

JULY, 1930

# PENCIL POINTS

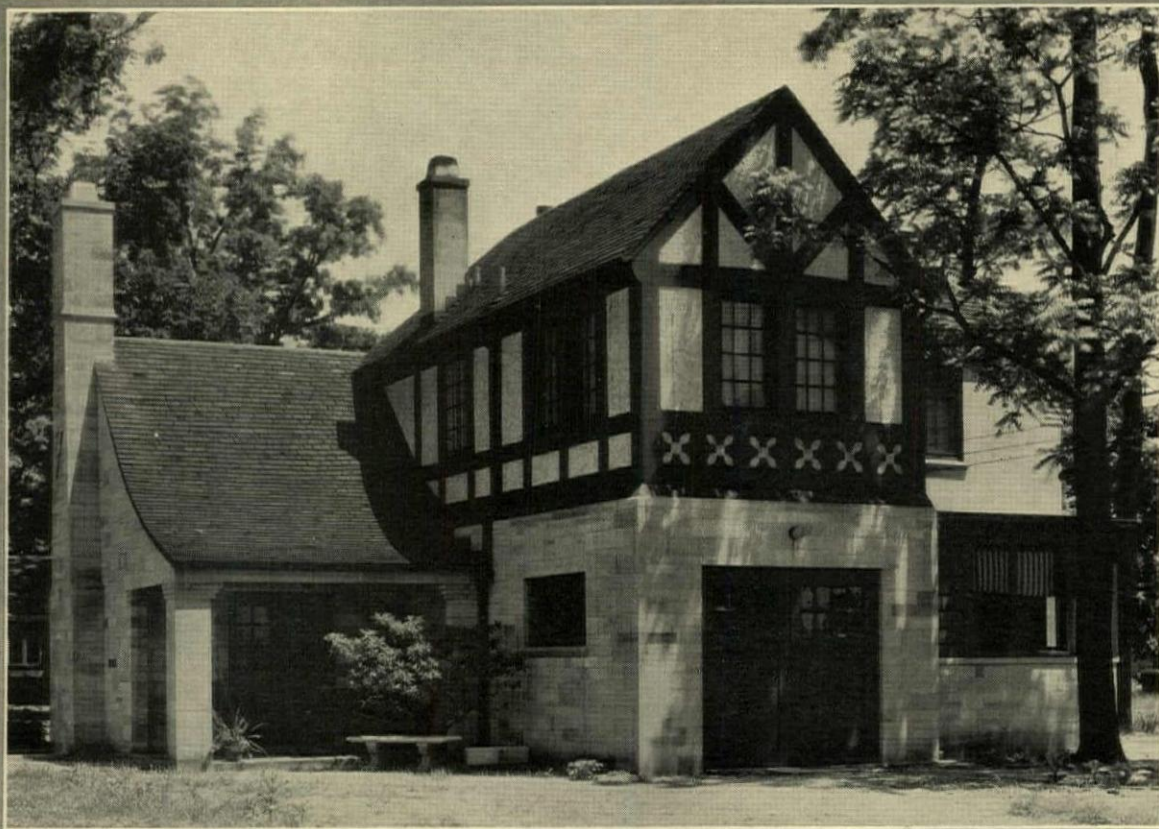
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# AUTHENTIC PLASTER ORNAMENT



JOHN EBERSON, Architect

## Reproduction of Spanish XVIth Century Ceiling

Among the best preserved of the old Spanish convents is the Convento de San Marcos at Leon built during the XVIth Century. It is justly famous for its ornamental ceilings of which this one, found in the main hall, is a notable example.

The extreme richness of detail is characteristic of the period and entirely in keeping with the Spanish furniture and wall hangings of this same era. The ceiling is pictured above as reproduced with startling effect by Jacobson in the New York offices of Mr. John Ebersson.

*The new Jacobson catalogue, comprising 3109 new designs never before published, is now ready for distribution to recognized architects and decorators. If you have not already done so, please write to make sure that your copy is forwarded promptly. A catalogue of Modern Ornament is in course of preparation.*

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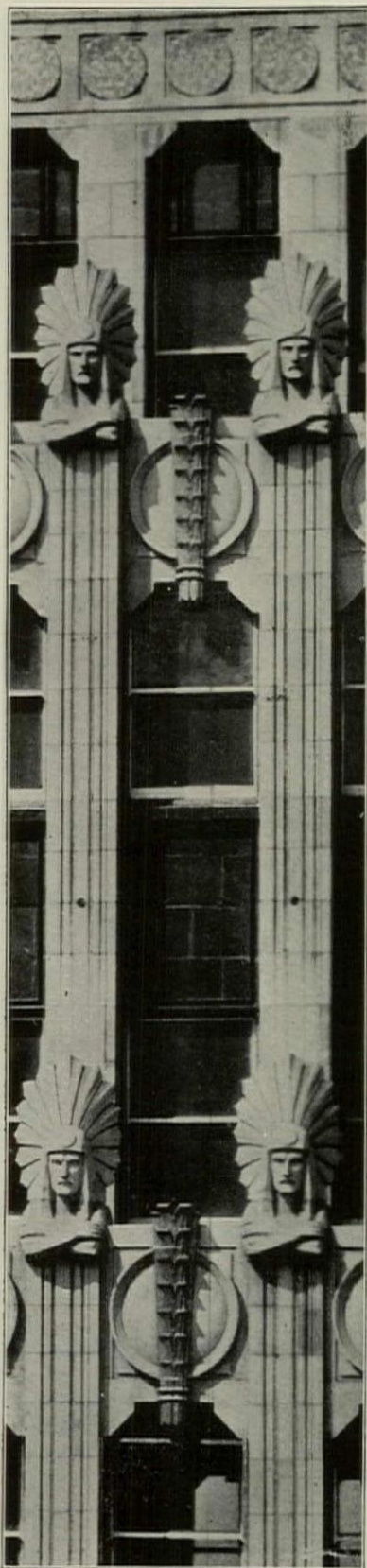


*The directors' room of Oneida Community, Ltd., manufacturers of the famous Community Plate. A ceiling of Armstrong's Corkoustic. It enhances the decoration in which the richness of dark wood panelling and beams sets the dominant note.*

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The architects of the great Merchandise Mart at Chicago, Messrs. Graham, Anderson, Probst and White, solved this problem by the logical use of Northwestern Terra Cotta for enrichment and color. The accompanying illustration shows one of many architectural motifs, executed in Terra Cotta. The colors are warm, even-toned, grey in the general adornments; dark green spandrels and well-placed gold inserts incircling the facades.

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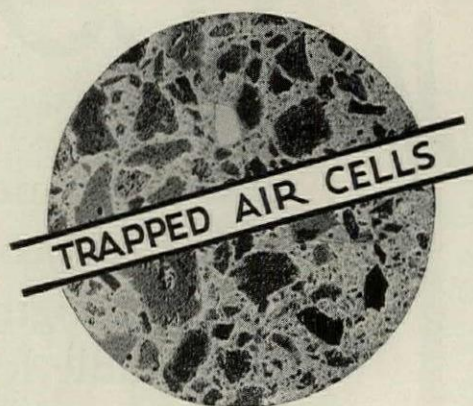


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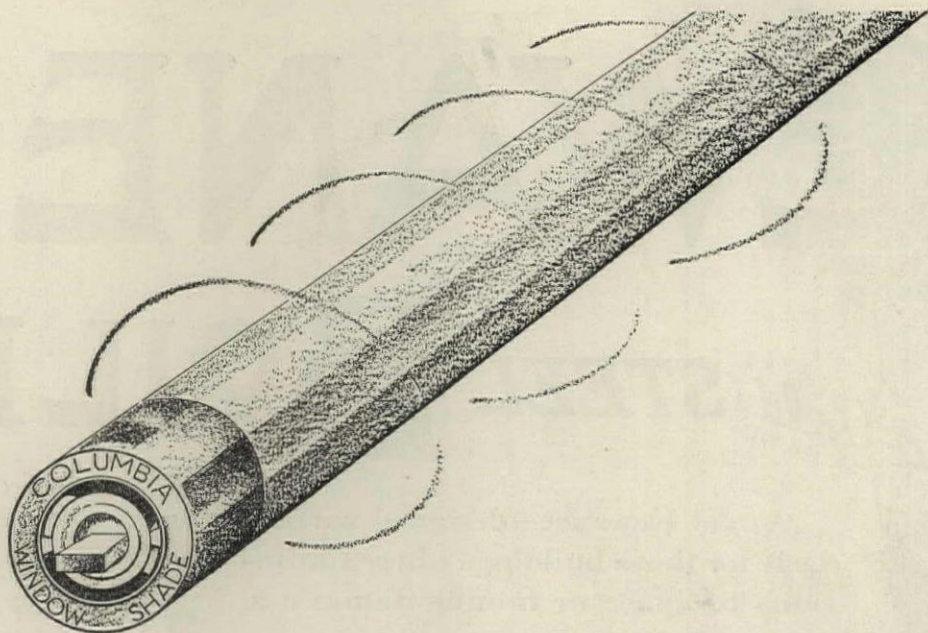


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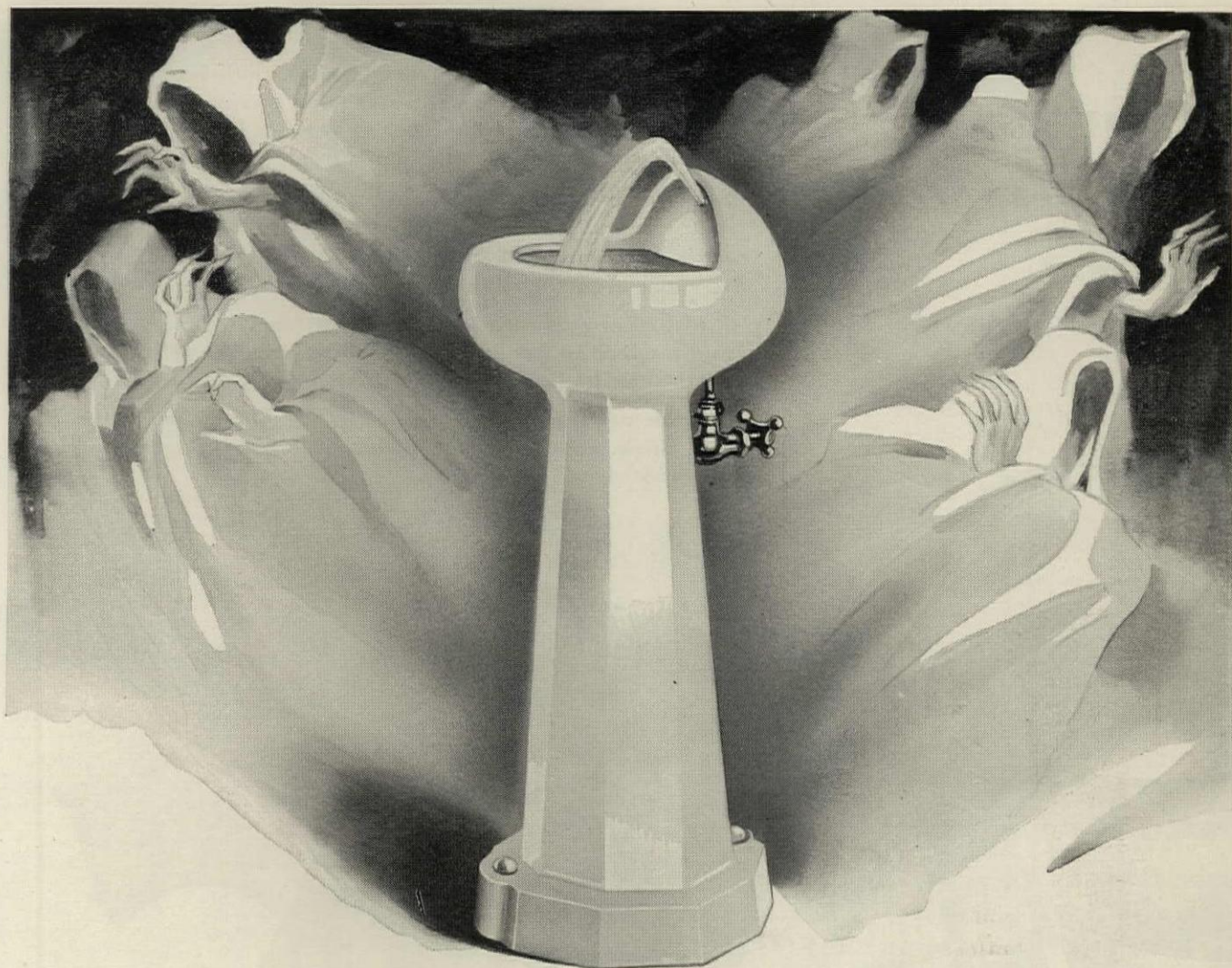
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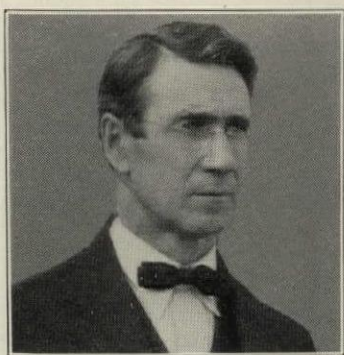
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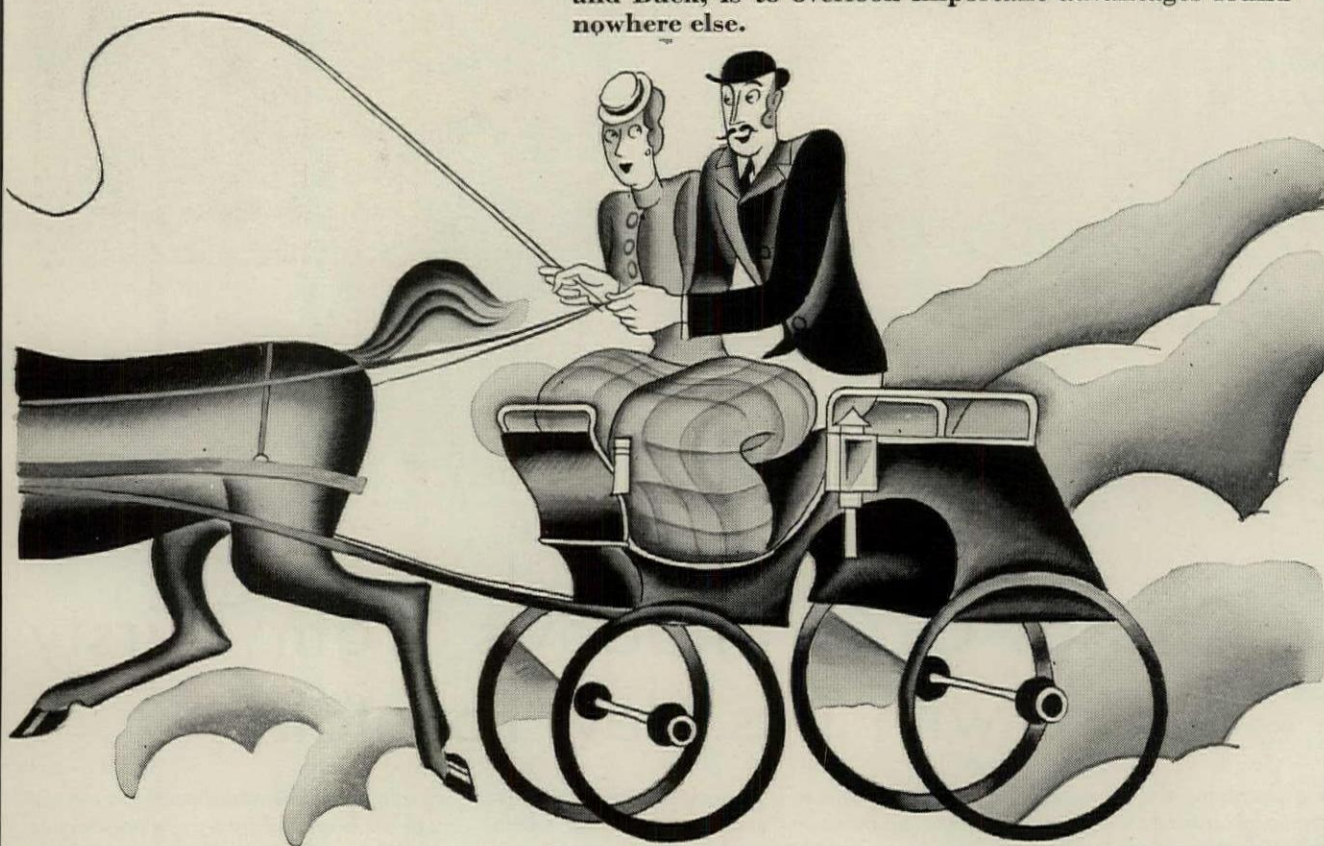
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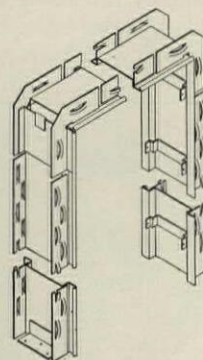
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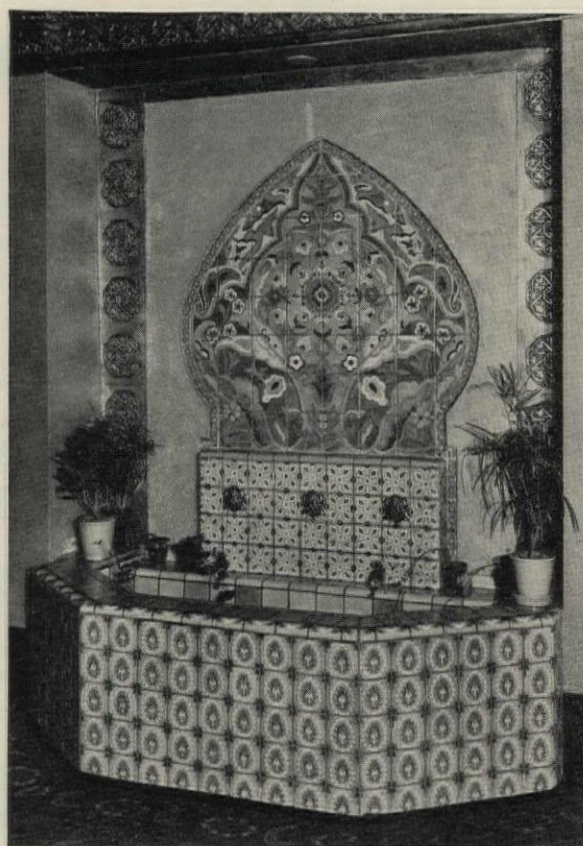
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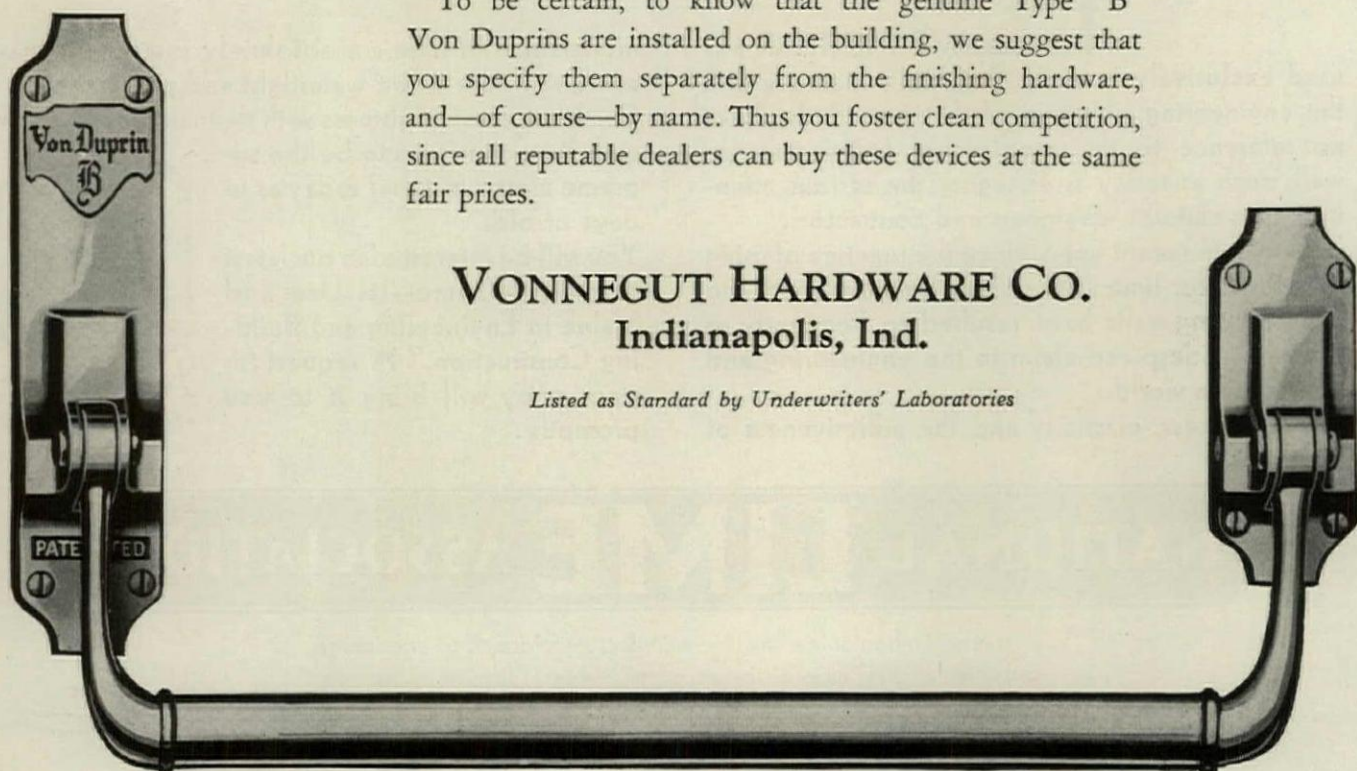
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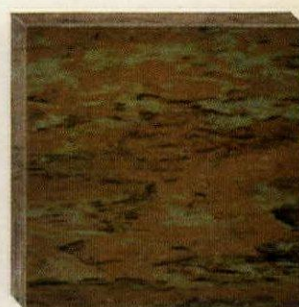
**Walnut Paisley**  
Walnut with veinings of Gold and Cream



**O.S.**  
Cream with veining of Black



**Black White**  
Black with veining of White



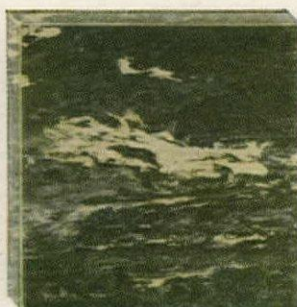
**Brown Green Paisley**  
Brown with veinings of Sea Green and Black



**White Sea Green**  
White with veining of Sea Green



**Black Red**  
Black with veining of Dark Red



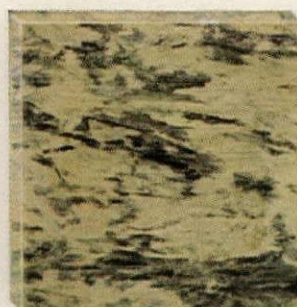
**Sea Green White**  
Sea Green with veining of White



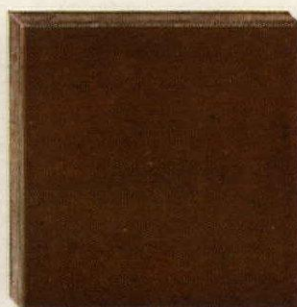
**Slate Red Paisley**  
Slate with veinings of Dark Red and Cream



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\*Illinois Zone Control Systems.



Photo by Chicago Aerial Survey





# FOR NEAT BRICKWORK

**T**HE mason can do neater, cleaner brickwork with Brixment than with any other mortar.

Because Brixment makes an unusually rich and plastic mortar which sticks to the brick and doesn't slop over the face of the wall.

Brixment is manufactured to harden a little more slowly than portland cement. This enables the mason to strike the joints conveniently, neatly and uniformly before the mortar sets up. Louisville Cement Company, Incorporated, Louisville, Kentucky.

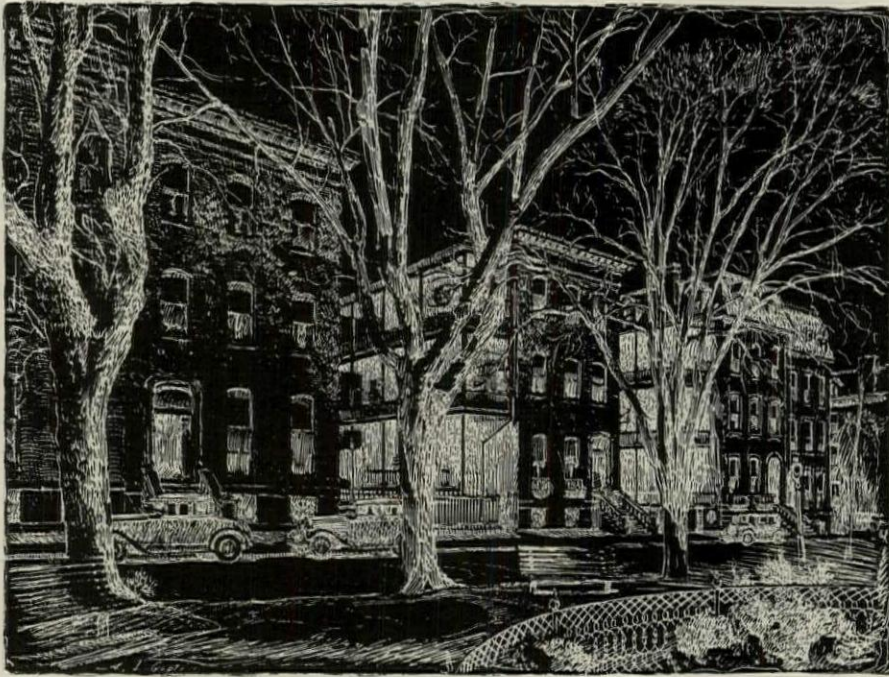
CEMENT MANUFACTURERS SINCE 1830

## BRIXMENT

for MASONRY and STUCCO







Four of the buildings of Dr. Howard A. Kelley's Sanitarium, 1400 Block, Eutaw Place, Baltimore, Md. Six Burnham Boilers are installed for heating and hot water supply. Oil burners by York Oil Burner Company.

