDED METAL COMPANIES

Steelcrete Building, Wheeling, West Virginia

Sales Offices and Warehouses:

Boston	Cleveland	New York	Chicago
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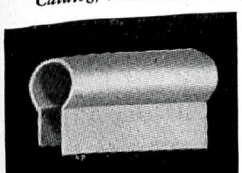
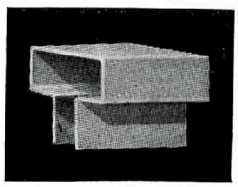
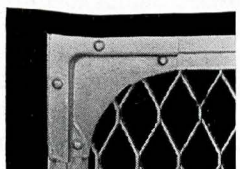


New Steelcrete Frame Bar speeds up framing of Guards and Panels.



The Steelcrete Partition Bar makes easier and quicker installation of Partitions.



The Self-squaring Corner Assembly—rigid, tight and mechanically efficient.

A Complete National Service On

Screen Enclosures and Partitions for Stock Rooms	Skylight Screens
Electrical Equipment	Ventilator Screens
Elevator Shaftways	Radiator Covers
Partitions	Pipe Rail Screens
Window Guards	Cellar Window Grilles
Door Guards	Dipping Baskets
	Switchboard Enclosures

INDUSTRIAL Steelcrete **PARTITIONS**

INDUSTRIAL MESH . . . . . FRAME AND PARTITION BARS

Now you can Specify Monel Metal store fronts ...READY to INSTALL!

Brasco introduces a complete system of MONEL METAL Store Fronts

Silvery-White Lustre
Rust Proof
Strong As Steel
Permanent Beauty
Non-Ferrous Nickel-Copper Alloy

For the first time, this wonder-metal, used so successfully for a quarter-century under the most difficult conditions in industry, lends its extraordinary properties to the advancement of store front construction.

Lustrous silvery beauty in keeping with today's style in architecture—absolutely rust proof—non-ferrous yet with the strength of steel—retaining its original brightness under all atmospheric conditions with a minimum of care, Monel Metal adds a new touch of perfection to the time-proven Brasco principles of safety and permanence. A complete hollow metal store front line is now available.

Once again the name Brasco comes to the fore in the march of store front progress and with it the assurance of ever increasing distinction and value. Full information and samples of Monel Metal and other Brasco constructions, sent on request.

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HARVEY, ILLINOIS
(Chicago Suburb)
36-07 to 36-11 33rd Street, Long Island City
Commonwealth Bldg., Philadelphia
DISTRIBUTORS EVERYWHERE

Brasco Rib Sash in Monel Metal. Illustration shows the self-supporting type used in connection with sill 840. Gauge of sash face and back members .040". of sill, .031". All attaching screws also of Monel Metal.

Brasco Store Fronts may be obtained in Monel Metal - Bronze - Copper - PermaWite - Davis Solid Bronze

INCO MONEL METAL

MONEL METAL

Monel Metal is a registered trade mark applied to a technically controlled nickel-copper alloy of high nickel content. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

EVERY forward-thinking architect and metal craftsman will welcome the news that Monel Metal store fronts are now readily available. But more than that, he will read into it the broader significance of an accelerated trend toward Monel Metal for countless structural and ornamental purposes where enduring strength with lasting beauty is all-important.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

Sixty-nine "ST. LOUIS" Freight Elevator Doors in these two modern buildings

More and more, the architectural profession is specifying 'St. Louis' Doors purely on their record of performance. Their practical, sturdy construction, and their ability to stand up under hard service make them the logical choice wherever the highest quality of equipment is necessary.

The two modern buildings shown above — one in Los Angeles, the other in Philadelphia — suggest both the national acceptance of 'St. Louis' Doors and the superior type of buildings for which they are deliberately selected.

Pages 1042-1047

Factories, warehouses and commercial buildings, both costly and inexpensive, find these the most satisfactory specifications from the standpoint of quality, price, service and endurance.

For more than a quarter century the St. Louis Fire Door Co. has striven to embody into its products the same principles of high grade materials, design and workmanship which the architect includes in his own specifications. Behind them is a sincere effort to keep these products in line with the best standards of building practice.

ST. LOUIS FIRE DOOR CO., 1138 S. Sixth St., St. Louis, Mo.