## A Particularly Effective Hook Up of Oil Fuel with Burnham Boilers

EACH of four buildings in Dr. Howard A. Kelley's Sanitarium has its own hot water heating system. Two of them have Burnham high pressure boilers for hot water supply.

The Burnham long fire travel boilers assure the maximum of heat from the oil fuel, while at the same time resulting in decidedly lowering the disturbing sounds of pressure combustion

# *Burnham Boiler Corporation*

IRVINGTON, NEW YORK

New York Office: Graybar Building, 420 Lexington Avenue

Representatives in many principal cities of the United States and Canada



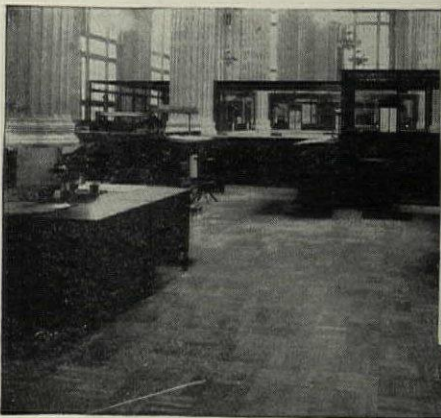
# \*CELLized wood floor blocks —

for homes, apartment hotels, dining and ball rooms, clubs, churches, hospitals, showrooms, banks, schools and public buildings generally.

\*CELLized Oak blocks in a Nurses' residence, Hospital for Consumptives, Mt. Dennis, Ontario, Can. Architect, Raymond Collinge—Flooring Contractor, R. Laidlaw Lumber Co., Toronto.



The strong color contrasts in this floor are obtainable in "lower" grade blocks only.



11¼" Quartered White Oak blocks in the Bank of Commerce, Memphis, Tenn. Harker and Cairns, Architects. Superior Floor and Screen Co., Floor Contractors.



The Wetherby-Kayser Shoe Co. at Pasadena, California. 9" Oak blocks. A. B. Slack, owner.

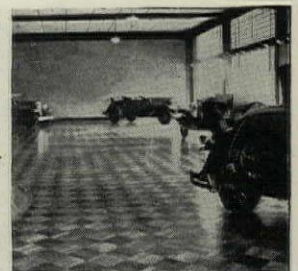
STYLE in floors, not only for homes, but for all types of interiors where wood floors have not heretofore been considered desirable or economical, is possible through the economy and versatility of the \*CELLized unit wood block. Beauty, durability, and inexpensive upkeep are combined with low cost.

**[NEW]**—Architects are invited to visit the \*CELLized office display in Memphis. Combinations of woods, both squares and rectangles, are installed in floors, walls and ceilings. These offices in actual use illustrate the wide application of unit blocks under service conditions.

**Condensed Specification FLOORING**—Shall be .....  
\*CELLized ..... Blocks, laid according to \*CELLized specifications over ..... sub-floor, by a Licensed Floor Contractor. Delivery of the \*CELLized Oak Flooring Inc. 5 year guarantee by the contractor will be required upon completion of the job.

OAK	BEECH	MAPLE	RED GUM	WALNUT	PHILIPPINE MAHOGANY	MAPLE*
Rectangular blocks in two sizes, 6" x 12" and 6¾" x 13½" Square blocks, 13-16" thickness in the following sizes:						
6¾ in.	6¾ in.	6¾ in.	for walls	6¾ in.	6¾ in.	also in 1 1-16" thickness in the following sizes: 6¾ in. 9 in.
7½ in.	7½ in.	8 in.	and ceilings	9 in.	9 in.	
9 in.	9 in.	9 in.	6¾ in.	9 in.	9 in.	
10½ in.		9¾ in.	9 in.			
11¼ in.	11¼ in.	10 in.				
12 in.	12 in.	11¼ in.	11¼ in.	11¼ in.	11¼ in.	
		12 in.				
		13 in.				

\*For industrial floors, maple blocks are also fabricated 1 5-16" thick; several sizes.



\*CELLized Wood Floor Blocks are guaranteed. Laid only by Licensed Flooring Contractors.

## \*CELLized Oak Flooring Inc.

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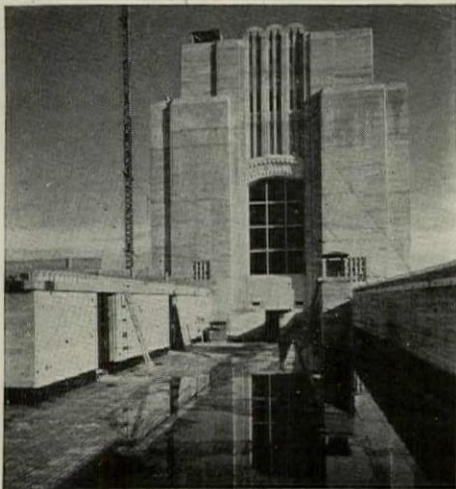


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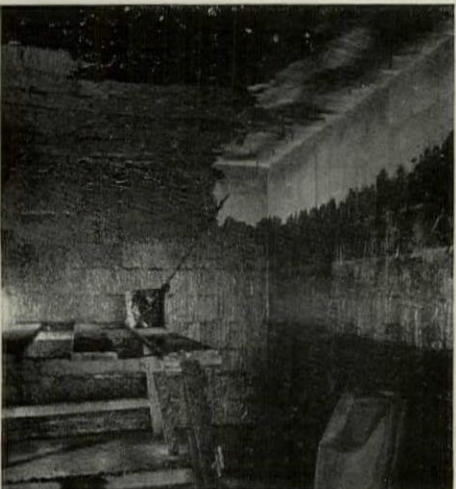


Los Angeles County Hospital, Los Angeles, California; Architect—Allied Architects of Los Angeles; General Contractor—Weymouth Crowl; Waterproofing Contractor—Owen Roofing Company.

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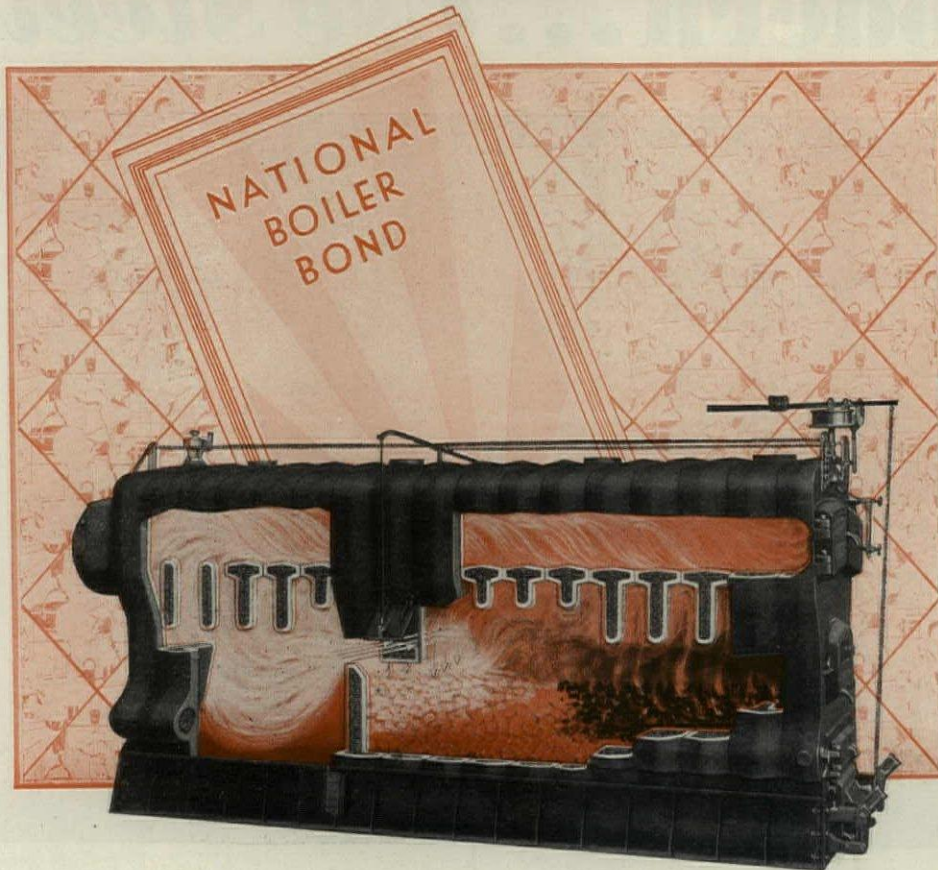
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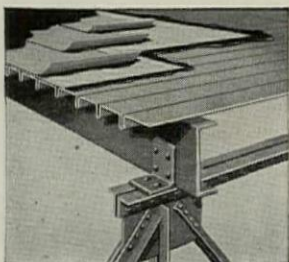
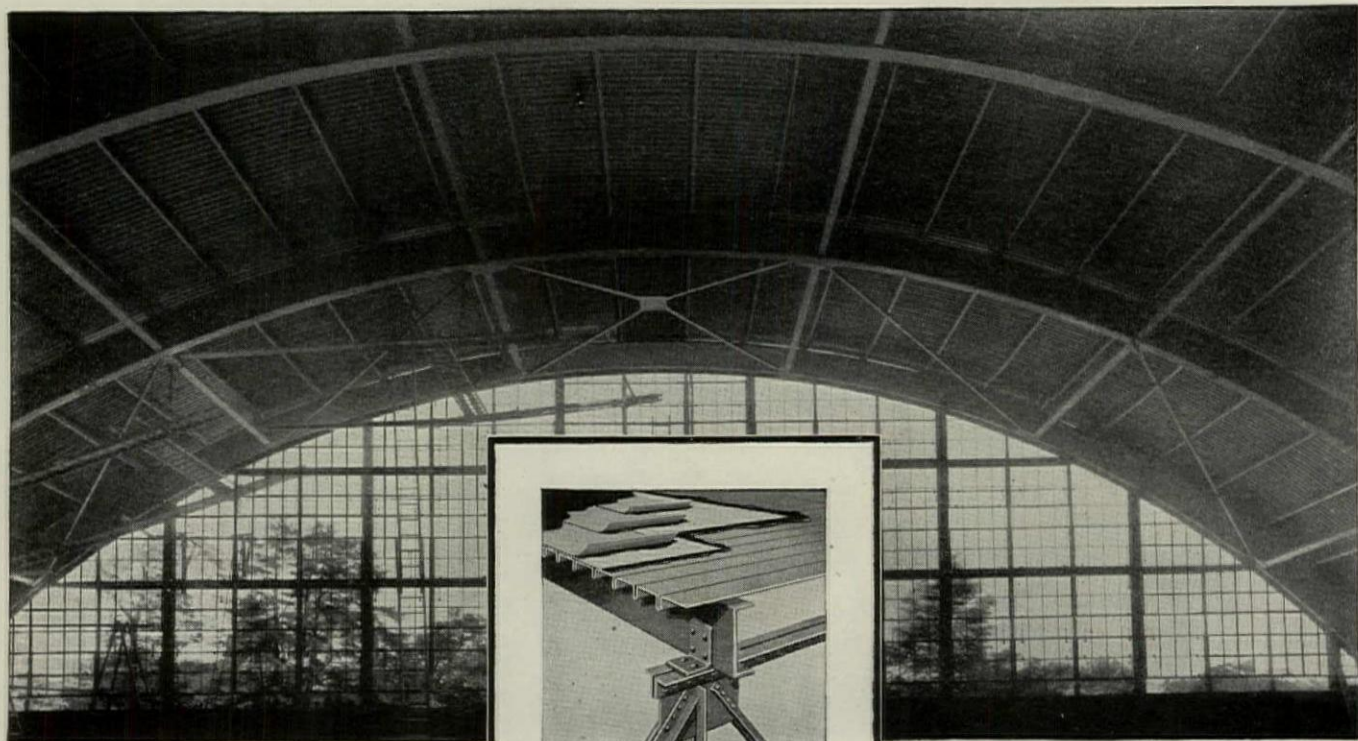
**National Low Water Line Boiler**



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Cross section of Mahon Steel Roof Deck showing interlocking principle and the application of insulation and roofing material. This deck can be insulated to any degree to meet your specific requirements.

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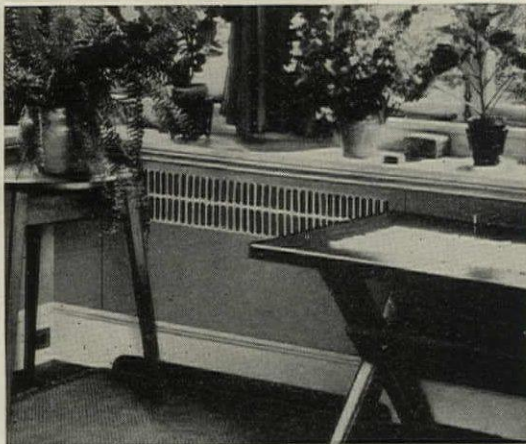
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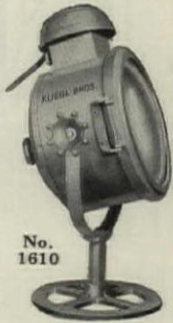
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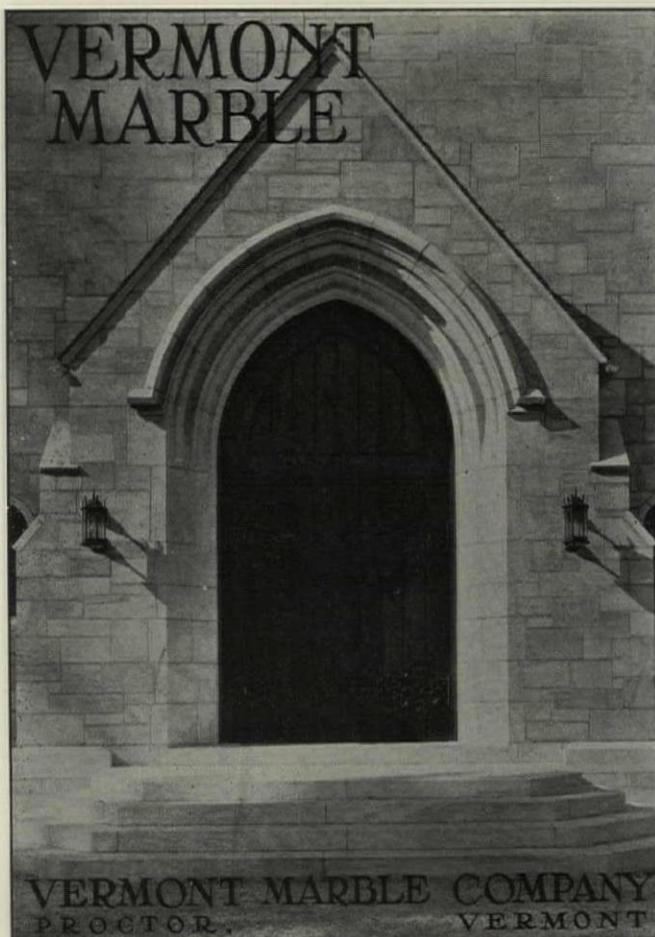
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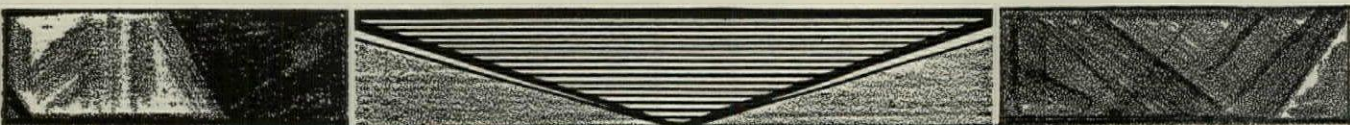
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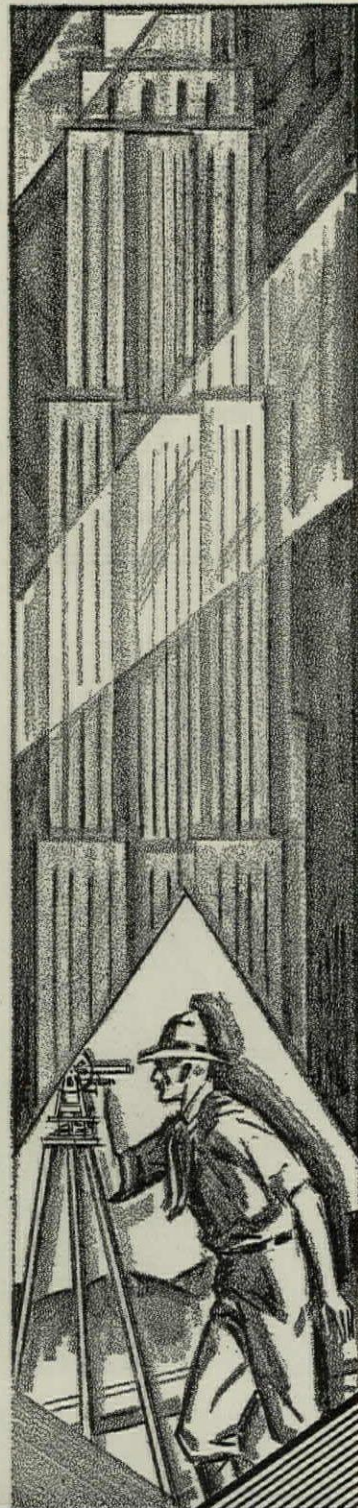
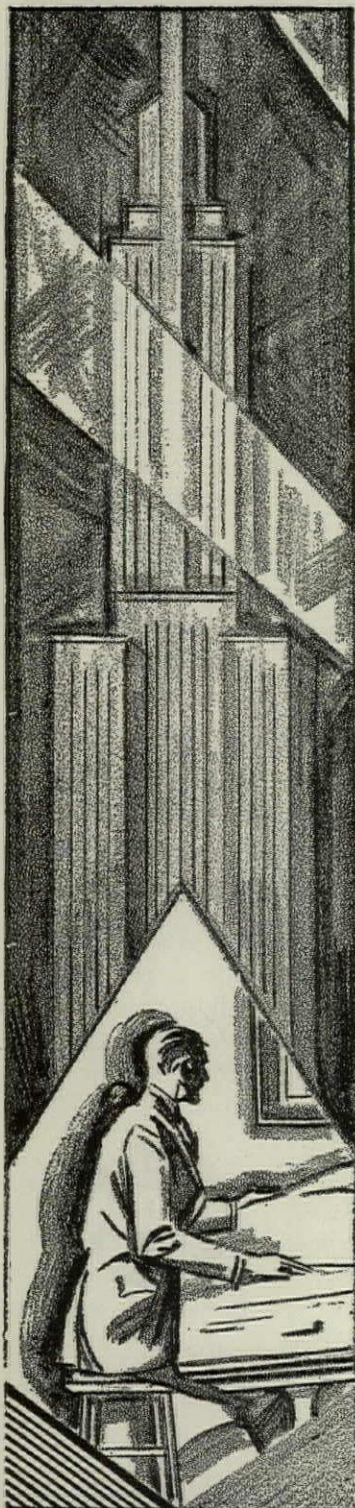
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SEATTLE  
SAN FRANCISCO  
VANCOUVER  
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WINNIPEG, MAN.  
CALGARY  
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MELBOURNE  
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\*Makers of the Herman Nelson Invisible Radiator, for residences, apartments, hotels, offices and monumental structures—the *Univent*, for the ventilation of schools, offices, churches and all buildings having an acute ventilating problem—the Herman Nelson *HiJet Heater*, for economical distribution of heat in factories, mills, garages, warehouses, and smaller buildings.





*The hand in the photograph is that of ARTHUR WILLIAM BROWN, whose drawings for years have been familiar to the millions who read the Saturday Evening Post.*

# This pencil is as obedient as your own hand

**Y**OU are not at the mercy of your pencil when you use a Venus to put your ideas on paper. Venus Pencils are as obedient as your own hand — more so, in fact, for a Venus Pencil is always the same, always uniform, always perfect.

Precise as any other instrument, Venus Pencils have made friends with craftsmen. Every needful shade is found in the 17 degrees of Venus Pencils—from the softest and blackest 6B, to 9H, the hardest.

Every Venus Pencil is made with greatest care. Each one is tested many times before it leaves the Venus factory. Every Venus Pencil is true to its degree.

Venus Pencils are worth comparing with the pencils you are now using. Indicate the desired degree in the coupon below and we will gladly mail you a sample. American Pencil Company, Venus Building, Hoboken, N. J.

# VENUS

## the pencil of 17 shades of black

(Of course you know about Unique Thin Lead Colored Pencils  
... and Venus Erasers ... made by the makers of Venus)

AMERICAN PENCIL COMPANY, DEPT. A,  
Venus Building, Hoboken, N. J.

Without obligation, please send me a Venus Pencil of  
the following degree.....

Name .....

Address .....

City and State .....

Occupation .....



# TURNING PLANS INTO REALITY



WESTERN UNION TELEGRAPH COMPANY BUILDING, NEW YORK

**T**ODAY—the development of American architecture has reached a plane that holds the undivided attention — the admiration and acclaim of the entire world.

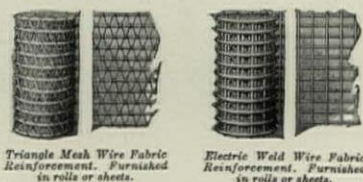
Today—the architect and builder are causing vast edifices to tower more and more toward the sky—to stand as enduring monuments to present standards of design and efficiency of materials.

Today—as in years past—the American Steel and Wire Company is supplying a major portion of the wire fabric (the steel backbone of concrete) that enables plans to be turned into reality.

So—we take justifiable pride in the confidence engendered by our products—and extend the full services of our engineering and technical staffs to the solution of specific reinforcement problems. Write to our nearest sales office for information and literature.

## WIRE FABRIC

### THE STEEL BACKBONE OF CONCRETE



Triangle Mesh Wire Fabric Reinforcement. Furnished in rolls or sheets.

Electric Weld Wire Fabric Reinforcement. Furnished in rolls or sheets.

Western Union Telegraph Company Building, New York, Voorhees, Gmelin & Walker, Architects. Marc Elditz & Son, General Contractors. Senn-Herricks Corp., Fire-proofing Contractor.

## AMERICAN STEEL & WIRE COMPANY

SUBSIDIARY UNITED STATES STEEL CORPORATION

208 S. La Salle Street, Chicago

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Other Sales Offices: Atlanta Baltimore Birmingham Boston Buffalo Cincinnati Cleveland Dallas  
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Export Distributors: United States Steel Products Co., 30 Church St., New York City



# ASH REMOVAL

## R. H. MACY & CO. USES FIVE G&G TELESCOPIC HOISTS

**T**HE Model D Electric Hoist, illustrated at right, is one of five G&G Electric Hoists in use in buildings of R. H. Macy & Co. (The World's Largest Department Store), New York, N. Y., Robert D. Kohn, Architect.

There are many prominent buildings throughout the country for which G&G Ash Removal Equipment has been selected. Among these are:

U. S. CAPITOL, Washington  
INDEPENDENCE HALL, Philadelphia  
U. S. CHAMBER OF COMMERCE,  
Washington. Cass Gilbert, Architect  
ROOSEVELT'S BIRTHPLACE, New York  
Restored by Theodate Pope, Architect  
CRERAR LIBRARY, Chicago  
Holabird & Roche, Architects  
HOLLAND TUNNEL, New York  
A. C. Davis, Mech. Engr.  
CORCORAN ART GALLERY, Washington  
HIGHLAND PARK LIBRARY, Detroit  
M. R. Burrows, E. L. Tilton, A. Githens,  
Associated Architects  
AMERICAN ACADEMY OF ARTS AND  
LETTERS, New York  
McKim, Mead & White, Architects

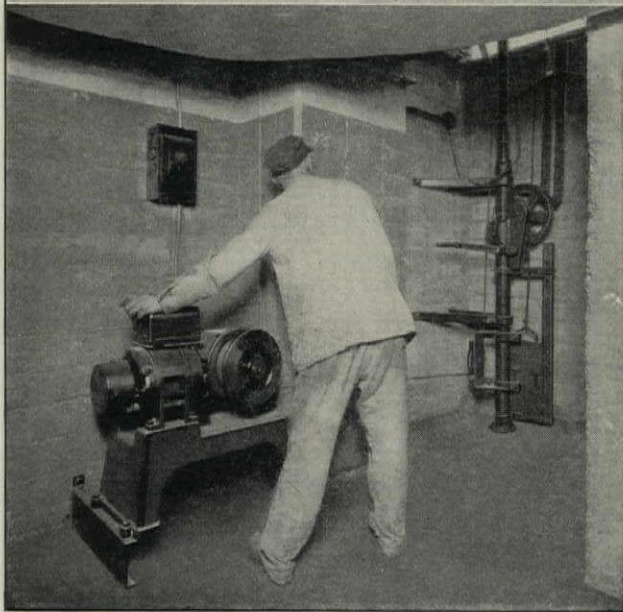
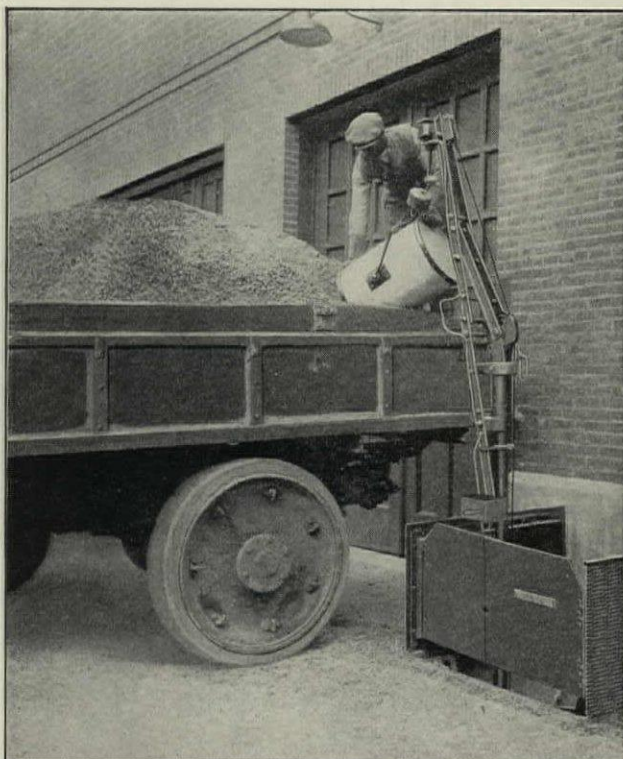
More than 2,000 schools use G&G Telescopic Hoists for ash removal, as well as Banks, Office Buildings, Churches, Factories, Hospitals, Garages, Theatres, etc. 183 Bell Telephone Buildings are G&G equipped.

G&G Telescopic Hoists are noted for their economy in operation, long life and freedom from repairs. Many installations are over 20 years old. The cost of operating the electric models is remarkably low; unbiased tests showing 78 cans of ashes and more raised and lowered at a cost of one cent for current. Hand models, too, for buildings with small volume of ashes to be removed.

Full safety is provided by the G&G Sidewalk Doors and Spring Guard Gate, operating automatically and completely protecting the sidewalk opening at all times. Complies with all municipal ordinances.

Catalog in Sweet's Archt. Cat., 1930 Ed., pp. D5116-23  
Catalog in Specification Data, 1930 Ed., pp. 230-231

**GILLIS & GEOGHEGAN, Inc.**  
548 West Broadway New York, N. Y.  
406 Dominion Bank Bldg., Toronto



**The**  
**G&G**  
**ELECTRIC**  
REG. U.S. PAT. OFF.

**Telescopic Hoist**



*The  
New*



DOCTORS HOSPITAL

*in New York City uses*

DOUBLE-WAXED LINOLEUM



*W. & J. Sloane Contract Marble Tile "A" Inlaid Linoleum is used in the dining room of the Doctors Hospital.*



*This Service Free to  
Architects*

We maintain a service department to assist architects in planning or specifying linoleum floors. This service is at your disposal without charge. Write for copy of Architects Data Book and ask for a representative to call if you wish advice on specific problems. Address: Architects Service Department, W. & J. Sloane, 577 Fifth Avenue, New York City.

THE new Doctors Hospital was built for the accommodation of the patients of the 182 doctors and surgeons constituting the Medical Board of New York City.

It has 264 private patient rooms, eight operating rooms and four delivery rooms for obstetrical cases. In addition there are 32 guest rooms for relatives and friends of patients, a restaurant, telegraph office, newspaper stand, druggist shop, gymnasium, lounge, library, private reception rooms, barber shop, tailor, florist and public stenographer.

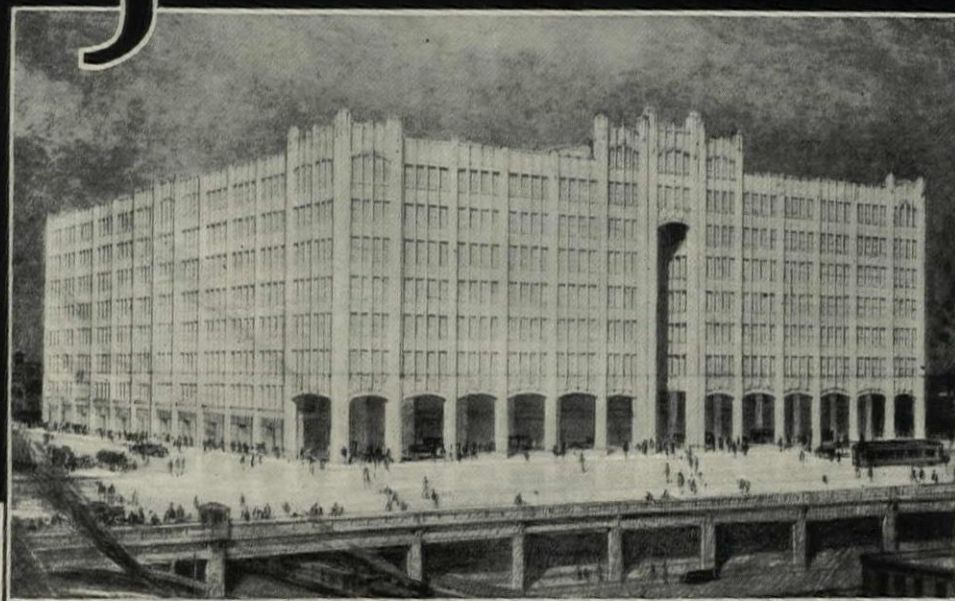
24,587 square yards of W. & J. Sloane *double-waxed* Linoleum are used in the Doctors Hospital.

Each month sees an increasing use of W. & J. Sloane Linoleum because of its distinctive patterns, inherent quality and exclusive double-waxed finish. When you specify W. & J. Sloane Linoleum you assure your client the finest that money can buy. We shall be glad to send you quality samples. W. & J. Sloane Mfg. Co., Trenton, N. J. Sole selling agents: W. & J. Sloane, 577 Fifth Avenue, New York.

W. & J. SLOANE  
*Double-Waxed* LINOLEUM



# Josam-



GIESECKE & HARRIS, ARCHITECTS  
HEDRICK & GOTTIEB, CONSULTING ARCH.

DON HALL, GENERAL CONTR.  
G. ROBISCHUNG, PLUMB. CONTR.

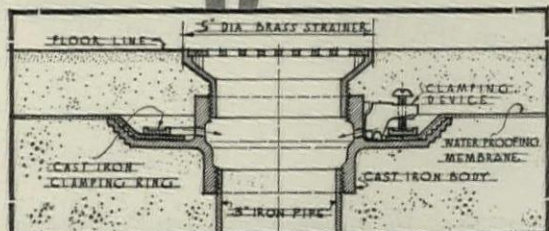
## the Usual Drain Selection for the Unusual Building

**D**OWN IN HOUSTON, the Merchants and Manufacturers Building typifies the modern trend toward building utility. This unique structure combining transportation accessibility with commercial and mercantile exposition facilities is a typical Josam Drain installation. This building with its ramp, arcade, garage, display room and warehouse drain problems proves convincingly the versatility of the Josam line.

The double drainage flange extending laterally from the Josam Drain body catches and diverts seepage through the weep holes into the drain proper. The Josam Catalog G gives full details, also illustrates and describes over a hundred different practical sanitary devices. Write for your copy.

### JOSAM MANUFACTURING COMPANY

4908 Euclid Building • • Cleveland, Ohio



The Josam Line includes: Josam Drains for Floors, Roofs, Showers, Urinals, Garages and Hospitals; Josam Swimming Pool Equipment; Josam-Marsh Grease, Plaster, Dental and Surgical, Sediment and Hair Interceptors; Josam-Graver Floor-Fed, Gas-Fired Garbage and Rubbish Incinerators; Josam Open Seat Back Water Sewer Valves; Josam Open Seat Swing Check Valves; Josam Adjustable Closet Outlet Connections and Bends, Water and Gas-Tight.

FACTORY: MICHIGAN CITY, INDIANA  
BRANCHES IN ALL PRINCIPAL CITIES

JOSAM PRODUCTS ARE SOLD BY ALL  
PLUMBING & HEATING SUPPLY JOBBERS

THERE ARE NO SUBSTITUTES FOR JOSAM PRODUCTS





# architectural TERRA COTTA



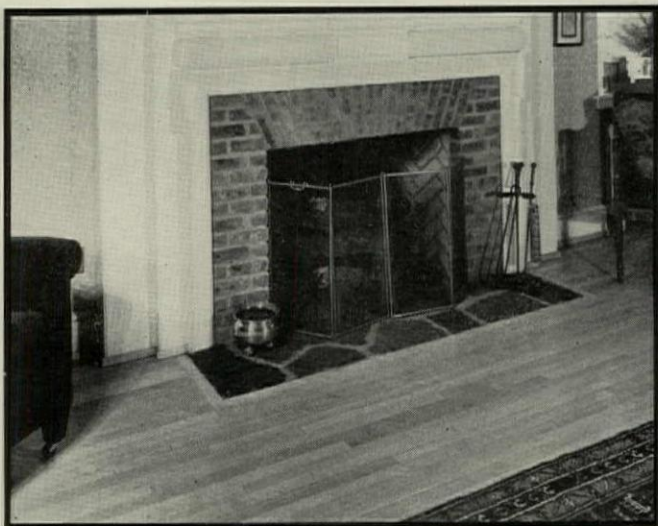
Bell Building  
Chicago, Illinois

K. M. Vitzthum & Co.,  
Architects  
John J. Burns,  
Associate Architect

An architecture which is  
**RESTRAINED**  
yet not starkly devoid of  
interest strongly points to  
**TERRA COTTA**  
for color and modeling.

NATIONAL  
**TERRA COTTA**  
SOCIETY

230 PARK AVENUE  
NEW YORK



## OAK'S hearty ruggedness accents simplicity

HERE is a straightforward room . . . restrained and simple . . . yet somehow warmed by the rugged oak floor. There is a quiet strength in the color and grain of oak which tempers all architectural types. At the same time, oak always blends harmoniously.

From the standpoint of beauty, there is no finer flooring than oak. But consider it from the practical angle. Oak is durable. Not only in that it lasts a long time, but the vogue of oak is constant. It is the standard of flooring materials. Regardless of ideas, which shift with the times, oak is always in perfect taste. Yet in spite of these advantages, oak generally costs less than other flooring materials.

If you would be interested in some important Oak Flooring installations, we shall be glad to send them to you. And at any time you are faced with a flooring problem, feel free to consult our engineers. Oak Flooring Manufacturers Association of the United States, 1887 Sterick Building, Memphis, Tenn.



1930. Look for our advertisements in *House and Garden*, *House Beautiful*, *Good Housekeeping*, *Better Homes and Gardens*, *The Literary Digest*, *Ladies' Home Journal* and *Small Home*.

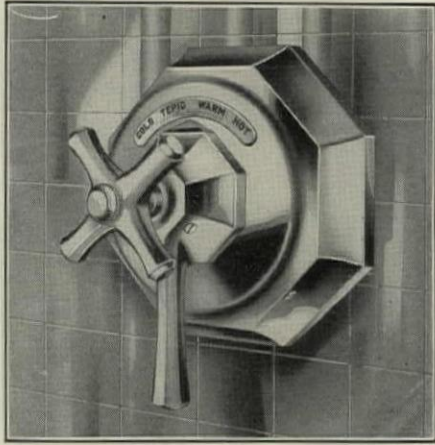
OAK FLOORING advertising is being continued on an increased scale during

THIS MASTER TRADE-MARK is stamped on the under side of all Oak Flooring produced by members of the Oak Flooring Manufacturers Association of the United States. It is complete protection for you. Every piece is air-seasoned and kiln-dried, then milled, and thoroughly inspected and accurately graded, insuring uniformly high quality.





## LEONARD *Thermostatic* Water Mixing Valves



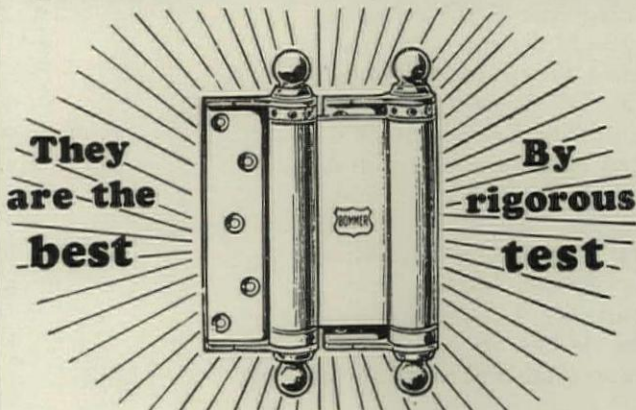
### ART LINE

Catalog C of Leonard Valves, showing Art Line and Colors to match bathroom fixtures, is now ready.

*Write for your copy*

**LEONARD-ROOKE COMPANY**  
Elmwood Station, Providence, R. I.

## 50 years on a DOOR good for fifty years more



### Notabene

The solid bronze Bommer Spring Hinges swinging the big front doors of the old Bank of Manhattan at 40 Wall St., New York, since 1880 were still in excellent condition when that building was demolished in 1929 to be replaced by the new Bank of Manhattan skyscraper of 73 stories which is also equipped with Bommer Spring Hinges—truly an astounding record.

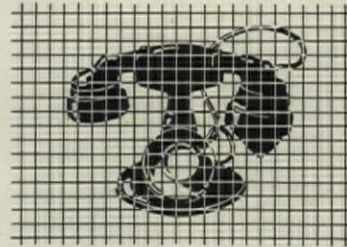
*These Historic Hinges can be seen at our factory*



**Millions and Millions of People  
are Pushing Bommer Spring Hinges  
when opening doors**

Factory at Brooklyn, N. Y.

# ORANGE Extruded Aluminum SCREENS



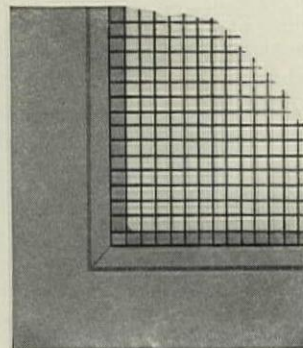
USED ON

55

## BELL TELEPHONE BUILDINGS

IN 1927 the New Jersey Bell Telephone Company, gave us the first order for Orange Extruded Aluminum Screens, to be installed on one of their buildings.

Since then, fifty-five other buildings of the New York and New Jersey companies have been screened with Orange Aluminum Screens, as well as buildings of the Chesapeake and Potomac Telephone Company in Washington, D. C., American Telegraph and Telephone Company, in North Carolina, New England Bell Telephone Company in Rhode Island, Bell Telephone Company of Pennsylvania, Associated Telephone Company of California, and other buildings.



Our Architects' Catalogue gives full working drawings of more than twenty methods of installing screens. It also gives sections and particulars of Orange Extruded Aluminum Screens. Gladly sent for your files.



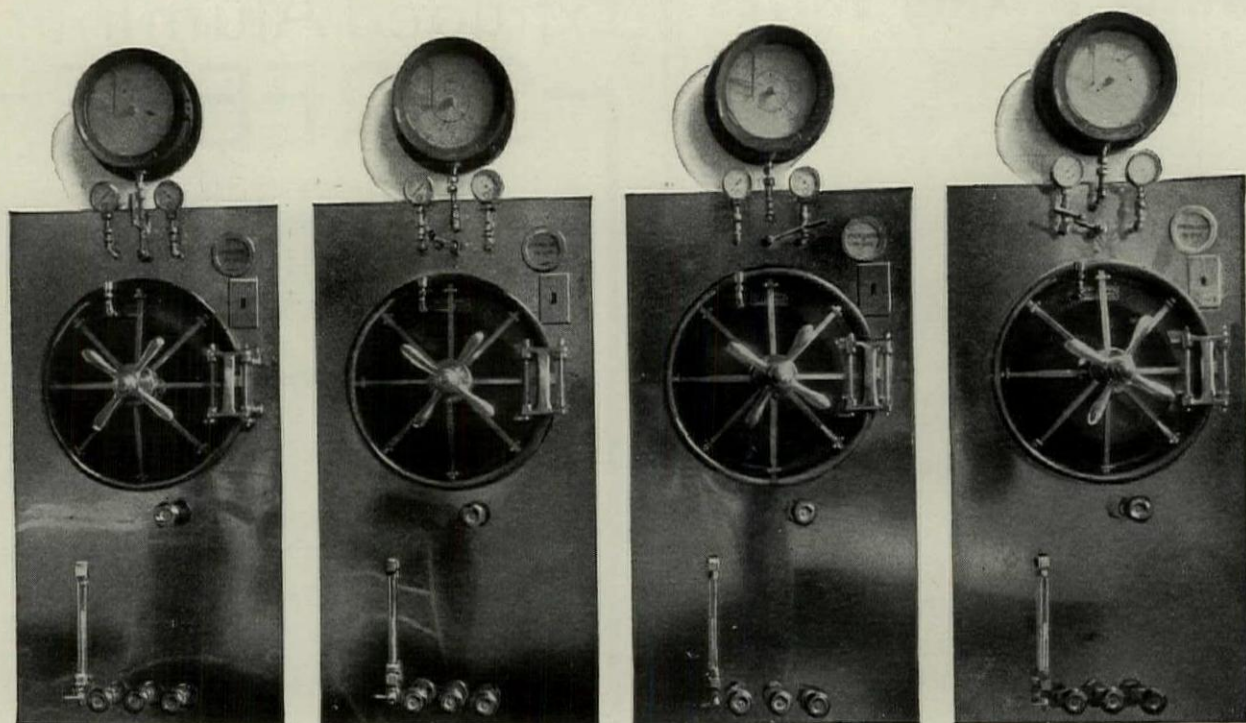
## ORANGE SCREEN COMPANY

Extruded Aluminum Frame Screens. Also  
Wood, Steel, Bronze and Roll Screens

MAPLEWOOD, NEW JERSEY



# Leading Hospitals favor *Sanitary* *Monel Metal* for clinical service



"Climax" built-in sterilizers with Monel Metal panels, installed in the Beth Israel Hospital, New York, N. Y., by THE HOSPITAL SUPPLY COMPANY and WATTERS LABORATORIES, CONSOLIDATED. Architect: LOUIS ALLEN ABRAMSON, N. Y.

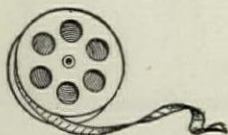
IN planning the modern hospital no factor deserves more careful attention than the selection of clinical equipment—particularly in regard to construction and quality. Here, above all, the question of first cost is subordinate to the principle of lasting efficiency and long-run economy.

For this reason, many of the most important hospitals have standardized on Monel Metal equipment for clinical use. They know that the many advantages which this silvery Nickel alloy has manifested in food and laundry service can be applied with equal success to the professional side of hospital work.

Inherently clean, Monel Metal provides scrupulous sanitation with minimum cleaning labor. Its lustrous, rust-proof surface resists the repeated attacks of cleaning compounds and disinfecting solutions. It has no coating to chip, crack or wear off. It offers the strength and toughness of steel with greater durability.

You can insure your clients' lasting satisfaction by specifying Monel Metal wherever service conditions demand low cost sanitation with enduring strength and beauty.

Send for "Modern Hospital Equipment", an illustrated book on the use of Monel Metal for clinical, food service and laundry equipment.



The story of Monel Metal—its properties and uses—is told in a fascinating 2-reel motion picture film now available for free distribution. Write for details.

## MONEL METAL



Monel Metal is a technically controlled Nickel-copper alloy of high Nickel content. It is mined, smelted, refined, rolled and marketed solely by The International Nickel Company. The name "Monel Metal" is a registered trade mark.





# BUILD CORROSION-RESISTANCE INTO CONCRETE FLOORS WITH OMICRON

**C**ONCRETE floors exposed to direct contact with acid solutions, oils, alkalis, greases, sugars and other corrosive agents quickly reveal the disintegrating action of those corrosives. As the solubles are leached away the floor becomes pitted and the destructive action of abrasive wear is intensified.

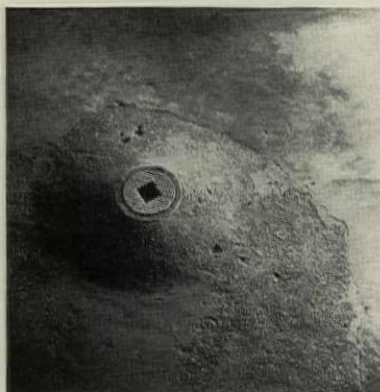
That same force is at work on floors not so exposed. While the action is slower, it is none the less sure. Mild acids in soaps and cleaning compounds; acidic precipitation from smoke or fumes; alkaline waters . . . all these attack the solubles in concrete, opening the way to premature failure of the floor.

Omicron . . the vital new ingredient discovered by the Master Builders Research Laboratories . . .

definitely checks corrosion by materially reducing the soluble elements formed in concrete during the hydration process. These are replaced by non-soluble cementitious products that add greatly to the strength of concrete.

Omicron-containing Master Builders Hardners give exceptional protection against both wear and corrosion . . . extending the useful life of concrete floors and effecting substantial savings in patching and replacement costs.

*Showing the disintegrating action of oil on an automobile service station floor.*



Charted reports of tests made in numerous testing laboratories on the value of Omicron in increasing strength and checking corrosive disintegration will besent on your request.



## The MASTER BUILDERS Co.

FACTORIES: CLEVELAND  
BUFFALO, IRVINGTON

CLEVELAND, OHIO

SALES OFFICES AND STOCKS  
IN ALL PRINCIPAL CITIES

### 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.

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

### FOR COMMERCIAL FLOORS

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

### FOR COLORED FLOORS

**COLORMIX**—Omicron-containing paste, mixed with the gauging water. Stronger than plain concrete. Produces uniform, fadeproof colors throughout topping. Hardens, waterproofs, dustproofs.



# INTERNATIONAL CASEMENTS



HIGH SCHOOL  
TEANECK • NEW JERSEY

HACKER & HACKER  
Architects

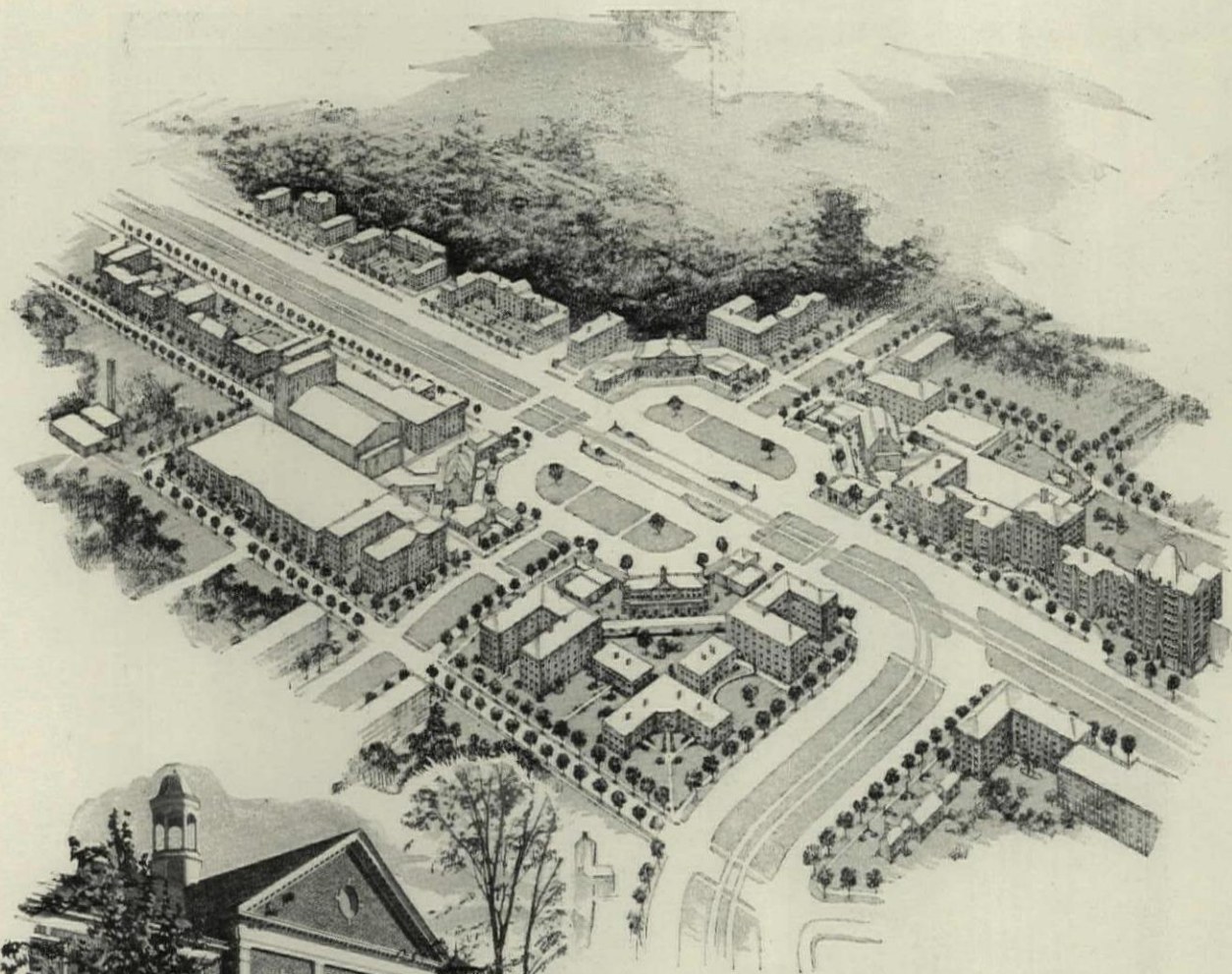
All metal casements in this school were custom-built by the International Casement Company. • • International Metal Casements now are available equipped with screens. Specially designed hardware permits the casement to be operated without disturbing the screen which, however, may be detached in an instant.