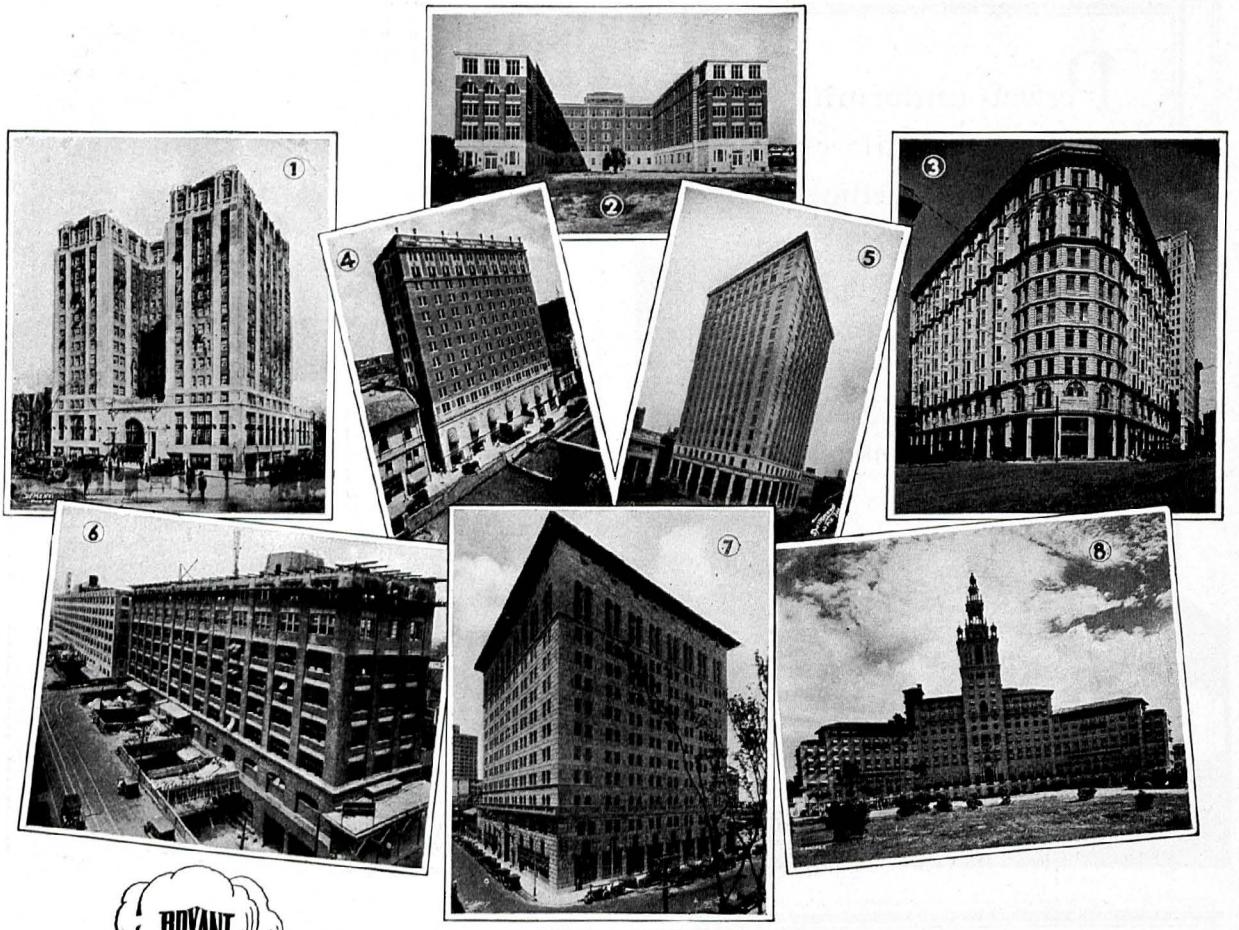
Manufacturers of all kinds of Fire-Proof Doors and Electric Operators

"MORE THAN A QUARTER CENTURY OF SUCCESSFUL SERVICE"

ST. LOUIS FREIGHT ELEVATOR DOORS

Descriptive literature regarding "St. Louis' Doors is at the service of architects and others interested in good construction work.

Special engineering cooperation is offered to the architectural profession. Much needless expense may be avoided by consulting us.