*Descriptive literature will be sent upon request.*

INTERNATIONAL CASEMENT CO • INC •

JAMESTOWN •• NEW YORK  
AGENTS IN PRINCIPAL CITIES





*Communities, as well as buildings,  
should be planned*

The beautiful Shaker Square Development at Shaker Heights, Cleveland, comprising a tavern, a bank, a theatre, and a number of stores and shops, demonstrates the wisdom of community planning. Despite the variety of uses to which these buildings are put, harmonious architectural treatment has achieved a most unique effect, impossible to accomplish by haphazard building.

The group of buildings flanking the square was designed by Philip Lindsay Small and Associates. All the steel work is of Carnegie Beams, fabricated by T. H. Brooks & Company. For small buildings as well as towering skyscrapers, Carnegie Beams with their wide, parallel flanges, contribute to steel construction unusual efficiency and a new simplicity of design and fabrication. Carnegie Beams merit your investigation.

**CARNEGIE STEEL COMPANY**

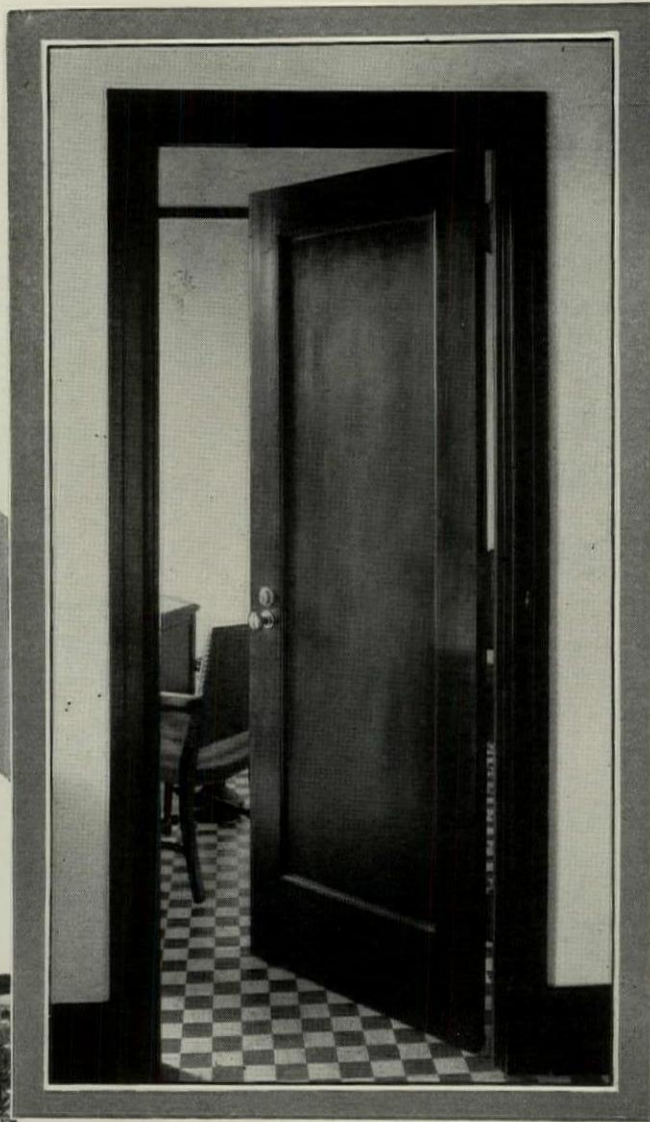
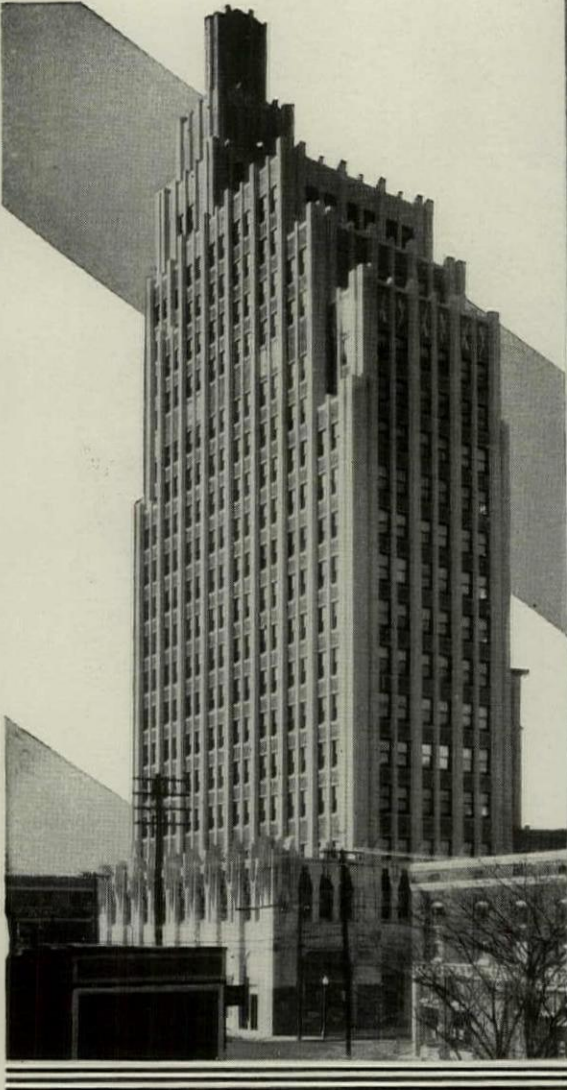
*Subsidiary of United States Steel Corporation*

PITTSBURGH, PA.

76

**CARNEGIE BEAMS**





Jackson Tower Building . . . . . Jackson, Mississippi  
C. H. Lindsley . . . . . Architect  
Rotary Red Gum Door of Special Design by Roddis.

## DOORS FOR THIS BUILDING CUSTOM MADE BY RODDIS

Roddis special service of design provides a custom made door specifically to the architect's prescribed details of idea. Beauty and architectural appropriateness has no bounds; beauty with forever-enduring quality construction. Most practical door service is procured; the desired distinctiveness of handsome style is obtained; and the cost remains within the

usual line of door price. Write now for details of Roddis standard doors or regarding Roddis special service of custom built design . . . Roddis Lumber and Veneer

Company . . . 128 Fourth Street, Marshfield, Wisconsin . . Established 1890 . . Manufacturers of Flush, French, Panel and Custom Built Doors. . . Distributors in All Principal Cities.

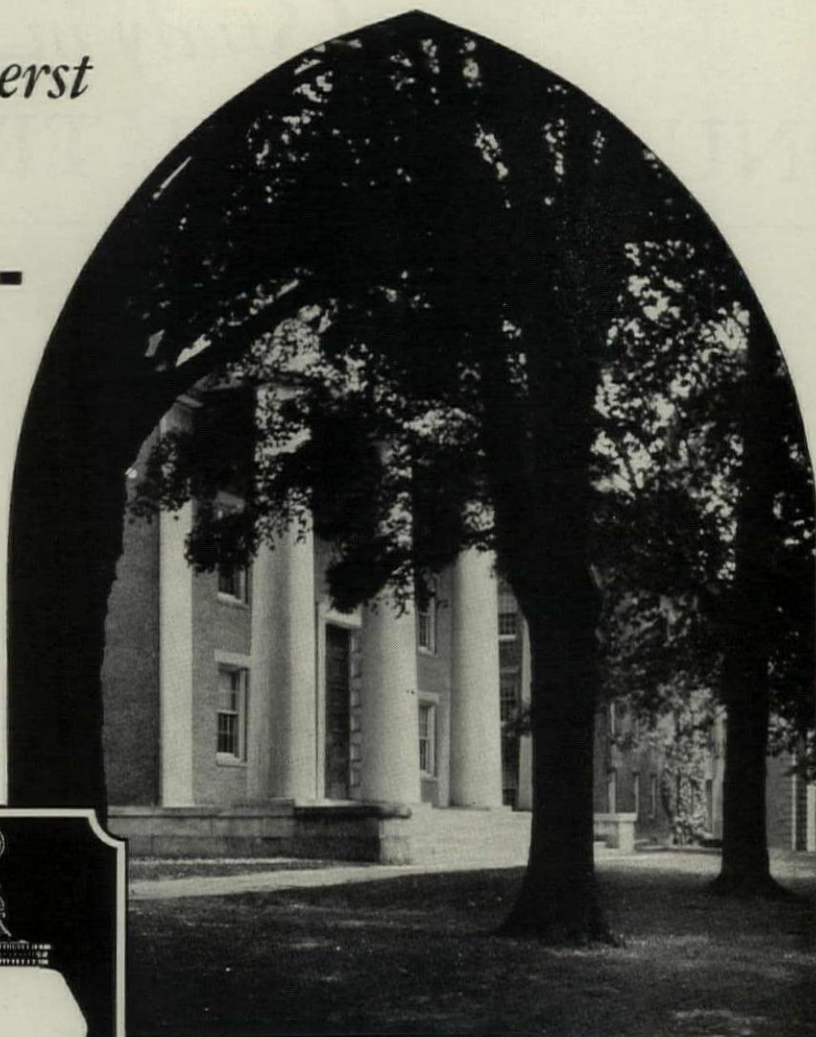


This Red-White Blue Dowel Trade Mark is on the edge of the Roddis Flush Door. It is the Roddis mark of identity and quality.

# RODDIS

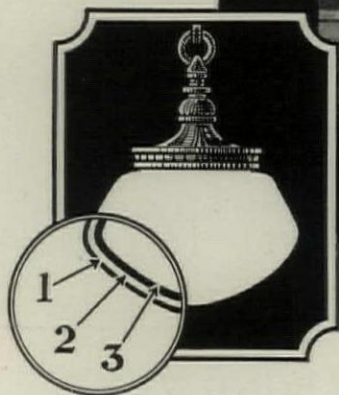


# And Now Amherst Installs Celestialite-



## *Celestialite's Three Layers: The reasons for its superiority*

Celestialite is a scientifically constructed glass that is made in three layers: (1) of crystal-clear transparency—for body and strength; (2) a layer of white glass—to diffuse the rays and soften the light; (3) a layer of blue glass—to whiten, clarify and perfect the light.



## *... the Superior Lighting Glass!*

### *Some Recent Celestialite School Installations*

Hershey School, Hershey, Pa.  
Closter Grade & High School,  
Closter, New Jersey  
Maplewood Junior High School,  
Maplewood, New Jersey  
School No. 4, Clifton, N. J.  
Gantner Avenue School,  
East Paterson, N. J.  
Technical High School, Scranton, Pa.  
Clifton High School, Clifton, N. J.  
Brighton High School, Brighton, Mass.

EDUCATORS invariably set standards of their own and they are usually standards worth following. For their standards are based on scientific researches involving tests, measurements, and long years of study. And when educators select lighting equipment, they will naturally select the equipment that minimizes glare, that will be restful to the eyes; that will most nearly reproduce daylight.

Amherst College now joins the large group of leading educational institutions that use Celestialite glassware. Their first order for the Physics Laboratory has recently been received. Among the other universities are Columbia, Wesleyan, Princeton, Pennsylvania, College of the City of New York, Stevens Institute of Technology, Rensselaer, Polytechnic Institute. These schools and universities have installed Celestialite after making the most careful scientific tests of its merits.

Write us for free catalogues showing various designs suitable for classrooms, lecture halls and laboratories.

# CELESTIALITE

(Registered and Patented)

## NEXT TO DAYLIGHT

Gleason-Tiebout Glass Co. (Celestialite Division)  
200 Fifth Avenue, New York City

Please send me free catalogues showing globe designs suitable for school and university lighting.

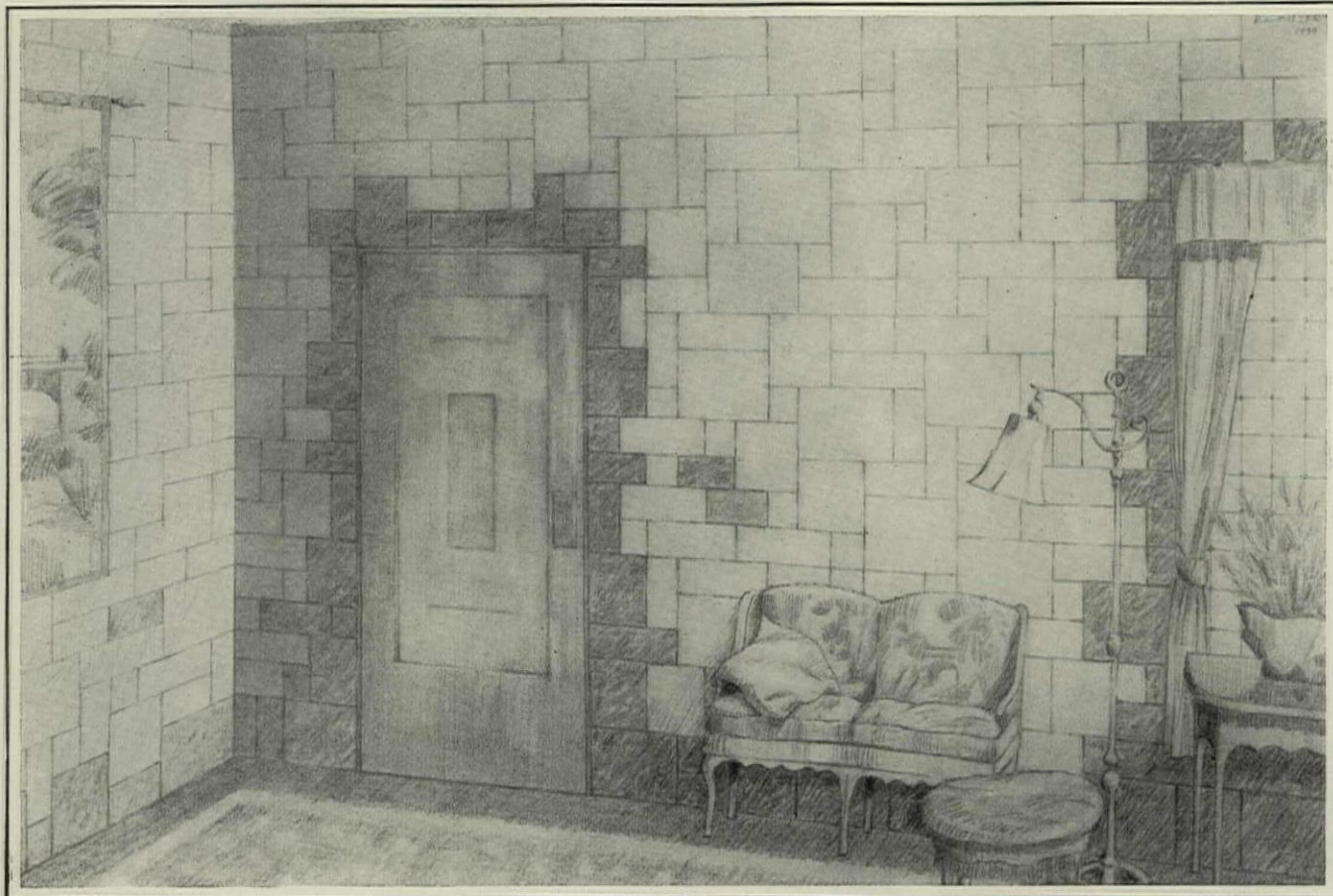
Name \_\_\_\_\_

Address \_\_\_\_\_

State \_\_\_\_\_



# *A Study in* UNUSUAL WALL TREATMENT



## RANDOM ASHLAR BOND VI

*A suggestion of Clay Products Company, Inc., of Indiana; one of the many decorative wall effects possible with AR-KE-TEX Tile*

THE creation and development of AR-KE-TEX Tile by Clay Products Company, Inc. has opened new possibilities in the achievement of wall effects that are pleasingly different.

Random Ashlar Coursing, shown above, represents only one of the wide variety of pleasing wall effects possible with AR-KE-TEX Tile.

When used in any coursing, color or texture or combinations of various colors and textures, AR-KE-TEX Tile affords a distinct departure from

ordinary construction materials. The attractive, finished face of AR-KE-TEX Tile is permanent too; refinishing is never necessary.

Clay Products Company, Inc. is constantly adding new textures and new colors, to the AR-KE-TEX family.

To keep you informed of these latest developments, we will gladly place you on our mailing list upon request.

CLAY PRODUCTS COMPANY, INC., OF INDIANA >< BRAZIL, INDIANA



THE STANDARD OF TEXTURED TILE



# THE MANHATTAN COMPANY BUILDING



*is shaded with du Pont*

## Tontine Washable Window Shades!

THE larger the building, the quicker are the architects to specify du Pont Tontine shades. With so *many* windows to provide for, they realize all the more clearly the great economy of a *washable* shade of Tontine's quality.

They know what it means in dollars and cents—in the life of the shades—to be able to scrub them with soap and water. They know the beauty and economy of a shade that does not fade in sunlight, that does not pin-hole and fray.

The next time you specify new shades make them du Pont Tontine. And for complete window shade satisfaction, insist that the shades be mounted on du Pont Tontine guaranteed rollers.

In the meantime, write to us for additional information and samples of Tontine shades. Use the coupon below for your convenience.

E. I. DU PONT DE NEMOURS & CO., INC.  
NEWBURGH, NEW YORK

Canadian subscribers address: Canadian Industries, Limited,  
Fabrikoid Division, New Toronto, Ontario, Canada



The Manhattan Company Building. H. Craig Severance, architect. Starrett Bros., Inc., builders. Brown, Wheelock, Harris, Vought & Co., Inc., renting and managing agents. This building is equipped throughout with du Pont Tontine washable window shades and Tontine guaranteed rollers.

# TONTINE

REG. U. S. PAT. OFF.

## THE WASHABLE WINDOW SHADE

E. I. DU PONT DE NEMOURS & CO., INC.  
Desk P. P. 7., Newburgh, N. Y.

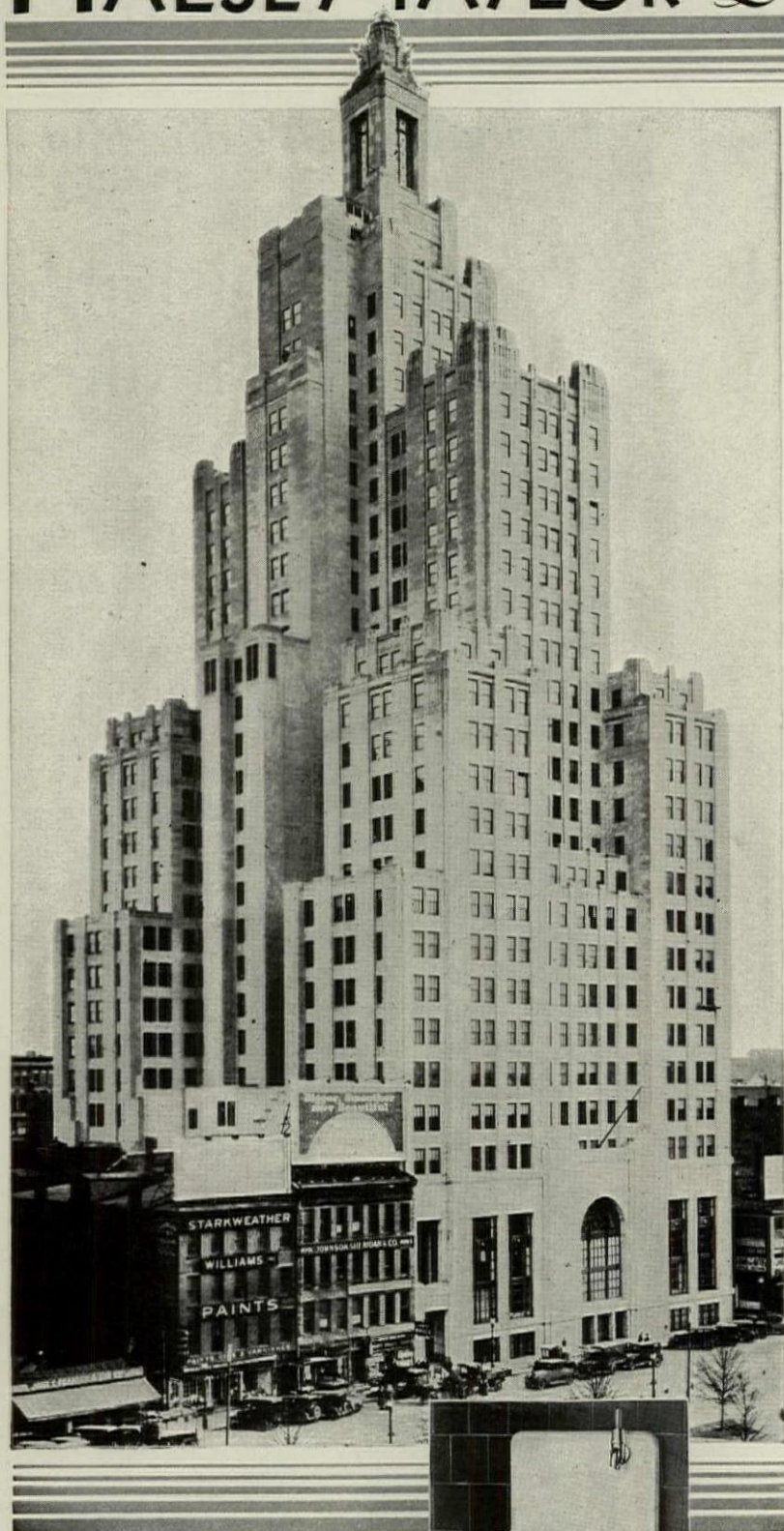
Please send me complete information about Tontine, the washable window shade.

Name .....

Address .....



# HALSEY TAYLOR *Drinking Fountains*



No. 623

## INDUSTRIAL TRUST CO. BLDG., PROVIDENCE, R. I.

WALKER & GILLETTE, N. Y., Arch's.

GEO. FREDERICK HALL, Providence, Assoc. Arch.

JOHN McMILLEN CO. Inc., N. Y., Plbrs.

**P**ROVIDENCE, like other growing metropolitan centers, is constantly adding to her skyline, the newest structure being illustrated herein.

No. 623, a type particularly in favor for public buildings, with glass-filler as well as projector, was chosen for installation in the Industrial Trust Building.

## *The Specification for Sanitation*

Invariably, the specification is Halsey Taylor Drinking Fountains. Special patented features insure trouble-proof and hygienic service at all times. Automatic stream control keeps water at uniform height regardless of pressure changes—two-stream projector insures a health-safe drinking mound—attractive designs give architects a chance to harmonize the fixtures with interior plans. \* \* \* \*

The Halsey W. Taylor Co., Warren, Ohio

See Sweet's Architectural Catalog—  
14 pages of information for you!





EMPIRE STATE BUILDING  
NEW YORK, N. Y.

## The World's Tallest Building . . . . .

Located on the site of the old  
Waldorf-Astoria, New York.  
Height 85 stories, 1046 ft.  
to main roof, with mooring  
mast 200 ft. additional.

✓

To be equipped with

**58 Signal  
Control Elevators**

by

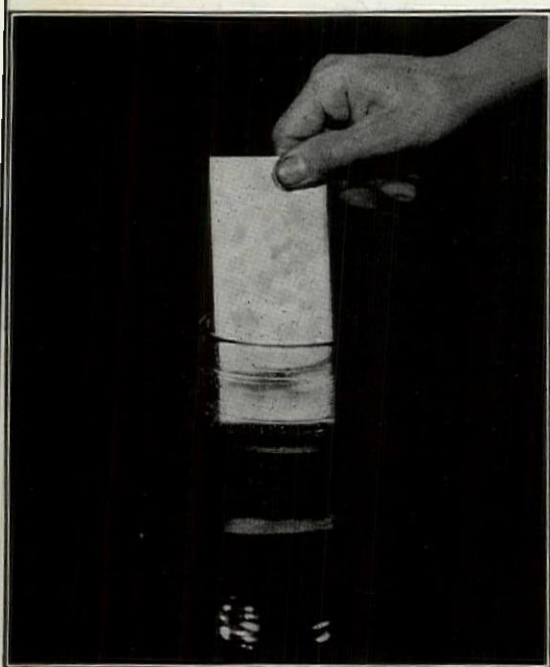
**OTIS ELEVATOR  
COMPANY**

SHREVE, LAMB & HARMON  
Architects

MEYER, STRONG & JONES  
Engineers

STARRETT BROS. & EKEN, Inc.  
Contractors





# Try this test

**T**AKE a glass of diluted sulphuric acid (two parts water, one part acid). Place a strip of the best galvanized roofing in this solution. Let it stay there five minutes. Note how quickly the acid eats away the coating. In every smoky locality sulphuric acid is slowly but surely eating away the roofing. Soot forms on the roof, rain water mixes with it to form acids which stain and corrode even copper.

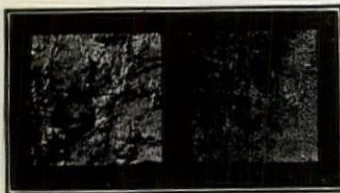
*then*

# Try this one

**P**LACE a strip of LEADCLAD in the same solution as above. Let it stay there twenty-five minutes or longer and notice that the PURE LEAD coating has not been harmed. That explains why LEADCLAD lasts years longer. The natural acids formed by rain and smoke neither corrode nor stain it. Its copper bearing steel base is rust resisting... its PURE LEAD coating is rustproof.

*There is a LEADCLAD product for every roofing need. It is made in all standard forms with a complete line of drainage products.*

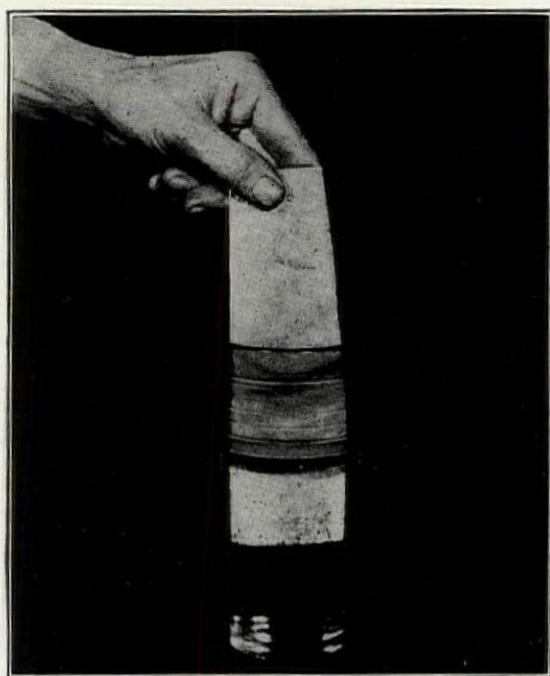
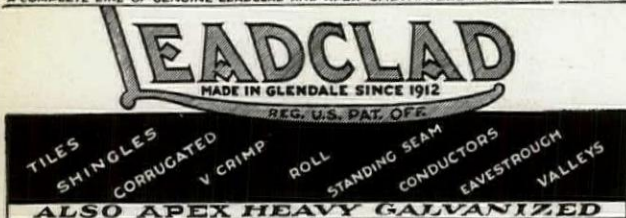
**Wheeling Metal & Mfg. Company**  
WHEELING, WEST VIRGINIA



## LEADCLAD COPPER

Here is an all time roofing material. It has a base of pure copper to which is fused a thick coating of pure lead. Permanent, non-staining. Particularly recommended for flashings, gutters, leader heads, conductor pipe and all drainage accessories. Made in two finishes, Old English or smooth, as illustrated.

A COMPLETE LINE OF GENUINE LEADCLAD AND APEX GALVANIZED ROOFING MATERIALS



**See our Catalog  
in Sweets  
pages B1717-1728**

## Leadclad Stocks in the Following Cities:

Boston, Mass.  
Bridgeport, Conn.  
New York City  
Erie, Pa.  
Cleveland, Ohio  
Cincinnati, Ohio

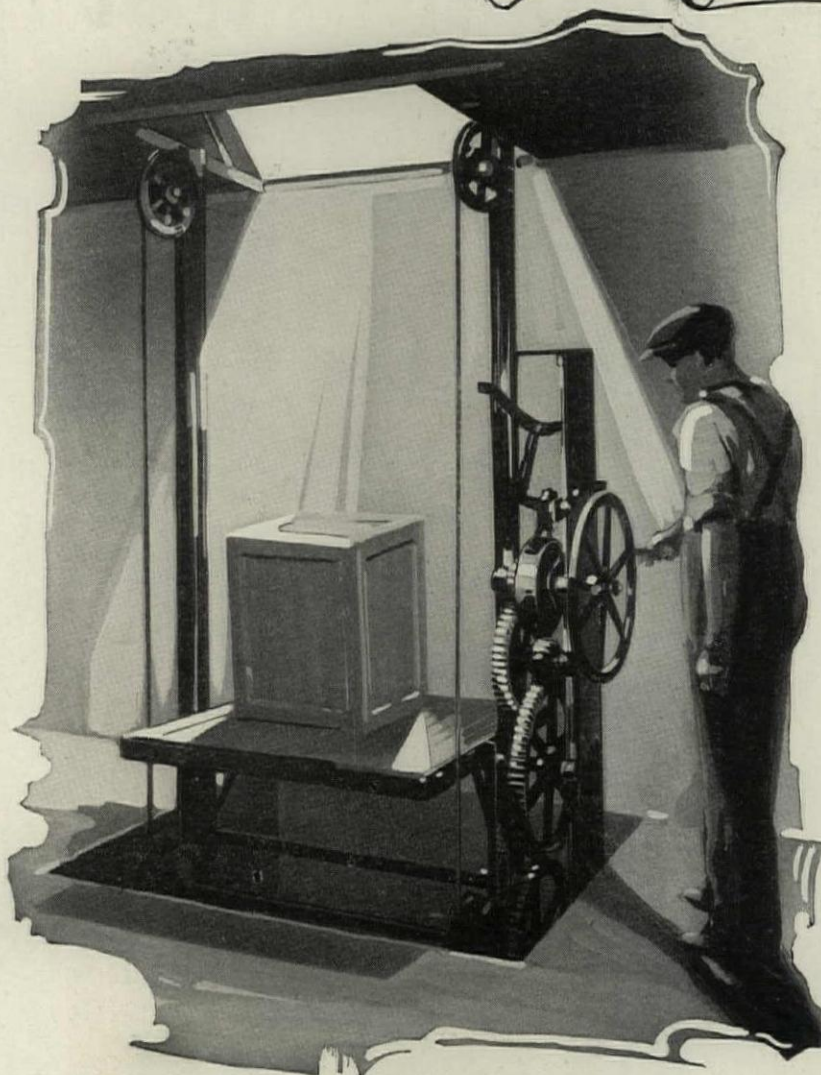
Mansfield, Ohio  
Youngstown, Ohio  
Toledo, Ohio  
Detroit, Mich.  
Richmond, Va.  
Los Angeles, Calif.

San Francisco, Calif.  
Portland, Oregon  
Baltimore, Md.  
Norristown, Pa.  
Tacoma, Wash.  
Medford, Ore.





- "and for the quick, economical movement of materials and refuse from basement to street level -



## —the **ENERGY** Hand-Operated **SIDEWALK** **ELEVATOR**

tinuous. In different types (to fit the various building conditions) it is in satisfactory service in apartments, banks, hotels, stores, schools, office buildings, hospitals and manufacturing plants.

The type illustrated (designed for use inside the building line) has a capacity of 1000 lbs. Even with a capacity load there is no undue strain on the operator.

For safety, floor saving and ease of operation, all mechanism is compactly contained and is motivated by a wheel instead of the usual crank.

Like all Energy equipment—Electric and Hand-Operated—this Sidewalk Elevator is strongly built to give continuously satisfying service for many years, and is tested to a high factor of safety.

Complete description and specification details of any type will be gladly sent on request—just tell us the capacity desired and its position on your plans. Energy Elevator Company, 211 New Street, Philadelphia, Pa.



*Been making them since 1887*

WHEN the need for vertical transit service between basement and street level will be infrequent . . . and the cost of electrical equipment out of proportion . . . it is not necessary to dispense entirely with the advantages of the mechanical lift.

Energy meets this need with the Hand-Operated Sidewalk Elevator, at a comparatively small initial cost.

This Elevator offers an adequate service in all cases where the use is not con-



### FOR DUMBWAITERS

We have just issued a catalog of Energy Dumbwaiters. The data it contains is of value in choosing the proper types for between-floors, messenger and light-load service.

If you have not already received a copy for your files, we'll gladly send one at your request.

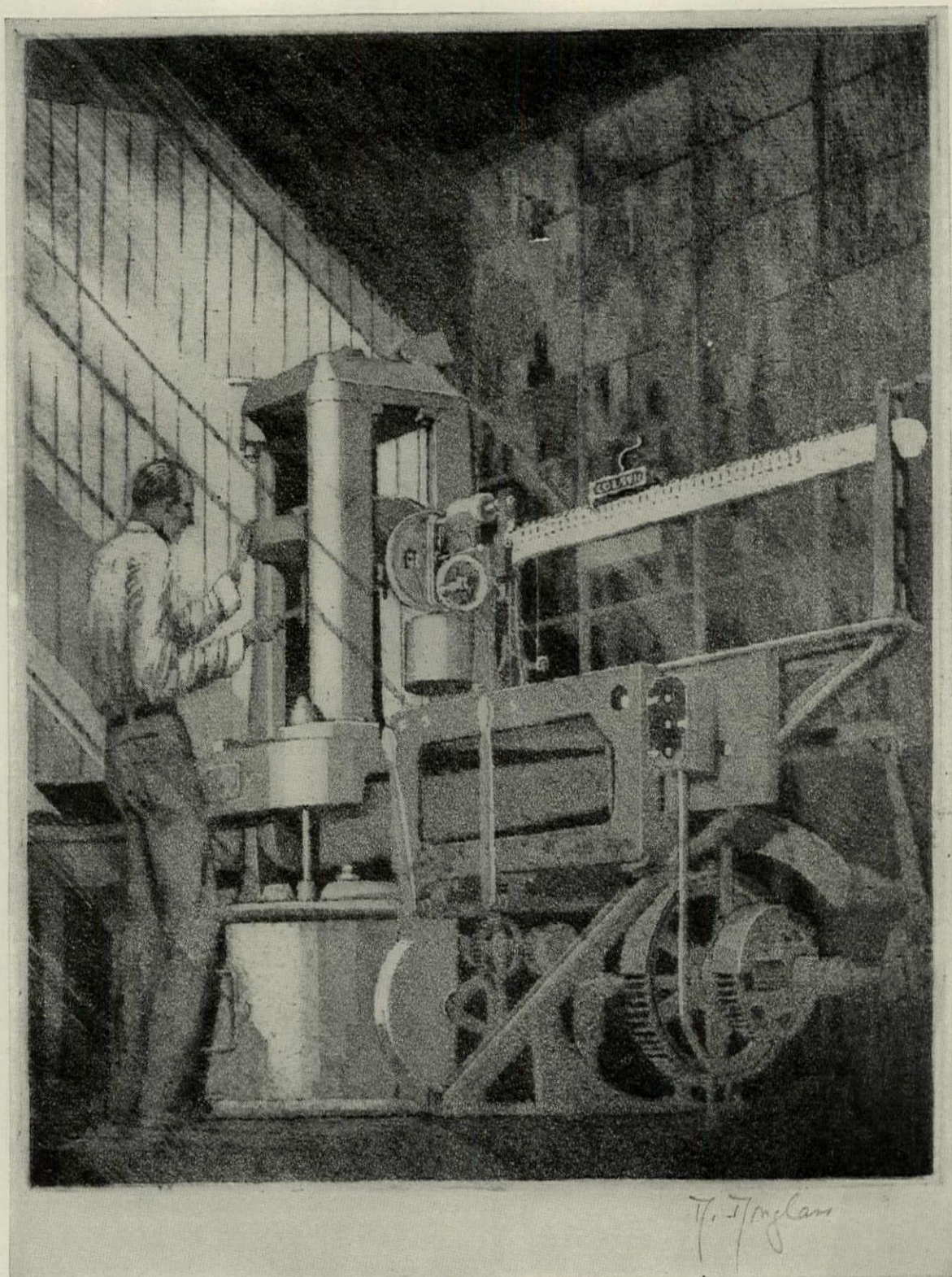


# ENERGY

## ELEVATORS & DUMBWAITERS

WHEREVER A LIFT IS NEEDED





## TESTING METALS... EVERY POUND MUST MEASURE UP...

The ability of valves to resist the service strains of expansion, contraction, pipe weight and settling is best indicated by the tensile, compression and cross-breaking strength of the valve metals . . . Testing machines of high scientific accuracy and incredible delicacy are relied upon by Jenkins Bros. to maintain the quality of valve metals in accord with Jenkins standards. Jenkins Valves are obtainable for practically any service . . . Jenkins Bros., 80 White Street, New York; 524 Atlantic Avenue, Boston; 133 North 7th Street, Philadelphia; 646 Washington Blvd., Chicago; 1121 No. San Jacinto, Houston, Texas; Jenkins Bros., Ltd., Montreal; London.



# "PROMPT DELIVERY . . . EFFICIENT SERVICE . . . FULL CO-OPERATION"

MORE THAN 12,000 FIXTURES AND FITTINGS . . . ON THE JOB WHEN WANTED, AND AT WORK WITHOUT A HITCH!



Kohler Co.,  
711 Fifth Avenue,  
New York City.

Attn: Mr. Clark, Manager.

Dear Mr. Clark:-

Now that The New Yorker Hotel is complete, the writer feels that W. G. Cornell Company's cooperation shown, efficient service rendered, and prompt delivery of plumbing fixtures and fittings complete for this, the largest in the City, we did so in the confidence that both the enameled and vitreous plumbing fixtures and the chromium-plated brass fittings manufactured by your company were of the highest quality and that you would render prompt service and efficient co-operation with the contractors.

The Owners and Builders have also expressed themselves to us as well pleased with your plumbing system in general.

023:7

TELEPHONE CHIEF 0725

THE NEW YORKER HOTEL CORPORATION  
145 WEST 57TH STREET  
NEW YORK, N. Y.

March 10th 1930.

Kohler Co.,  
Kohler, Wisconsin.

Gentlemen:

When we selected Kohler Plumbing Fixtures for the New Yorker Hotel, the largest in the City, we did so in the confidence that both the enameled and vitreous plumbing fixtures and the chromium-plated brass fittings manufactured by your company were of the highest quality and that you would render prompt service and efficient co-operation with the contractors.

It gives me pleasure to say that the Kohler Company has fully lived up to our expectations. The more than eight thousand plumbing fixtures, together with the brass fittings, all of which you furnished, are most attractive in appearance and operate satisfactorily.

The promptness you showed in delivering this large order as required, and the efficient way in which you co-operated with the contractors was very much appreciated and meant a great deal in so large a building operation.

Cordially yours,

The New Yorker Hotel,

by *Mac Kanner*  
President.

THE PROMPT and efficient way that Kohler fills orders, large or small, is strikingly revealed with the completion of The New Yorker . . . rising forty-five stories above ground at Eighth Avenue and 34th Street, New York, and costing \$22,500,000. This hotel, the largest in New York, used Kohler fixtures and fittings exclusively, a total of over 12,000 pieces!

In commenting on the thoroughness of Kohler service, extending from the time the order was placed until the actual installation, Mack Kanner, President of The New Yorker Hotel Corporation, writes:

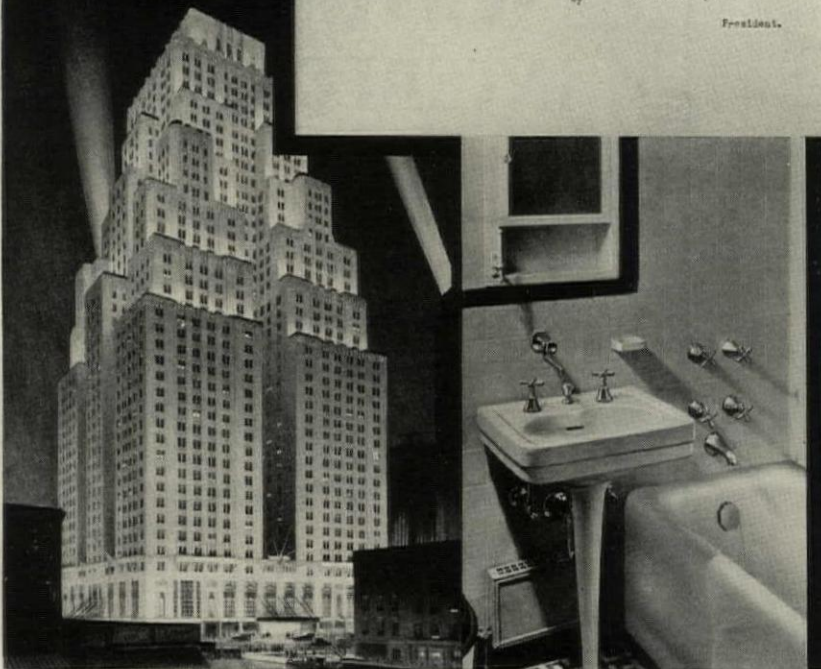
"We selected Kohler plumbing fixtures in the confidence that your enameled and vitreous plumbing fixtures, and chromium-plated brass fittings, were of the highest quality.

"The promptness you showed in delivering this large order as required, and the efficient way in which you co-operated with the contractors, meant a great deal in so large a building operation."

The contracting firm, W. G. Cornell Co., through the Vice-President, George J. Simons, also expresses gratification:

"Now that The New Yorker Hotel is completed and occupied, the writer feels that W. G. Cornell Co., as the plumbing contractor on this building, owes your company a word of appreciation for the splendid co-operation shown, the efficient service, and the prompt delivery rendered by you. . . . The owners and builders have also expressed themselves to us as well pleased with your plumbing fixtures, as well as with the plumbing system in general."

Kohler organization, coupled with unusual resources which insure ample stocks at all times, makes it possible for this house to deliver orders of any nature when and where you want them, without difficulties. Kohler Co. Founded 1873. Kohler, Wis.—Shipping Point, Sheboygan, Wis.—Branches in principal cities. . . . Look for the Kohler trade-mark on each fixture and fitting.

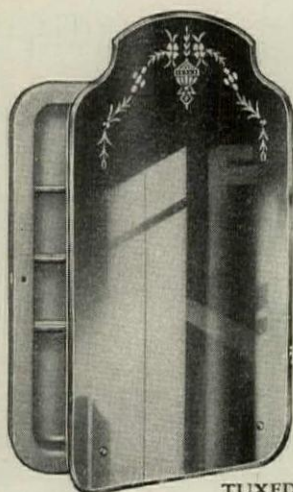


# KOHLER OF KOHLER

## PLUMBING FIXTURES



# Round Corners! INSIDE and OUT



TUXEDO

**CORCORAN**  
one piece  
Steel Bathroom  
**CABINETS**

Corcoran Cabinets are the original One-Piece Steel Cabinets. No cracks, no seams, no welded joints, no raw edges.

A cabinet that really belongs! Corcoran, with its unique method of construction, presents modern bathroom cabinets that harmonize and through which no wall moisture can enter—because not a single crack, joint, or seam is present. Round corners inside and outside eliminate collection of dirt, rust and corrosion—providing absolute sanitation and easy cleaning.

## 38 Models

Venetian Mirrors, Colonial Mirrors, regular insert type models and hotel cabinets. All types furnished in small and large sizes. Write today for your copy of the latest catalog.

**THE CORCORAN MFG. CO.**  
Cincinnati, Ohio



Complete stocks are now being carried in Chicago, New York, Philadelphia, Boston, San Francisco, and Los Angeles; communicate with Corcoran offices at 1820 McCormick Building, Chicago; 1228 Locust Street, Philadelphia; 11 West 42nd Street, New York; Colonial Distributors, Inc., 292 Main Street, Cambridge, Mass.; The Gardner Sales Co., 1318 So. Grand Avenue, Los Angeles; E. T. Rawlinson, 1906 Vine Street, San Francisco.

THE CORCORAN MFG. CO., CINCINNATI, O. DEPT. PP-7-30

Gentlemen:

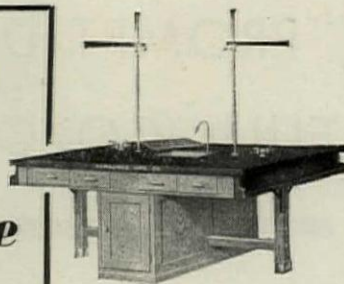
We are interested in Corcoran One-Piece Steel Bathroom Cabinets. Kindly send catalog and full details.

Name .....

Address .....

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

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Chemistry Table No. D-605

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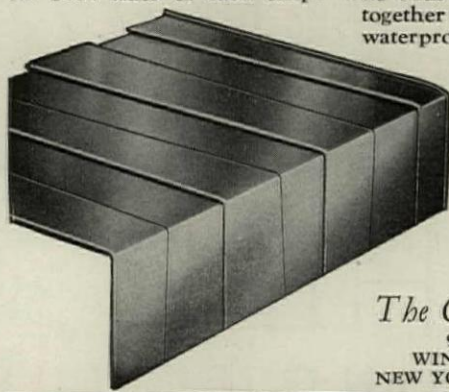
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## CHENEY INTERLOCKING WALL FLASHING *prevents ~ seepage ~ leaks ~ efflorescence*

CHENEY INTERLOCKING WALL FLASHING IS A THRU-WALL COPPER FLASHING that positively prevents seepage, leaks and the usual unsightly and destructive results of neglecting to thru-flash the walls.

"It does not break the bond" because when laid between two courses of masonry it forms a perfect mechanical key-bond in every direction. It is keyed both horizontally and vertically on both sides of each strip. The ends of the strips hook together to form a continuous waterproof flashing.



Cheney Interlocking Wall Flashing comes ready-to-use; is laid by the Mason as fast and easily as brick; requires no special fitting, soldering, or loss of time.

Carried in Stock for all Standard dimension walls.

Send for descriptive literature TODAY.

**The Cheney Company**  
961 Main Street  
WINCHESTER, MASS.  
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### The Stevenson "Door That Cannot Stand Open"

(Patented)—the greatest money-saver ever invented for busy doorways. Double-swing, self-closing doors—always closed unless filled with passing goods or man—prevent any flow of air—avoid practically all refrigeration waste. Write for descriptive catalog.

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Consolidating Jamison Cold Storage Door Co., Inc., and Stevenson Cold Storage Door Co.

HAGERSTOWN, MD., U. S. A.  
Oldest and Largest Makers of Cold Storage Doors

Branch Offices: New York, Chicago, Chester, Pa., San Francisco, Los Angeles, Seattle, Spokane. Southern Representatives, address Hagerstown.

**Jamison & Stevenson**  
Cold Storage Doors



### IMPORTANT ANNOUNCEMENT

All our manufacturing—both of Stevenson and Jamison Door Products—will be done hereafter at our

### HAGERSTOWN PLANT

where amplified, up-to-the-minute equipment and the long-experienced personnel of both our former plants are now combined. There will be no change in the products themselves, or their high standards of quality and performance.

This will facilitate production and shipment of all orders—especially those combining products of both our former plants.

All orders and other communications which would formerly have gone to the Stevenson Cold Storage Door plant at Chester, Pa., should be addressed to us at Hagerstown.

## Little Points that make a BIG DIFFERENCE

### DIVERSITY OF EQUIPMENT

There are 21 standard types of Sedgwick Hand Power Dumb Waiters and Elevators.

### PROMPT DELIVERY

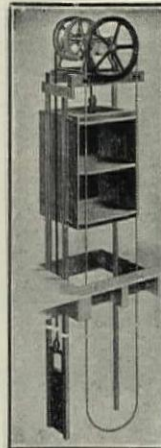
Shipment of standard equipment can be made upon receipt of order, special outfits in less than a week.

### EXPERIENCED ADVISORY SERVICE

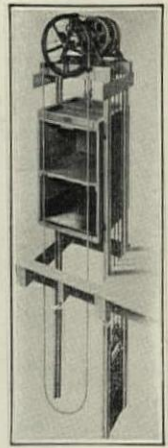
With 40 years of specialization in the design, manufacture and installation of hand power elevating equipment for all purposes, the Sedgwick Architectural Engineering Department is well qualified to submit advice.

### UNDIVIDED RESPONSIBILITY

Recognized as the largest manufacturers of hand power dumb waiters and elevators exclusively, the name SEDGWICK is positive guarantee for satisfaction.



Automatic Brake Dumb Waiter



Sedg-Versal Dumb Waiter

THE Automatic Brake Dumb Waiter illustrated above is suitable for average loads of 25 pounds or less. The Sedg-Versal Dumb Waiter is suitable for average loads up to 150 pounds. This information and additional data is now prepared in convenient folder form ready for your files. Write for new Architect's Reference Chart showing Application—Uses—Loads and Sizes of Dumb Waiters and Elevators, if your copy has not been received. Address Sedgwick Machine Works, 158 West 15th Street, New York, N. Y.

## MOUNT AIRY GRANITE



The Masonic Memorial at Acacia Park, Buffalo, N. Y.