BRYANT
SUPERIOR WIRING DEVICES

Eight Important Bryant Installations in the South

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   Architect, Marcellus E. Wright, Richmond
   General Contractor, Wise Granite Construction Co., Richmond
   Electrical Contractor, Chenning & Wilmer, Inc. Richmond
2. St. Vincent Hospital, Jacksonville, Fla.
   Architect, Gerald A. Barry, Chicago
   Electrical Contractor, L. L. Patterson, Jacksonville
3. Piedmont Hotel, Atlanta, Ga.
   Architects, Pringle & Smith, Atlanta
   Electrical Engineer, H. J. C. Pearson, Atlanta
   Electrical Contractor, Sam Donelson, Atlanta
4. Carling Hotel, Jacksonville, Fla.
   Architects, Thompson, Holmes & Converse, New York
   Electrical Contractor, Sam Donelson, Atlanta
5. Lynch Building, Jacksonville, Fla.
   Architects, Pringle & Smith, Atlanta
   Electrical Engineer, H. J. C. Pearson, Atlanta
   Electrical Contractor, H. P. Foley, Washington, D. C.
6. Southern Railway Office Building, Atlanta, Ga.
   Architects, United Engineers and Constructors, Inc., New York and Philadelphia
   Electrical Contractor, Sam Donelson, Atlanta
7. Ingraham Building, Miami, Fla.
   Architects, Schultze & Weaver, New York
   Electrical Contractors, J. L. Goodrich Co., New York
8. Miami Biltmore Building, Miami, Fla.
   Architects, Schultze & Weaver, New York
   Electrical Contractors, J. L. Goodrich Co., New York

From the Potomac *to the* Everglades—

MAKE the trip in your car . . . over perfect roads. You'll note in every town and every city a remarkable development. New homes . . . schools . . . factories . . . hospitals . . . hotels . . . business buildings. Of course, a great many of these are "Bryant Equipped," for, like the Southern Railway, whose new office building is included in the group of some recent installations shown above, Bryant also "Serves the South."

See our Catalogue in the new 4-volume Sweet's for 1930, Vol. D, pages 5188 to 5192

THE BRYANT ELECTRIC COMPANY

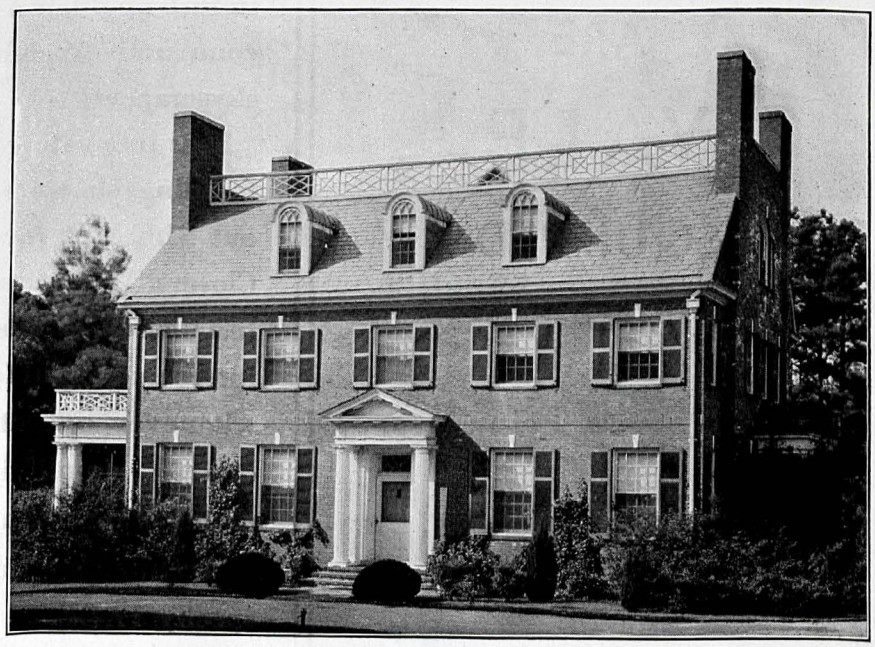
BRIDGEPORT, CONNECTICUT

Lincoln Bldg., New York, N. Y. — Widener Bldg., Philadelphia, Pa. — 844 West Adams Street, Chicago, Ill. — 149 New Montgomery St. San Francisco, Calif.

MANUFACTURERS OF SUPERIOR WIRING DEVICES SINCE 1888

A-4

A Real Contribution to Architecture



Residence of Mrs. Emily C. MacDougald, Atlanta, Ga. Cooper & Cooper, Architects, Atlanta, Ga.
GLAZED WITH LIBBEY-OWENS GLASS

When, in 1917, Libbey-Owens perfected its exclusive process of glass manufacture, and began producing window glass of superior quality distinguished by its rich, sparkling lustre, it made a significant contribution to modern architecture.