The selection of a competent manufacturer is no less important than the choice of the right granite

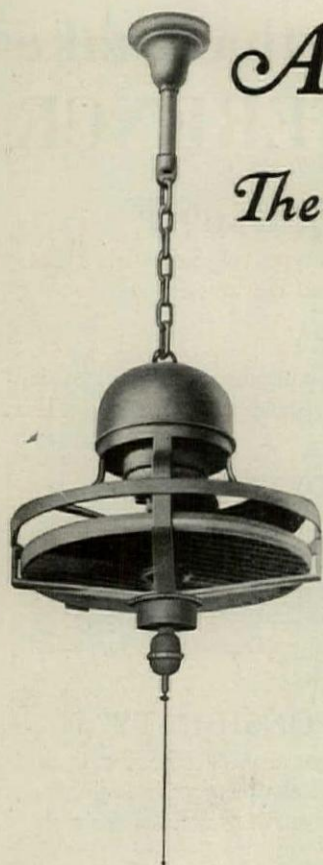
**J. D. SARGENT GRANITE CO.**  
MOUNT AIRY, N. C.

615 Witherspoon Bldg., Philadelphia  
127 N. Dearborn St., Chicago 297 Fulton Bldg., Pittsburgh



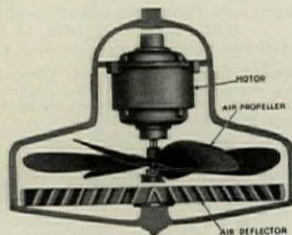
**SEDGWICK**  
Dumb Waiters - Elevators  
FOR ALL PURPOSES





# *Air Comfort at All Times*

*The Fandolier* No draft—no danger from too much air—no discomfort from too little circulation. The FANDOLIER produces gently diffused air currents that come upon you with delicious welcome and relief. It eliminates all dangers so common from the blasts of ordinary fans, or from too wide opened windows. You can regulate the volume and velocity of its descending zephyrs to suit your conditions.



FANDOLIERS  
installed in  
Barber Shop,  
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## THE SAFETY CAR HEATING & LIGHTING COMPANY

NEW YORK  
75 West Street

PHILADELPHIA  
1617 Pennsylvania Boulevard

CHICAGO  
310 South Michigan Avenue

BOSTON

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SAN FRANCISCO



PENCIL POINTS FOR JULY, 1930

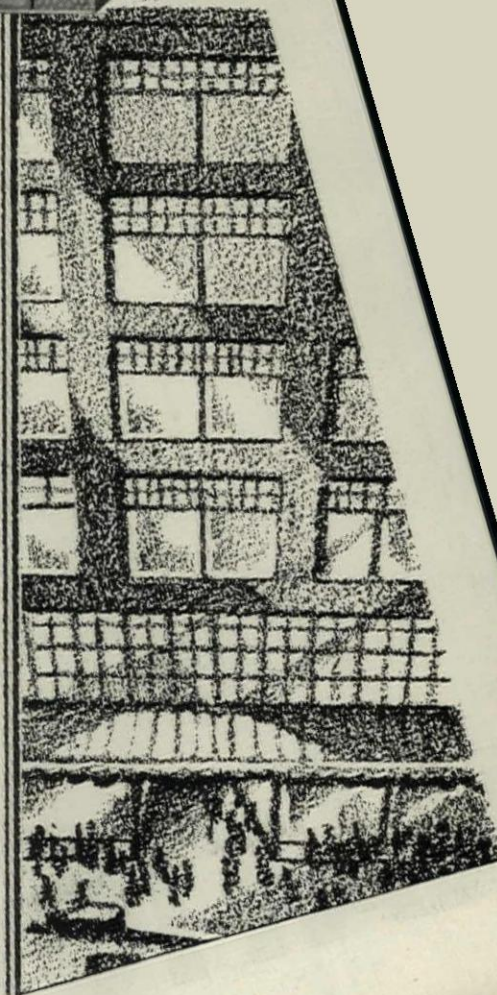
# T ransex

THE perennially popular store front transoms of small square lights of glass set in metal bars can be closely simulated and considerably surpassed in appearance, durability and economy by the use of TRANSEX. Obviously a single sheet of glass is less subject to leakage under the stress of weather and vibration. Neither the minute lenses nor the division lines are sufficiently elevated to collect dirt rapidly.



**BLUE RIDGE GLASS CORPORATION**  
**KINGSFORD, TENNESSEE.**

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 Pacific Slope Agents . . . GOODMAN & PAIGE . . . 1490-1494 Mission Street  
 San Francisco, California





# NEW JERSEY'S TALLEST

LEFCOURT-NEWARK BUILDING, NEWARK, N. J.

Architect: Frank Grad, Newark, N. J.

Engineer: Eadie, Freund & Campbell, New York City

Plumbing Contractor: Jaehnig & Peoples, Newark, N. J.

Heating Contractor: Schrenell Bros., Newark, N. J.

Unusually effective in interior plan with its commanding and graceful exterior lines, this recently completed building ranks with some of the finest in the land, a structure of which New Jersey may well feel proud. Thirty-seven stories from street to tower—the highest building in the State of New Jersey—the Lefcourt-Newark Building is the latest addition to Newark's skyline. Naturally the architects and engineers, experienced in specifying for some of America's finest buildings, turned to time-tested and quality-proven material.

Thus, as in many previous instances, they chose NATIONAL for the major pipe tonnage. In addition to NATIONAL Pipe for the heating, soil and waste lines, they specified NATIONAL Copper-Steel Pipe for the vent lines and rain leaders as an additional protection against atmospheric corrosion. Many years of experience and numerous service tests have proven that copper-steel pipe gives added life to those lines exposed to alternate wet and dry conditions. Write for Bulletin No. 11, describing—

NATIONAL COPPER-STEEL PIPE

*The Original Copper-Steel Pipe*

NATIONAL TUBE COMPANY—Pittsburgh, Pa.

Subsidiary of United States Steel Corporation



# NATIONAL PIPE



# BRING DAYLIGHT TO DARK PLACES WITH THESE IMPROVED SKYLIGHTS

**LUPTON** — the pioneer in steel-window construction — recommends Corrugated Wire Glass Skylights. Their advantages are numerous. They bring maximum daylight, without glare or shadow. They are completely water-proof. So with each rainfall, dirt and dust are washed away — making the skylight practically self-cleaning. Maintenance costs are reduced.

Strength tests prove that Corrugated Wire Glass\* is seven times stronger than flat wire glass of equal thickness. This means less breakage, and greater resistance to vibration and temperature changes.

Translucent — transmitting diffused light which is easier on workmen's eyes. Also made in Actinic Glass, which absorbs most of the heat rays of a

\* Mfd. by Pennsylvania Wire Glass Co.

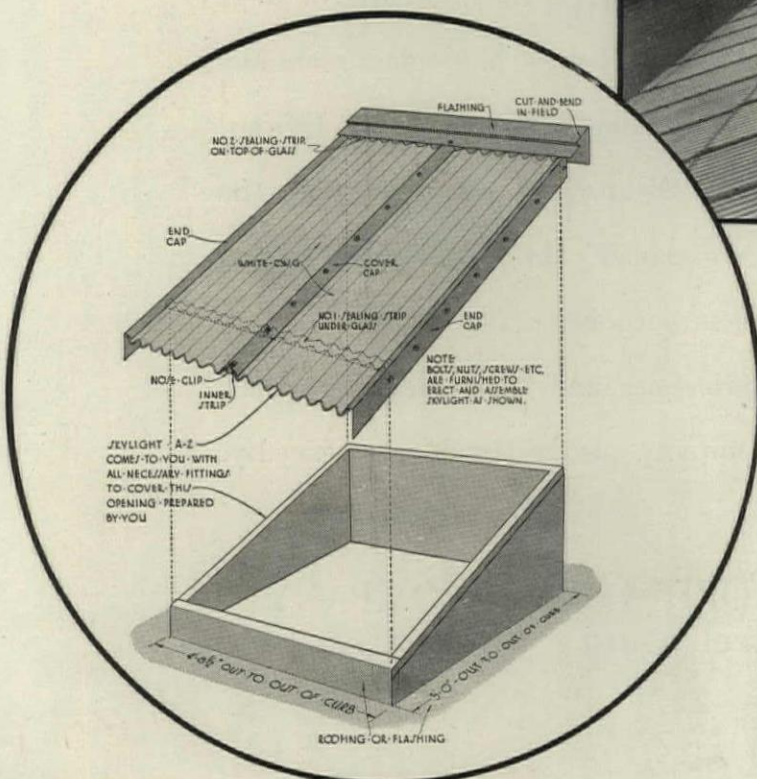
summer sun. Consequently, the expense of painting the glass is saved.

Lupton sends you the skylight completely equipped: glass, flashing, caps, bolts, clips, sealing strips, elastic cement, etc. Skylights can be applied to curbs of wood, concrete, steel or any other structural material, or direct to sloping roofs. Fittings can be obtained in copper, galvanized steel, or aluminum. Each skylight made to meet Lupton's high standards of quality and workmanship.

We have a free folder showing the various types of construction, prices, etc. You should have the details of these superior skylights for your files. Write to David Lupton's Sons Company, 2229 E. Allegheny Ave., Philadelphia, Pa.

## LUPTON

WHERE STEEL IS FUSED WITH SINCERITY



*Corrugated Wire Glass Skylights bring many extra square feet of light to the Wagner Electric Corporation of St. Louis, Mo. Condon and Post, Engineers.*

*Diagram showing details of construction of skylight A-2. You prepare the opening, and we furnish everything needed to make a complete skylight.*





An announcement  
addressed to the  
**ARCHITECTS *of* AMERICA**

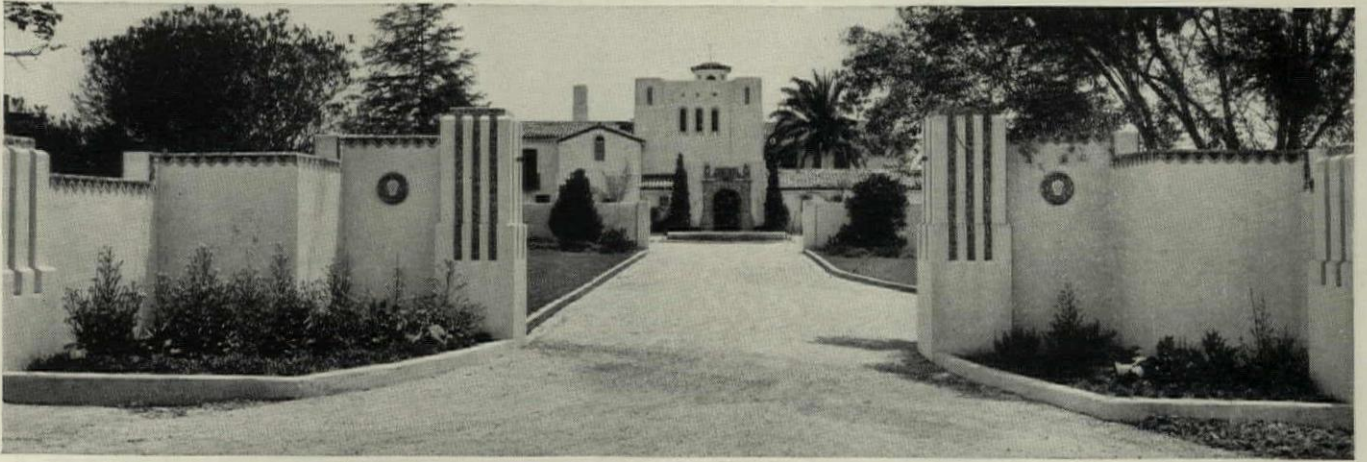
The name Libbey-Owens has been a familiar one to architects for many years. It has become synonymous with quality glass. Thousands of architects throughout the country always specify Libbey-Owens glass for fine buildings. This widespread confidence in Libbey-Owens has been a major factor in the spectacular growth of this institution . . . Now Libbey-Owens joins with The Edward Ford Plate Glass Company—one of the country's foremost producers of quality plate glass. This new organization—under the name of Libbey-Owens-Ford Glass Company—is the largest manufacturer of sheet glass in the world, as well as one of the largest plate glass manufacturers . . . : Quality manufacture was almost a religion with Edward Drummond Libbey, Michael J. Owens and Edward Ford, the founders of these two uniting companies. On this common ground they reared outstanding business successes . . . To the furtherance of their policies, their principles and their ideals, the new Libbey-Owens-Ford Glass Company pledges itself unreservedly.

LIBBEY·OWENS·FORD GLASS COMPANY  
TOLEDO, OHIO



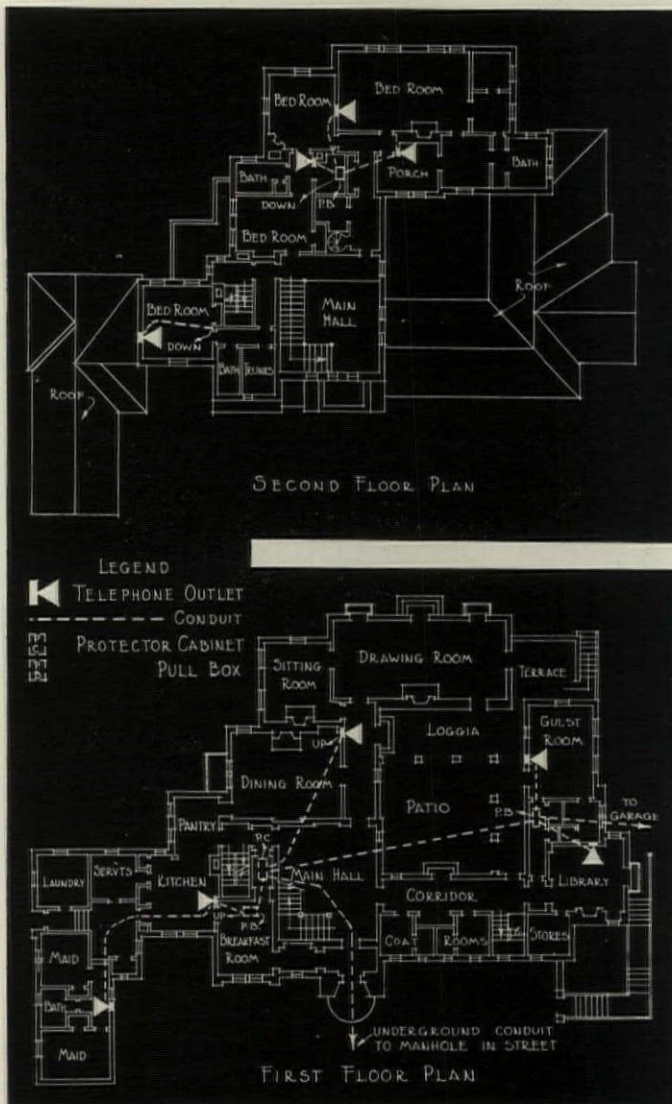


# Telephone Convenience adds to the Individuality of a Residence



Complete telephone convenience is provided for in the residence of Mr. Francis Whitaker, 1155 Angelo Drive, Los Angeles, Cal., by ten telephone outlets, including one in the garage. Conduit within the walls and floors carries the wiring for the telephone system which will include inter-communicating features.

CARLETON M. WINSLOW, Architect, Los Angeles.



CERTAIN things contribute to the effectiveness of the well-designed home: its beauty . . . excellence of materials . . . other carefully chosen features which assure the comfort of those who live in it. The achievement of complete convenience, so essential to modern life, is increasingly claiming the attention of architects in every part of the country. And a considerable part of this attention is being directed to *telephone convenience*.

Many people who move into new homes, or who have their residences remodeled, desire to have telephones in all the important rooms. They realize how many steps and how much time this will save. And architects are meeting this modern need by planning for the telephone arrangements in advance of construction, and specifying conduit to all locations where telephone outlets may be desired. The home owner can then use just those outlets which best meet his requirements, and he can enjoy the improved appearance which comes from concealed wiring.

Representatives of the local Bell Company will gladly confer with you and your clients relative to appropriate locations for telephones. There is no charge. Just call the Business Office.







A SIDEWALL INSTALLATION OF AKOUSTOLITH SOUND-ABSORBING ARTIFICIAL STONE  
IN TEMPLE EMANU-EL, NEW YORK CITY, IN A GRADATION OF COLOR FROM LIGHT  
AT THE BASE TO DARK AT THE CEILING AND WITH GOLD CERAMIC INSERTS.

. . .

ROBERT D. KOHN, CHARLES BUTLER AND CLARENCE S. STEIN WERE THE ARCHITECTS OF  
THIS BEAUTIFUL INSTALLATION IN ASSOCIATION WITH MAYERS, MURRAY AND PHILLIP.

❖❖❖ **R. Guastavino Company** ❖❖❖

40 COURT STREET, BOSTON, MASS.

225 WEST 34TH STREET, NEW YORK, N. Y.

R. GUASTAVINO CO. OF CANADA, LTD.  
New Birks Building, Montreal, P. Q.



# ***For business offices***



## ***specify permanent cushioning***

**I**N virtually all types of modern building Goodyear Rubber Flooring finds suitable place. But for business offices especially, where many people gather for work, *qualities inherently of rubber* justify specification.

Goodyear Rubber Flooring is a *permanent* flooring — rubber yields to shock and avoids wear. It is a *silent* flooring — rubber deadens sound. It is a *sanitary* and *easily cleaned* flooring—*rubber* is impervious to dirt. It is an extremely *comfortable* flooring—

## ***in floors of*** **RUBBER!**

for it is not only easy to stand on but like all *rubber* an insulating material and slowly responsive to atmospheric change. It is *always dry*. In no other flooring do you find so combined an appropriateness.

Goodyear Rubber Flooring is, as well, nicely susceptible to design. Over thirty colors and many

sizes are available to work with. You may make *floors* a coherent part of main decorative treatments in endless combinations of figure and pigment. Even on places of severe wear, as stair treads, these colors persist. They go the whole depth of the material — *permanently smudgeless*.

Write for complete information on this *versatile* modern flooring material—Architect's Booklet, A. I. A. File 23C — Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME  IN RUBBER  
**GOODYEAR**  
RUBBER FLOORING



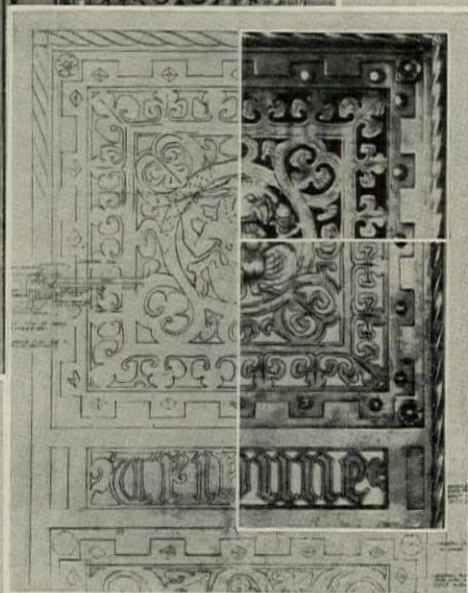
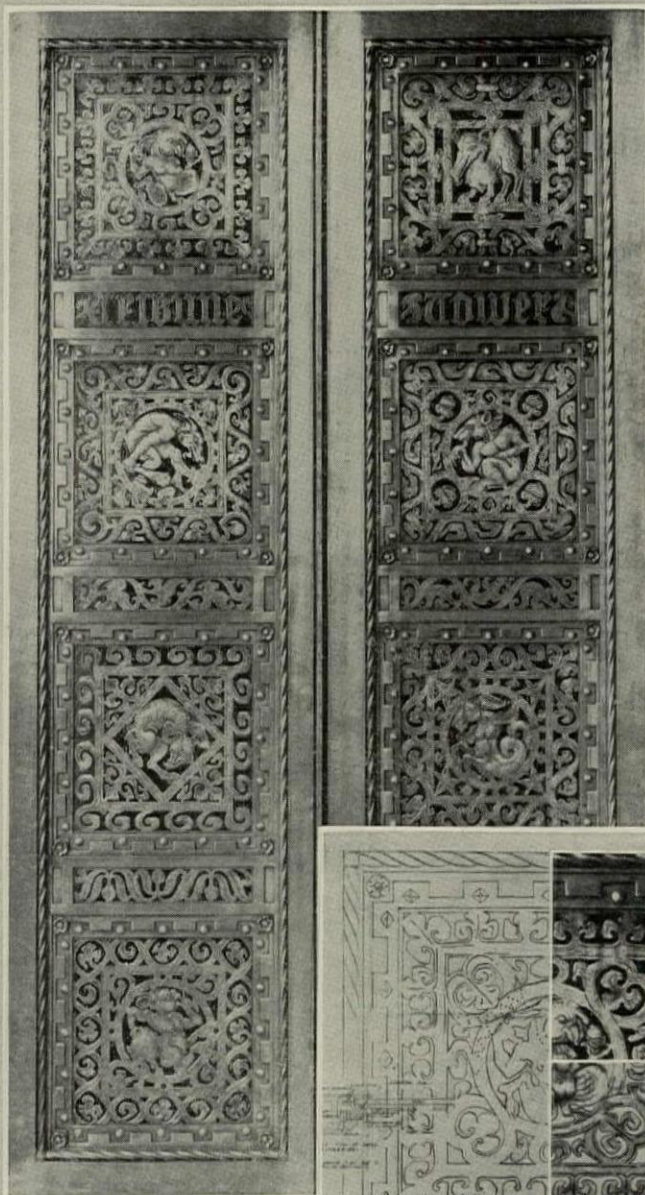
## Tribune Tower

CHICAGO

This distinguished Architectural Achievement is an inspiring, outstanding and important milestone on the road to fame of the architects. One of them, MR. HOOD, in a recent article in LIBERTY MAGAZINE entitled "WHAT IS BEAUTY IN ARCHITECTURE," says that "beauty is utility developed in a manner to which the eye is accustomed by habit, in so far as this development does not detract from its quality of usefulness."

That this work was designed and executed with this truth in mind is apparent in its many interesting, utilitarian details. Among these, the Lobby Elevator Fronts, here shown, rank in importance, utility and beauty.

They are hand forged from heavy wrought iron plates whose half polished surface texture is finished with burned oil. The inset shows portions of the Architects' full size detail, sample plaster model and finished metal, and makes it evident that the designer's pencil, modeller's thumb and artisan's hammer were alike guided by the same spirit of playful enthusiasm.



### ARCHITECTS

John Mead Howells and  
Raymond M. Hood

### BUILDERS

Hegeman & Harris

### MODELLER

Réne Chambellan

### ORNAMENTAL IRON WORK

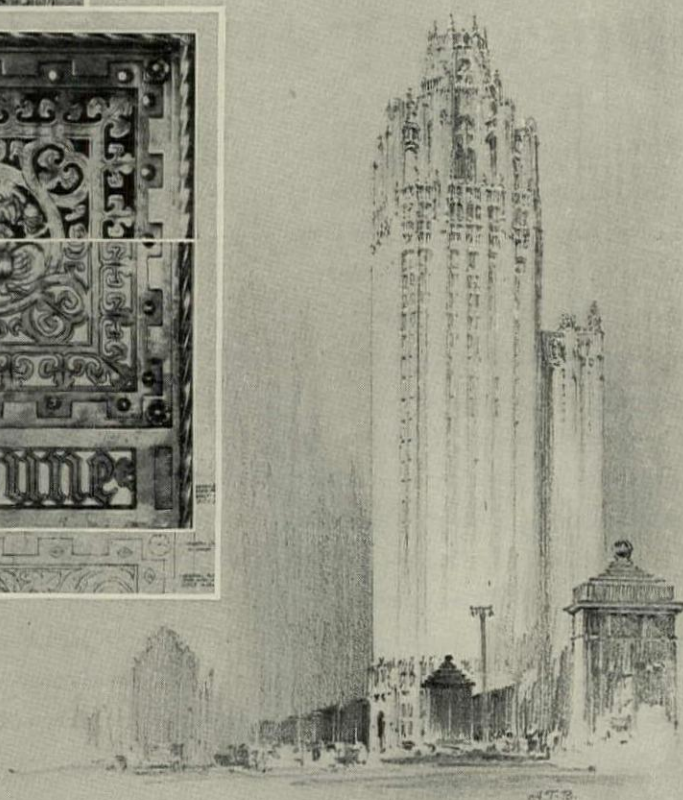
Flour City Ornamental Iron Works  
Minneapolis

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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



## CONCERNING THIS MONTH'S ISSUE

THE EDITORIAL contents of PENCIL POINTS for this month is bulked out, our readers will notice, by the addition of twenty-four pages over and above our usual quota. These were added so that we could include our document addressed to the layman, "The Value of the Architect's Services," which has been in preparation since the first of this year. The document will be found on pages 565 to 588 and we invite serious criticism and discussion of its contents by our architect friends whom it concerns. Before reading the document itself we suggest that you read the statement on the two pages immediately preceding it.

In this issue are included also the ten leading designs in our Competition for an Eight-room House—four prize designs and six mentions. It is probable that we will be able to publish next month an additional group of designs submitted in this competition. So many excellent designs just fell short of qualifying for prizes and mentions that it would be a pity not to let them be seen by all the competitors. We might as well take this opportunity to congratulate publicly not only the prize winners but the designers of the numerous houses which, though unsuccessful, impressed the jury with their high standard of quality. They augur well for the future of domestic architecture in America.

It seems appropriate here also to express our thanks to the five members of the jury of award who, confronted with the unusually difficult task of exam-

ining 634 drawings, gave to the judgment their best critical efforts from beginning to end. We have never seen a jury work harder and more continuously than this one and we want the competitors to know that the judgment, as we observed it, was most thorough and unprejudiced.

The leading article this month is on the work of Robert Lockwood, an outstanding delineator of architectural subjects if there ever was one. The variety of his works shown and evident skill with which they were done should be interesting and instructive to all draftsmen. There are not so many men in this country who are equally at home with pen and ink, pencil,

and color and who can do such remarkably good things in each medium. There will be another color plate in some future issue, made from one of Mr. Lockwood's renderings.

For the rest of the issue we present another installment of Mr. Freese's excellent series on drafting geometry, another entertaining "adventure" by Mr. Mitchell, and a radio talk by John Wade of Buffalo, N. Y., which, we hope, may inspire other architects in different sections of the country to go and do likewise. In addition to these, there are our usual inserts—an etching by William Walcot, two color reproductions, and two Knobloch construction plates—all of which go to make this, editorially, the biggest issue of PENCIL POINTS ever published. We'd like to know what you think of any part or all of it.

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ANNOUNCEMENT  
PENCIL POINTS COMPETITION  
FOR THE DESIGN OF  
AN EIGHT-ROOM HOUSE AND TWO-CAR GARAGE

---

*PRIZES*

- FIRST— JOHN T. GRISDALE, Philadelphia, Pennsylvania  
SECOND— OTHO MC CRACKIN, Hutchinson, Kansas  
THIRD— BURTON ASHFORD BUGBEE, New Rochelle, N. Y.  
FOURTH—JEFFERSON M. HAMILTON, New York, N. Y.

*MENTIONS*

- ELMER BABB, Bronx, New York  
ELMER A. JOHNSON, Milwaukee, Wisconsin  
FRANCIS KEALLY, New York, N. Y.  
ARTHUR D. ROBERTS, Los Angeles, California  
JOHN R. ROWE, New York, N. Y.  
JOHN FLOYD YEWELL, New York, N. Y.
- 

The Prize and Mention Designs with the report of the Jury of Award  
will be on pages 513 through 524 of this issue.

RUSSELL F. WHITEHEAD  
*Professional Adviser.*









BATTERY PLACE, NEW YORK  
FROM A DRYPOINT BY WILLIAM WALCOT  
*Reproduced by courtesy of A. C. & H. W. Dickens*

*PENCIL POINTS*  
July, 1930



# PENCIL POINTS

Volume XI

July, 1930

Number 7

## THE WORK OF ROBERT A. LOCKWOOD

*By Robert Dennis Murray, A. I. A.*

THIS BUSINESS of writing an article about a clever man's work is very difficult. Personally, I never read the surrounding or accompanying print when the pictures are worth looking at, and Lockwood's pictures are invariably very good, so my problem is evident. The reasons why Lockwood's various renderings are good are the usual reasons why most good renderings are good. In other words, he understands composition, he is an excellent draftsman, he has a faultless eye for color, he is a demon for work, and, most important of all, he has the time of his life working.

There is a certain type of rendering that the average good architectural office designer does. It gets by, sometimes it is pretty good, more often it is mediocre. Then, on the other hand, there are real renderings, professional renderings, renderings that the office man thinks he could do if he had more time, if he could just find the right thing to inspire him, or if he had more room on his drafting table to pile additional Jules Guerin plates and whatnot to copy from.

Lockwood's task is not an easy one either. It would be if all he had to do was to make dashing little sketches of quaint Mediterranean fishing villages or even of tumbled down California Missions; but somebody has to do the hard work, so along with some good work he heroically continues to try to save the bad by subtly suggesting little changes to the more faltering brethren in the profession when possible, and his job too often is an attempt to make a masterpiece in water color out of some very poorly designed theatre or com-

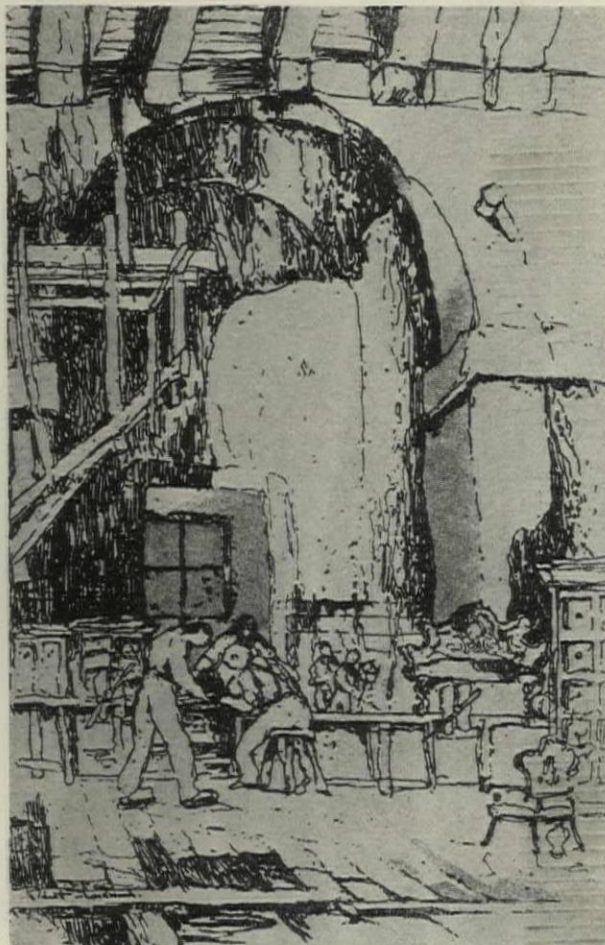
mercial building. When he's not employed making an opaque color drawing for some picturesque architect who may be doing his best to "out Spanish the Spanish" with a masterful baronial hall, he is winning competitions for some ambitious young southern California architect or other.

Lockwood is extremely versatile in his work, from his carefully and beautifully executed pen drawings to his bold expressions in opaque color and in oil. In using water color as a transparent medium his usual directness is manifest. He never goes over the washes a second time, therefore they have that brilliant transparency free from muddy blotches of color. He tries to simplify his subject as much as possible, omitting unnecessary detail and treating it in a broad way.

His pen drawings have a great deal of individuality. Here again his directness, so essential for success in this medium, is shown.

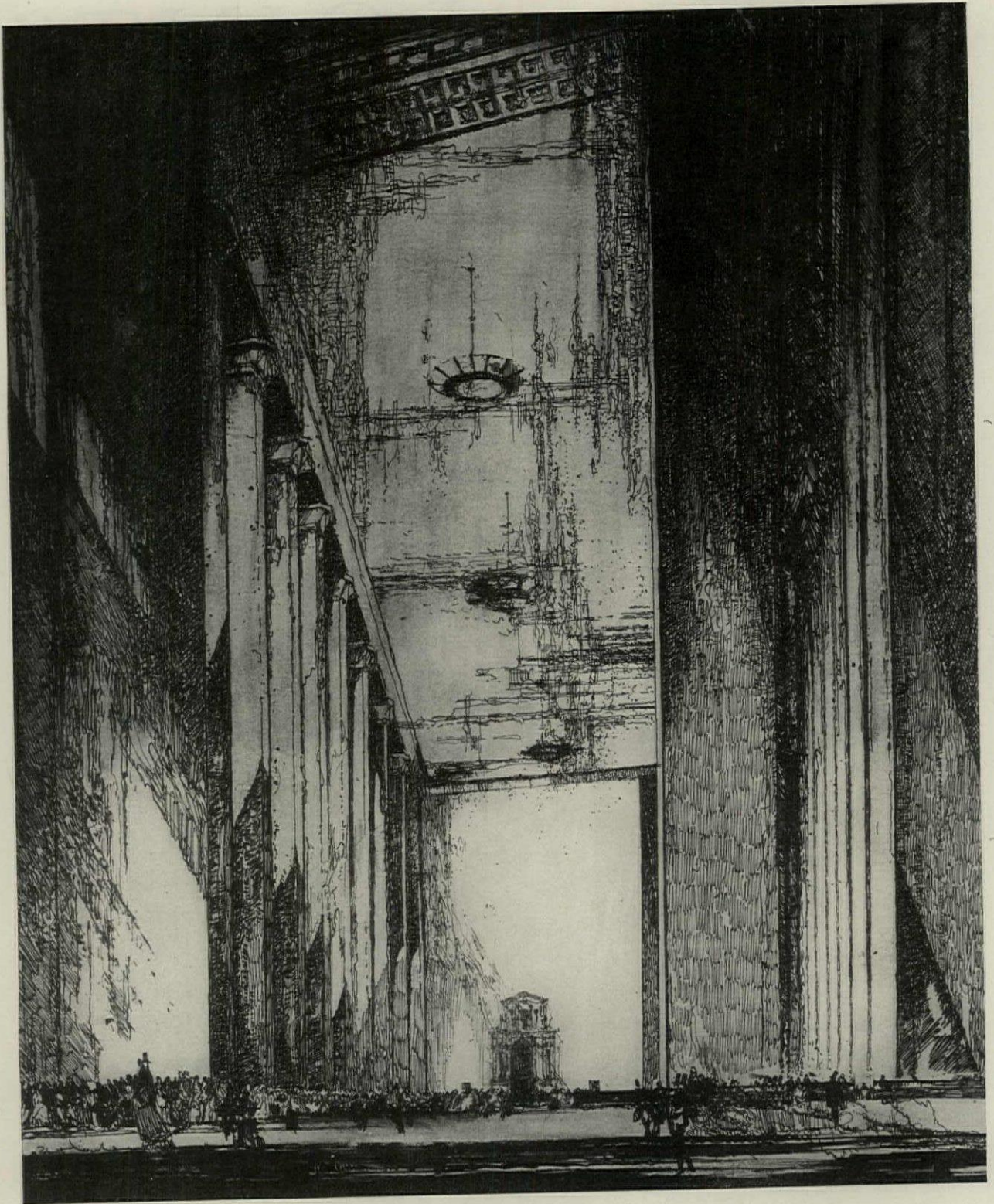
His ability to express the luminosity which he feels in nature, the play of light upon different surfaces, is quite remarkable. The surface or material of his subject is not often disguised, but its capacity for enchanting the eye is thoroughly exploited. Often the accepted old form of correct local coloring gives way to modified hues as influenced by light, so that trees are not necessarily shown with brown trunks and green foliage, but instead they perhaps run a color gamut from grey to violet. Air-brush blue skies, the kind that look as though they had been hewn out of ice, give way to skies of various interesting hues and patterns.

There is doubtless nothing more stupid than smug mediocrity, and



ANNOUNCEMENT CARD FOR GEORGE HUNT, FURNITURE  
PEN AND INK DRAWING BY ROBERT LOCKWOOD





FROM A PEN AND INK AND WASH DRAWING BY ROBERT LOCKWOOD  
IMAGINATIVE INTERIOR FOR A BANKING ROOM  
*Size of original, 21" x 25 $\frac{3}{4}$ "*

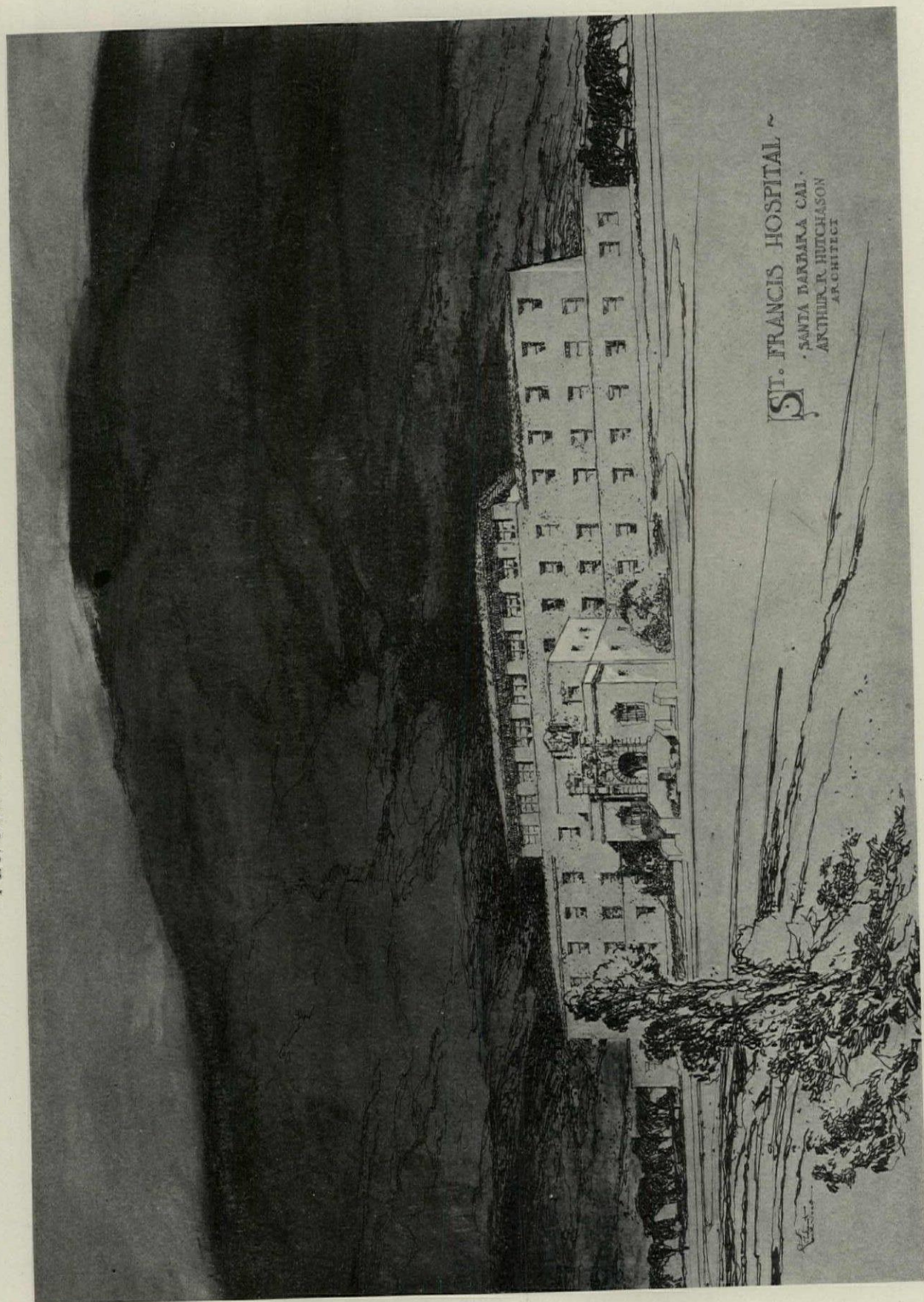


THE WORK OF ROBERT A. LOCKWOOD



FROM A PEN AND INK DRAWING BY ROBERT LOCKWOOD  
BANK IN PASADENA, CALIFORNIA—WALLACE NEFF, ARCHITECT





FROM A DRAWING IN PEN AND INK AND WASH BY ROBERT LOCKWOOD  
SAINT FRANCIS HOSPITAL, SANTA BARBARA, CALIFORNIA—ARTHUR R. HUTCHASON, ARCHITECT



## THE WORK OF ROBERT A. LOCKWOOD

Lockwood is very rarely mediocre in his work. Moreover, as I have said, he is always direct—his things are always forceful. He never does anything half-way. When he works he works as though he means it, and when he gets drunk he gets “cockeyed.” It has been said that “the secret of the artistic man’s failure, such as that is, is the versatility with which he strays in all directions after secondary ideals. The artist is either a poet or a scalawag. More often he is both. Just so there is a touch of poetry about Lockwood even when he is playing the scalawag. For instance there must be something of the poet, at any rate something very chivalrous, about a man to prompt him to go Sir Walter Raleigh one better, and remove his trousers, especially when they are good ones, to pay his cab fare, when he is for the moment, or evening, financially embarrassed. And there is certainly something of the scalawag. But that’s another story. In order that I may avoid something akin to the ancient ducking pond I had better stick strictly to my subject.

Lockwood has had little experience with formal renderings, or rather, little opportunity here in the great hungry West to make them. On one occasion in a certain Chicago office, he was employed to make a formal India ink rendering. Apparently, certain members of the office force were curious as to just how he would go about it; in fact he was a little in doubt himself as to what he would do (perhaps the occasional rattling of the machine-guns outside his window made him a little nervous). Anyway he started in “with a Murad” (adv.) and very carefully mixed numerous godets, after trying to recall all the rules and regulations of academic rendering—such as selecting brushes, planning out division of washes, laying the sky, and all those other little pleasantries which accompany non-carbonaceous washes. At the end of the day or night, however, he had the contents of all the godets slopped into one large receptacle, the whole room in a wild and disorderly condition, and a very good rendering—to the great disgust of the disillusioned drafting force. And even at that it looked like a good deed in a naughty world.

His pencil drawings are things of beauty, and

usually a joy forever, for I knew of one of them that I will surely purloin if I ever get my hands on it. It belongs to a certain Los Angeles architect, and was made in an idle moment on an old piece of buff detail paper. The artist’s mind must have been travelling down the coast toward San Diego from somewhere near Capistrano, if that means anything to you.

This particular drawing was made a good many years ago, and he has improved an awful lot since then too. As I said, it was on an old table covering, a little soiled and worn, and there may have been a few little miscellaneous diagrams on the sheet that he had to draw over—diagrams that some former draftsman

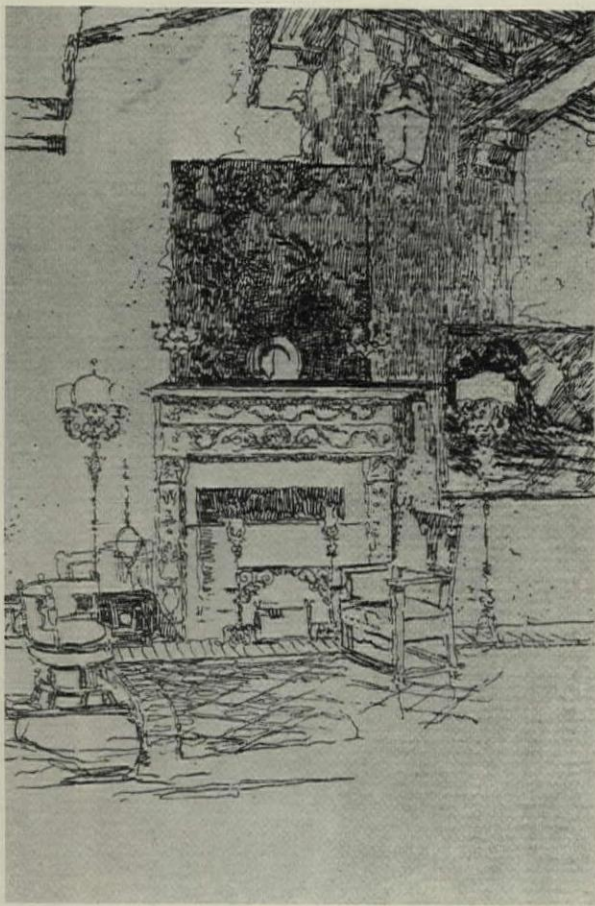
made, as draftsmen will do, of how his baby broke its arm, or the funny arches on some despised architect’s house he saw on the previous Sunday, etc. There were lots of clouds, a little old barn, and some trees—and it certainly was a knockout. It is framed now and jealously guarded, so probably I will never be able “to pull a Mona Lisa” and get away with it.

Lockwood’s pencil sketches are not the kind that the average architectural man makes. They are very free, and lack that carefully detailed primness that is the curse of the molding-minded man. It may not have been a struggle for him to get away from this error, but his early training was as an architectural draftsman. In speaking of his pencil sketches it might be well to add that certainly no two of them are alike—

he has no standard type. Sometimes they are handled with an exquisitely fine technique, at other times they have that bold scrawling 6B look. All of the shadows haven’t that T-square and triangle, down, forward, and to the right at an angle of forty-five degrees appearance. Here again his ability to omit detail is seen, and it certainly is an accomplishment.

He is continually experimenting, too, with various mediums. This in itself has a tendency to free him from a sameness in all his work. He is not easily discouraged when the drawing looks like a hopeless mess. To see him pull a rendering through, when it is apparently a total loss, is remarkable.

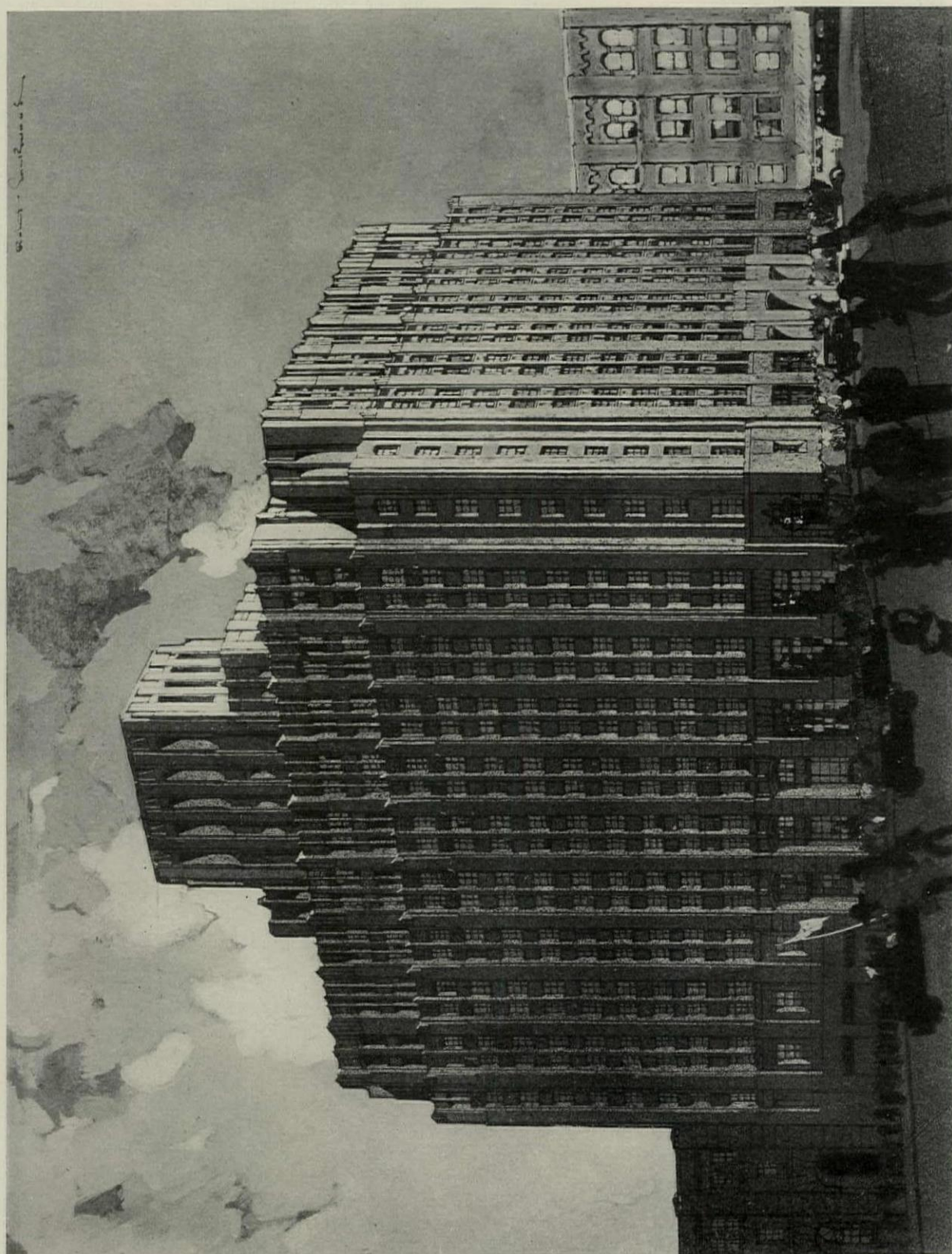
In writing an article on a man’s work the tendency is usually to be either a liar or a bore. I have prob-