That contribution was one of beauty—beauty in windows—where beauty means so much to the charm and attractiveness of a home.

That this Libbey-Owens contribution to beauty in architecture has been welcomed by the profession, is evidenced by the imposing list of fine residences, office buildings, hotels, apartments, and schools throughout the entire country glazed with Libbey-Owens glass.

Specify Libbey-Owens "A" quality glass for your next building. Look for the L/O label which appears on each individual light. It is a positive means of identification and your assurance of uniform high quality.

LIBBEY-OWENS GLASS COMPANY
TOLEDO , , OHIO

Libbey-Owens
FLAT DRAWN CLEAR SHEET GLASS

The Fandolier

in elevator cabs built by The Tyler Co.
of Cleveland, for the Chrysler Building,
New York

The FANDOLIER is unique in comfort producing equipment—moving air at proper velocity and distributing it at such intervals as to give the soothing effect of a palm leaf fan.

THE SAFETY CAR HEATING & LIGHTING COMPANY

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SAN FRANCISCO

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ADVERTISING OFFICE, 419 FOURTH AVE., NEW YORK, N. Y., PHILIP H. HUBBARD, *Advertising Manager*
District Offices: 1050 Straus Building, Chicago; 953 Leader Building, Cleveland; 703 Market St., San Francisco.

Announcement is made by the J. G. Braun Co., Chicago, Ill., that it has been appointed by the Aluminum Company of America to act as distributors of architectural shapes in Alcoa aluminum. A large assortment of shapes will be carried in stock, additions to be made as requirements determine.

Robert M. Eames has been made general manager of The Bryant Electric Company, succeeding Marcus A. Curran, who recently resigned on account of ill health. Mr. Eames, a graduate of Union University and of the Albany Law School, joined the sales force of The Bryant Electric Company in 1906. In 1914 he organized and became the head of the export department of the company, and in 1921 became general sales manager.

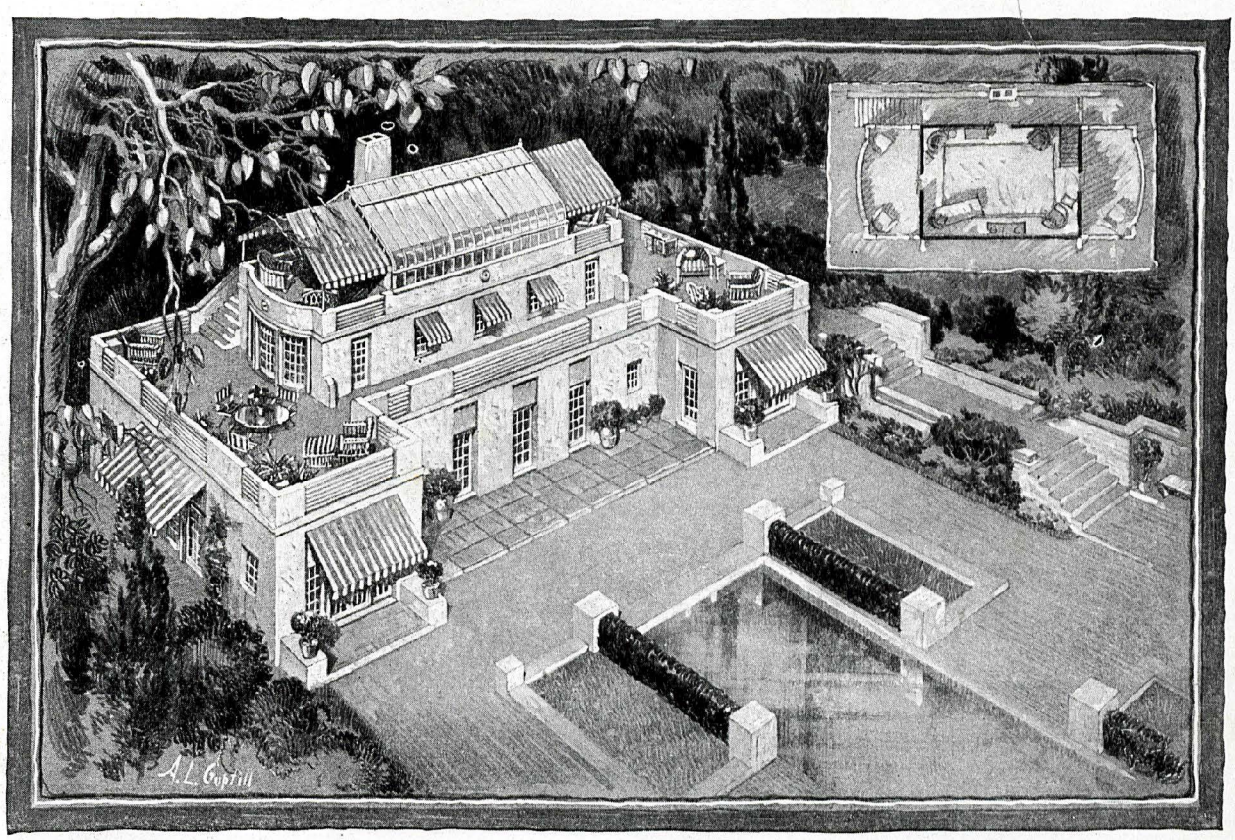
The slogan, "Consult an Architect—The Service is Valuable," is being featured in a very conspicuous position in its national and trade paper advertising by the Kawneer Co., Niles, Mich., manufacturers of bronze store fronts, windows and doors. This suggestion, stressing the importance of the architect, will be brought to the attention of forty-four million readers during 1930.

To care for constantly increasing business throughout Wisconsin on their Robras 20-20 and other types of lightweight concealed radiators for steam, water, vapor and vacuum heating systems and Aulbras domestic hot water heaters the Rome Brass Radiator Corp., 1 East 42nd Street, New York City, announces the opening of new offices at 518 Empire Building, W. Water Street and Milwaukee Avenue, Milwaukee, under the management of P. F. Callaghan, Jr., who was transferred from the Chicago offices of the corporation.

The appointment of Oliver L. Thompson as assistant general manager and general sales manager of the Sundries Department, with headquarters at Providence, R. I., has been announced by the United States Rubber Company, New York, manufacturers of tile flooring, hard rubber goods, etc.

The Modine Manufacturing Co., Racine, Wis., manufacturers of unit heaters, domestic copper radiation, etc., announces the appointment of the following representatives: R. M. Gunzel & Co., Los Angeles representative, 1015 E. 8th Street, Los Angeles, Calif.; R. F. Van Alstyne, Indianapolis representative, 1034 Architects Building, Indianapolis, Ind.; J. I. Krueger, San Francisco representative, 357 9th Street, San Francisco, Calif.; E. W. Klein, Atlanta, Ga., representative, 152 Nassau Street, N. W., Atlanta, Ga.; R. E. Burden, Rockford representative, 227 Grand Ave., Loves Park, Rockford, Ill.

The Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., announces that it is now manufacturing Micarta for use as a veneer material for furniture decoration and embellishment, as panels for wall covering, and as tops of soda fountain and cafeteria counters. Micarta is composed of especially prepared paper or fabric and phenolic resin which under the action of heat and tremendous pressure form a homogeneous, insoluble product. Its hard lustrous finish duplicates the fine grain and beauty of choice walnut, mahogany and other woods. It is furnished in a varied assortment of colors.



FRANKLY NOW—

And Why Shouldn't The Vitalarium Be More Than Just An Incidental Feature?

THIS sketch of Arthur Guptill's shows a Vitalarium, Sun Bath Room, a whatever you choose to call it, placed on a residence roof, where it takes advantage of every hour of sunshine. It recognizes the growing tendency to employ flat roofs, even in suburban residences, utilizing them to the utmost.

When you stop to think of it, the wonder is that this was not done more often, long ago. Such designs as a whole, wouldn't you say, in their "modern trend" infuse new vitality into residences, making them organic, living things?

Aside from its health getting use by the grown ups, can you conceive of a more delightful play place for the kiddies than this sun flooded room? Here they can play around in their beach clothes and every minute be soaking up sunshine.

We have a special construction for these enclosures, that fully overcomes certain drawbacks that such glassed-rooms have often had. Glad to give you complete particulars.

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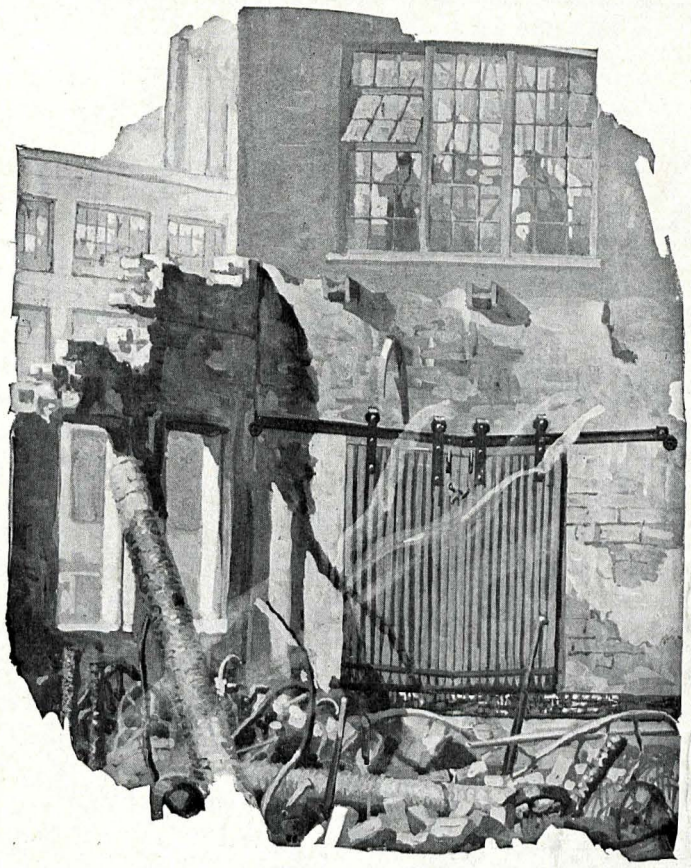

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FyeR-Wall Doors and automatic hardware are correctly made to *stop the passage of fire* —heavy corrugated galvanized sheets with thick sheet-asbestos between and fitted with the correct type of hardware to meet every conceivable condition.

Fye-R Wall economies are tangible and important—

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—they cost no more than tin-clad doors; they're good as money can buy.
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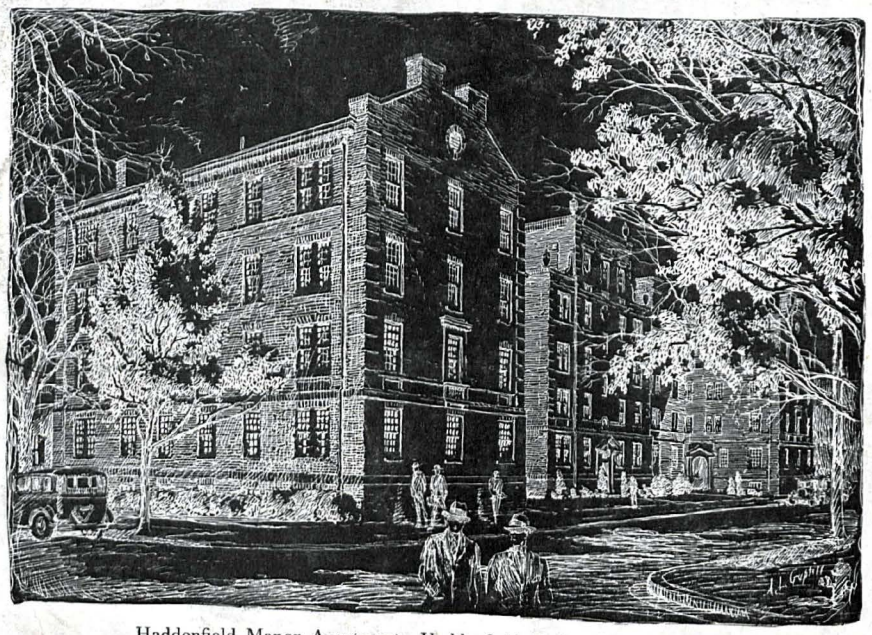
Printing of Pencil Points by The Gillespie Bros., Inc., Stamford, Conn., U. S. A.



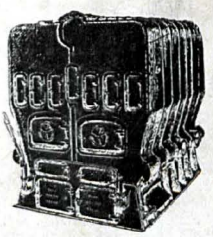
Haddonfield Manor Apartments, Haddonfield, N. J., where two S-50-9 Burnham sectional boilers are the heating units. Edwards & Green, Architects, Camden, N. J. Baldwin Ventilating Co., Heating Contractors, Philadelphia, Pa.

This Big Heavy Duty Boiler When Being Installed Can Pass Through an Ordinary Door

ONE of the big things about a Big Twin cast iron boiler is the smallness of its sections. Each cross section is divided into two sections, right and left.

Even the base and grates are divided. Which means that this heavy duty cast iron boiler will go down a winding stair or through an ordinary cellar window.

No holdups are necessary in the building program to wait for boiler installation. And Big Twin makes replacements a simple operation.



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