NEW YEAR'S GREETING FOR B. B. BELL COMPANY

PEN AND INK DRAWING BY ROBERT LOCKWOOD





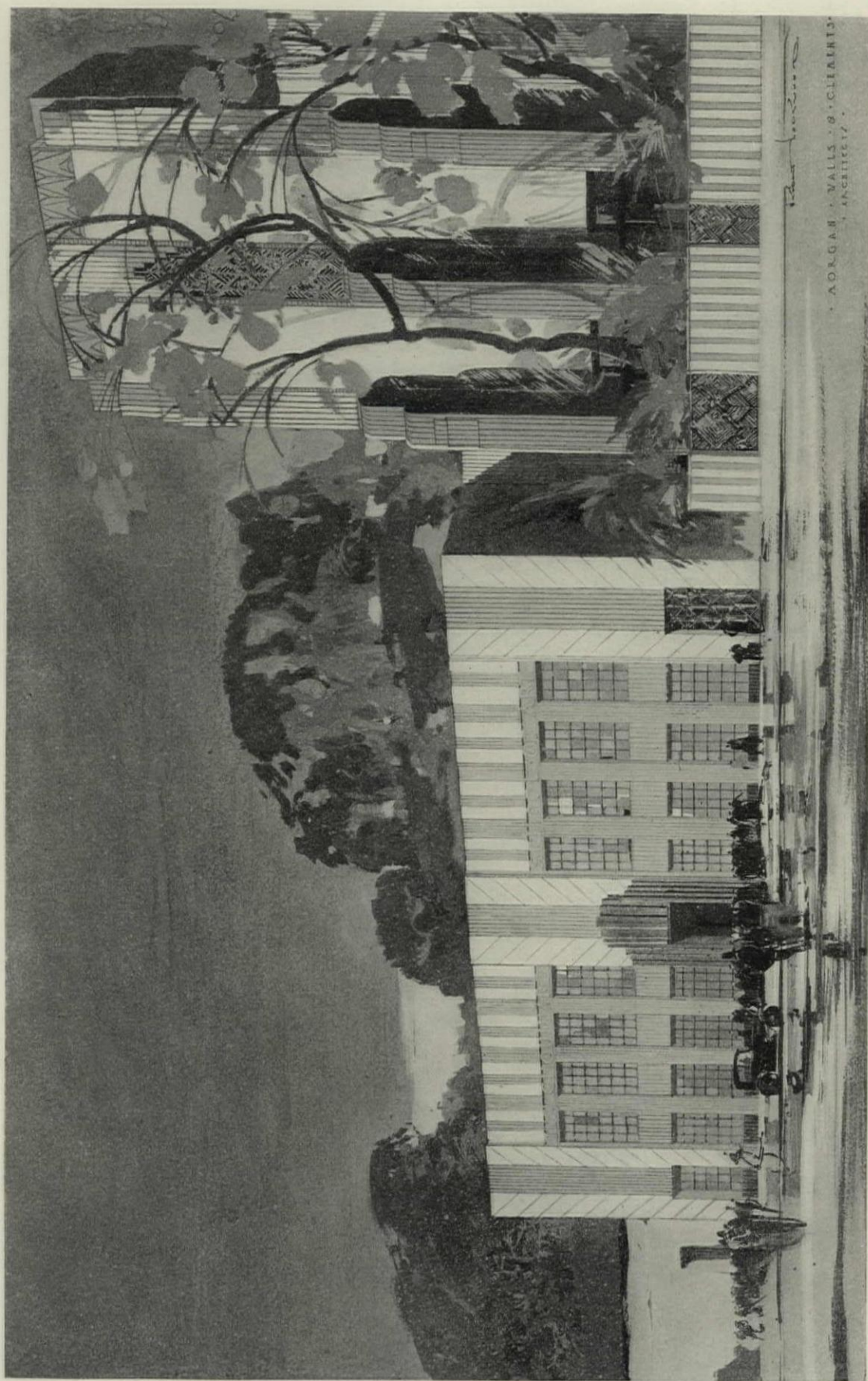
FROM A DRAWING IN TRANSPARENT AND OPAQUE COLOR BY ROBERT LOCKWOOD

PROPOSED OFFICE BUILDING IN A CALIFORNIA CITY

*Size of original, 32" x 25"*



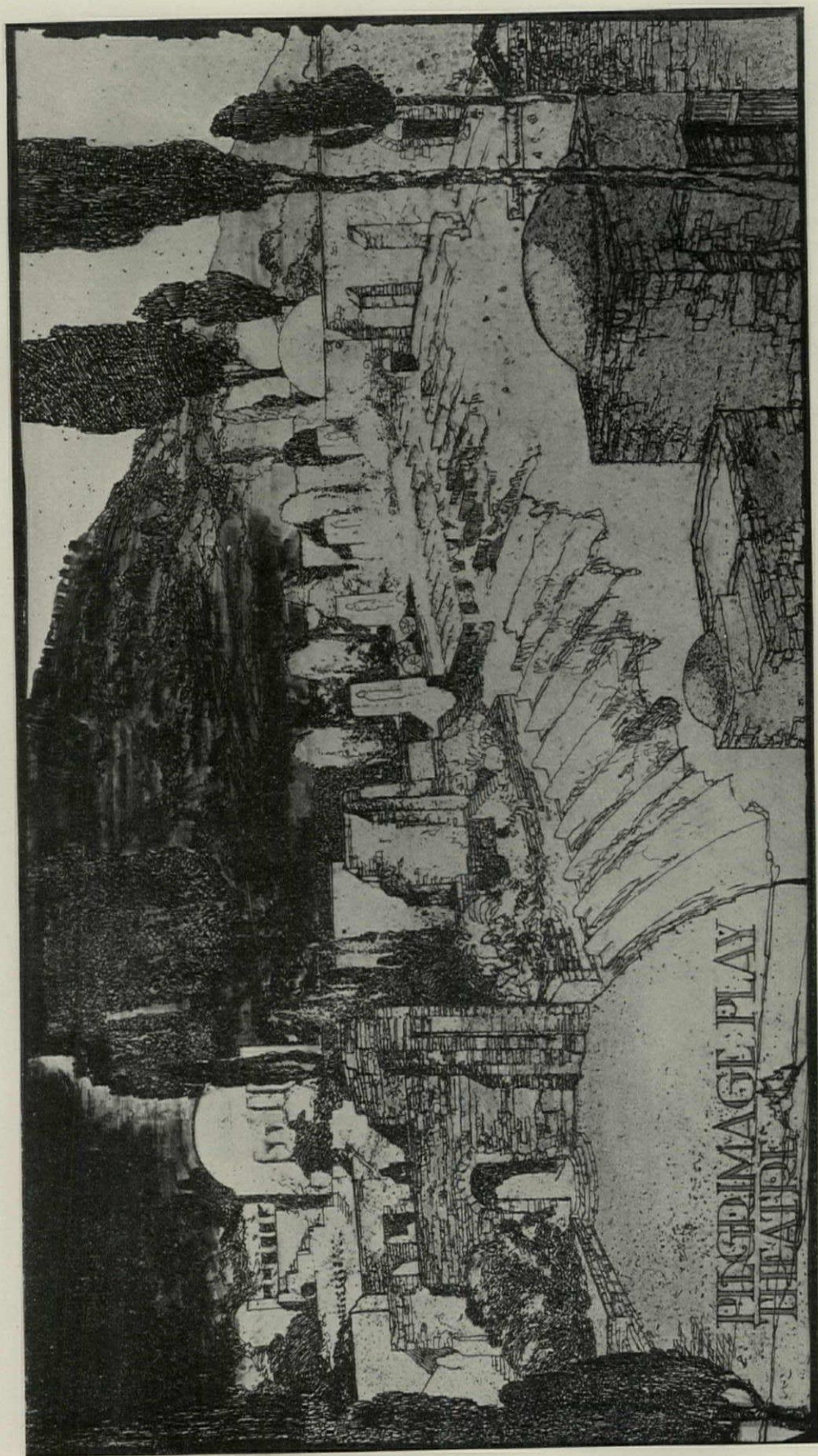
THE WORK OF ROBERT A. LOCKWOOD



FROM A RENDERING IN TRANSPARENT AND OPAQUE WATER COLOR BY ROBERT LOCKWOOD  
CHOUINARD SCHOOL OF ART—MORGAN, WALLS, AND CLEMENTS, ARCHITECTS

*Size of original, 34" x 22½"*

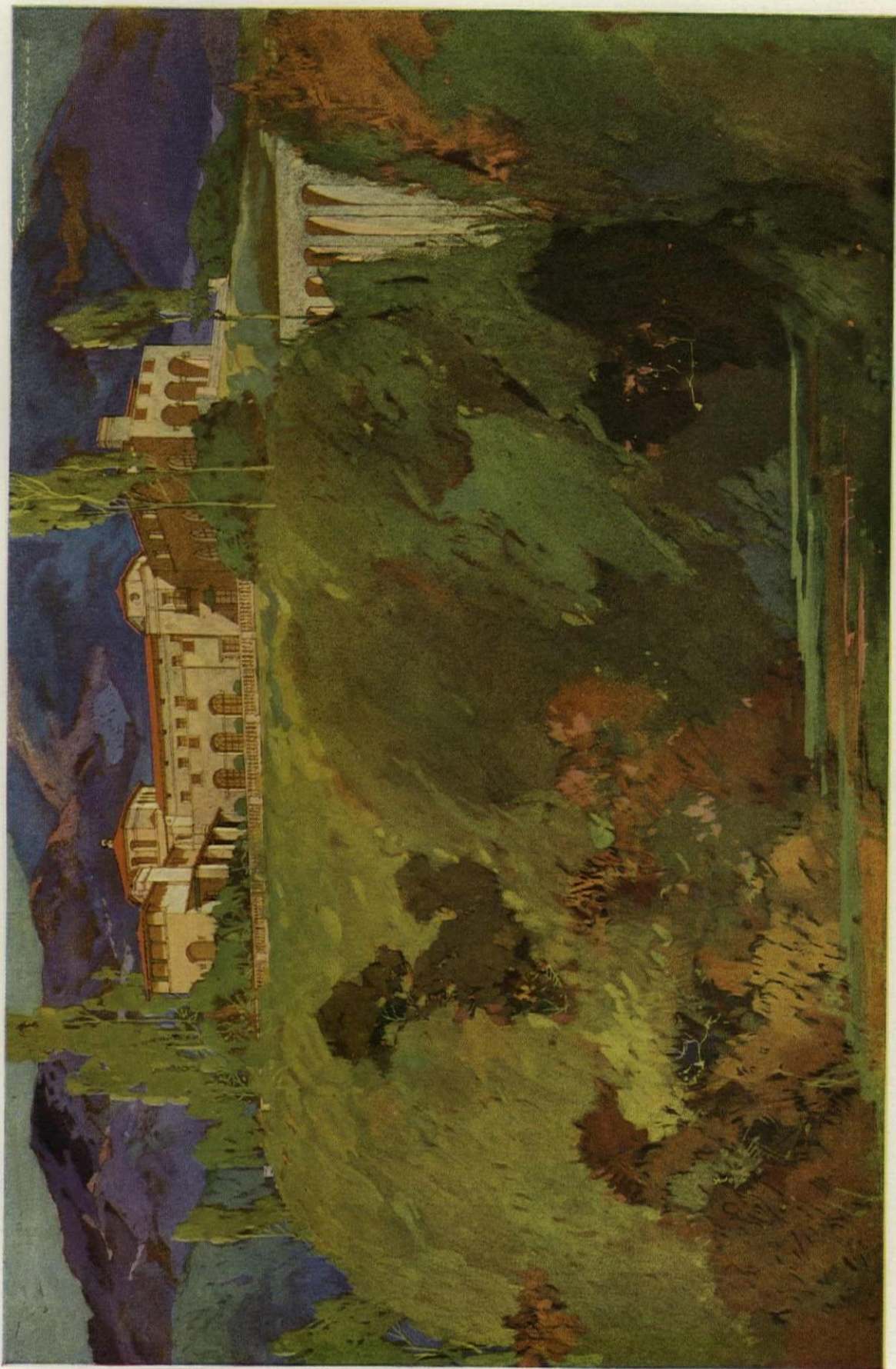




FROM A DRAWING IN PEN AND INK AND WASH BY ROBERT LOCKWOOD  
NEW PILGRIMAGE PLAY OPEN AIR THEATRE—WILLIAM LEE WOOLLET, ARCHITECT

*Size of original, 34" x 19"*





A RESIDENCE IN THE HILLS OF CALIFORNIA

FROM A DRAWING IN COLORED INKS AND OPAQUE WATER COLORS BY ROBERT LOCKWOOD



## PENCIL POINTS SERIES of COLOR PLATES

*The problem of making this rendering was, in Mr. Lockwood's words, "more a job for a painter than for an architectural man." It is his secret ambition "to render architecture as if it were warm with life and companion to its surroundings rather than to make the twain like two spinsters from opposing families met for disagreeable but necessary purposes." We think he has succeeded in this drawing.*

*It was laid out in pencil on a piece of 40" x 60" pebbled surface mat board. The whole sheet was then sprayed evenly with a mixture of colored inks—brown, yellow, and a little vermilion—which does not cover up pencil lines. This tone was used in all shades and shadows on the building with the least possible variation with the idea of keeping the house up on the hill in value yet away from the secondary portion of the composition—the hills—which were to be cool and complementary. The sunlit portions of the building were then painted in with opaque water colors, letting the pencil lines show to carry the drawing. (Continued on back of other color plate, this issue.)*





PORTION OF RENDERING OF A RESIDENCE IN THE HILLS OF CALIFORNIA  
REDUCED TO THREE-FIFTHS OF THE SIZE AT WHICH IT WAS DRAWN BY ROBERT LOCKWOOD



## PENCIL POINTS SERIES of COLOR PLATES

*(Description continued from back of other color plate, this issue.)*

*The general formation of the hills and foreground was sketched in tentatively as a skeleton and the artist then commenced painting fully and modeling as he went along. The foreground and the background were kept going at the same time in order that all would hang together. As this color was applied, colored inks or dyes were frequently sprayed over them to produce a blending or working together of color. Changing values from a gray to a darker gray is more easily done in that way than when it is all done with the brush and helps when a drawing of such large size has to be done in a hurry. In this detail, which is reproduced at large scale to show technique more clearly, it will be noticed that the original brown ink mixture shows through the opaque color in many places. This helps to hold the drawing together.*

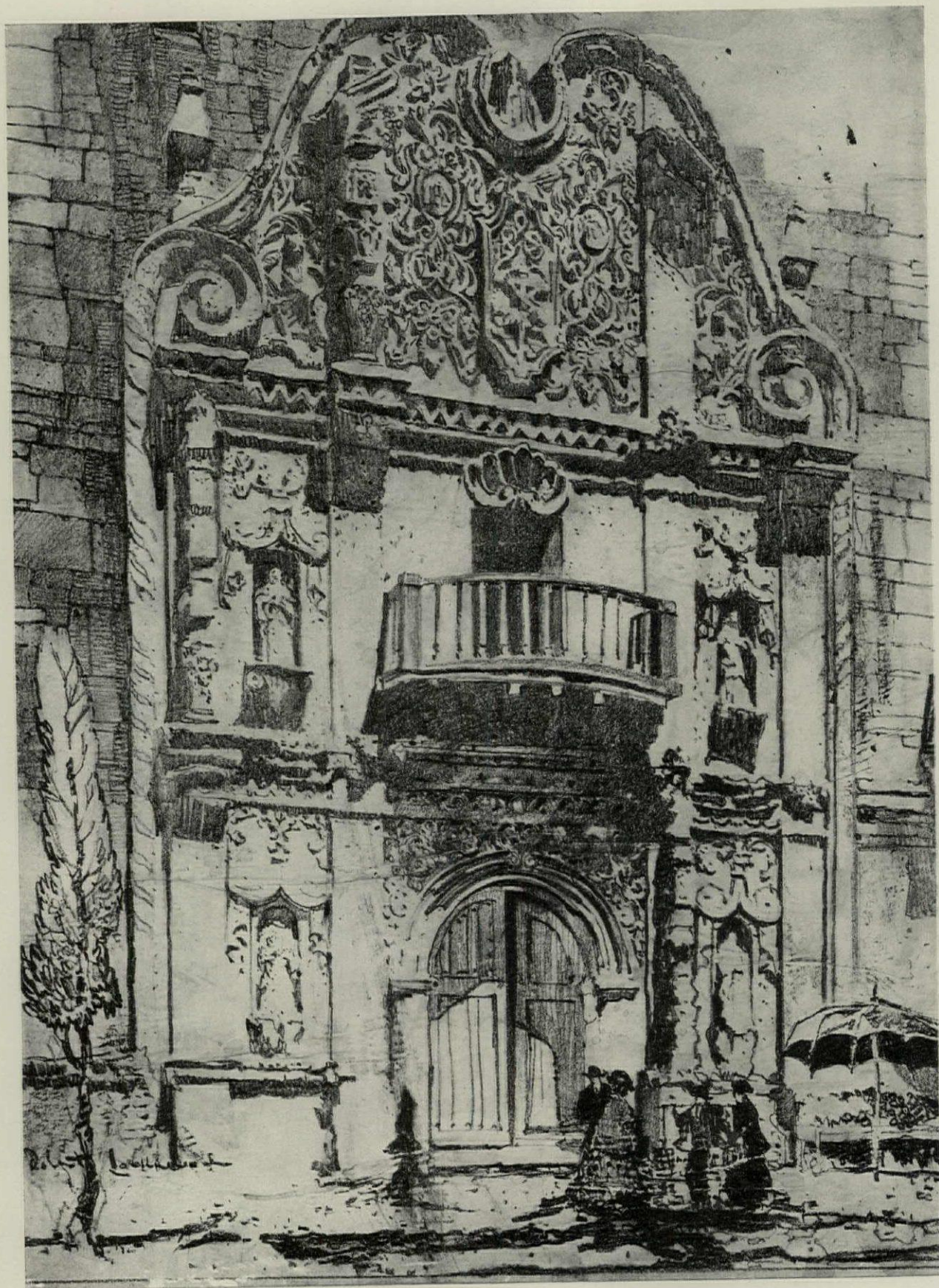


THE WORK OF ROBERT A. LOCKWOOD



FROM A RENDERING IN CRAYON AND WATER COLOR BY ROBERT LOCKWOOD  
PRELIMINARY STUDY, RICHFIELD BUILDING—MORGAN, WALLS, AND CLEMENTS, ARCHITECTS  
*Size of original, 33½" x 47"*





FROM A LITHOGRAPH BY ROBERT LOCKWOOD

ENTRANCE OF SAN XAVIER MISSION, ARIZONA

*Size of original, 16" x 21"*



## THE WORK OF ROBERT A. LOCKWOOD

ably been both. The world can often excuse a cheerful liar, it seldom excuses a cheerful bore. I have tried to avoid telling about his clubs, social activities, etc. As a matter of fact, I believe he has gone through life practically clubless. I feel sure he doesn't belong to any cheerful service clubs—if he does it is a new form of vice with him and he surely has been concealing something. If he has been concealing that something I don't blame him.

I have also avoided saying anything about Lockwood's early life. It was doubtless as colorful, probably more so, than most early lives; but to tell how, at the age of three, he had a mania for spreading Prussian blue on his toast in order that he might study the divine color combination; or that he didn't like carrots; or how with his first penny he bought a pot of pink paint with which to paint the puppy, has little to do with the case.

He hasn't any bad habits except perhaps swearing and smoking and drinking and occasionally fighting with offensive taxi-drivers (if they can truly be called bad habits, they more probably come under the heading of light recreation).

He is a veteran of the World War and fought and bled for his country in France in the Camouflage Corps, where he also had some opportunity to camou-

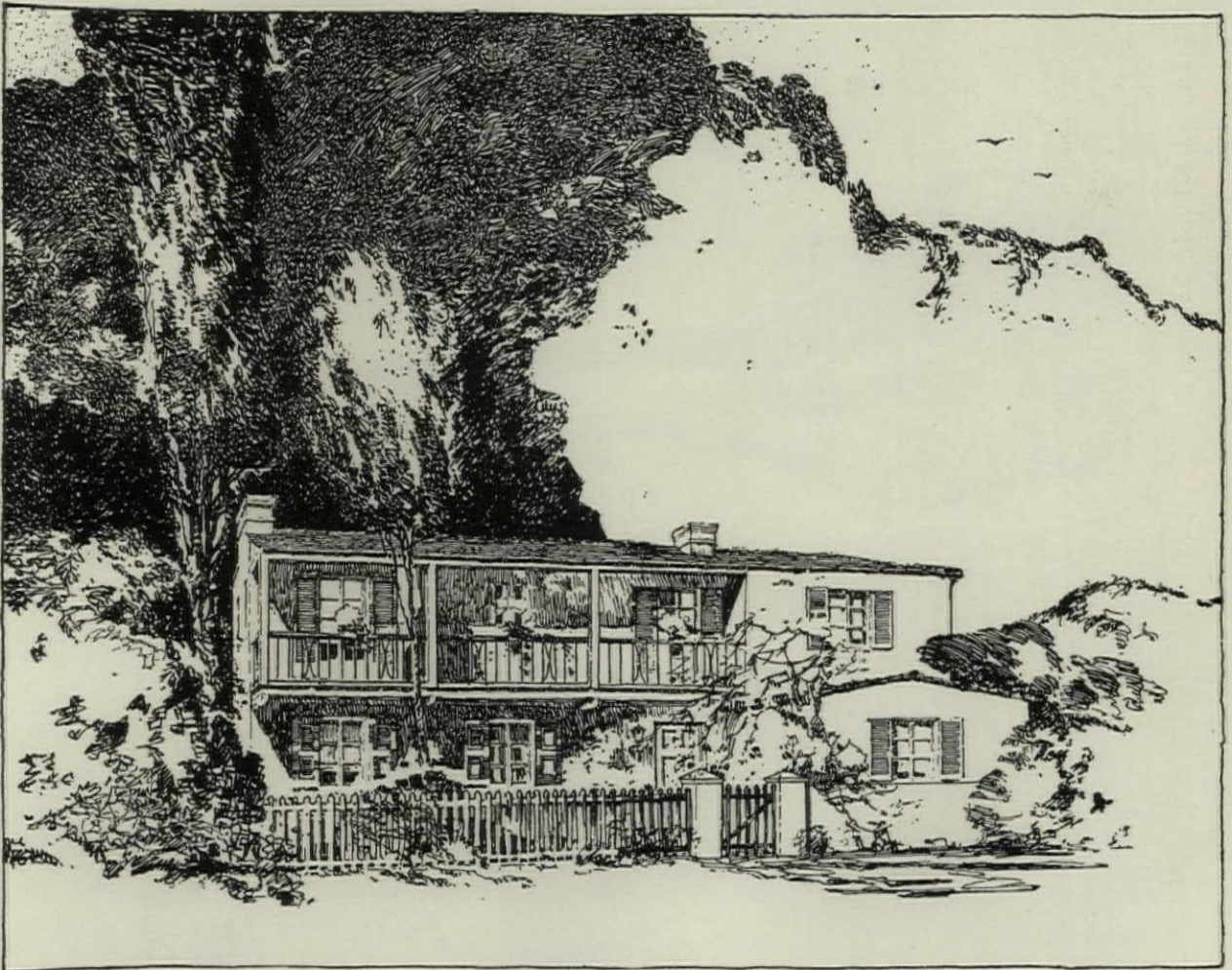
flage his way through Paris and other well known French places.

He had some very good schooling, attended the Chicago Art Institute etc., worked with the well known architect Myron Hunt in Los Angeles—which in itself is quite an accomplishment. (And, incidentally, if I should suddenly be appointed a jury of one to pick the best piece of architecture in Southern California I would unhesitatingly and with my eyes blindfolded pick the Pasadena Public Library.)

The tendency also seems to be in writing an article of this nature, to write about anything else but the person in question or his work. If my writing may happen to remind you of a "concrete mixer mixing concrete," it is not because my subject has been dull, but that it is very difficult to write an article about a clever man's work.

Lockwood's success is certainly partially due to the tact and efforts of his better half. It takes a genius to live with a genius. It must be very difficult to live with a brain, particularly an artistic brain. A clever person is doubtless very trying at times, and Mrs. Lockwood is that other genius.

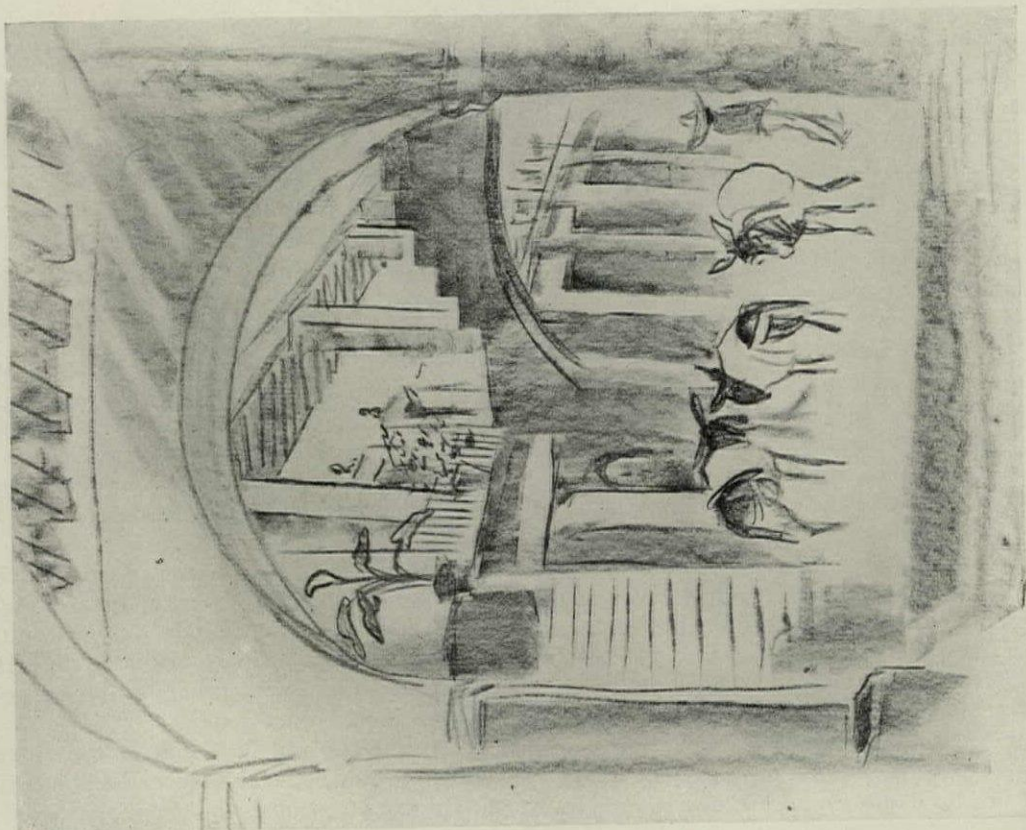
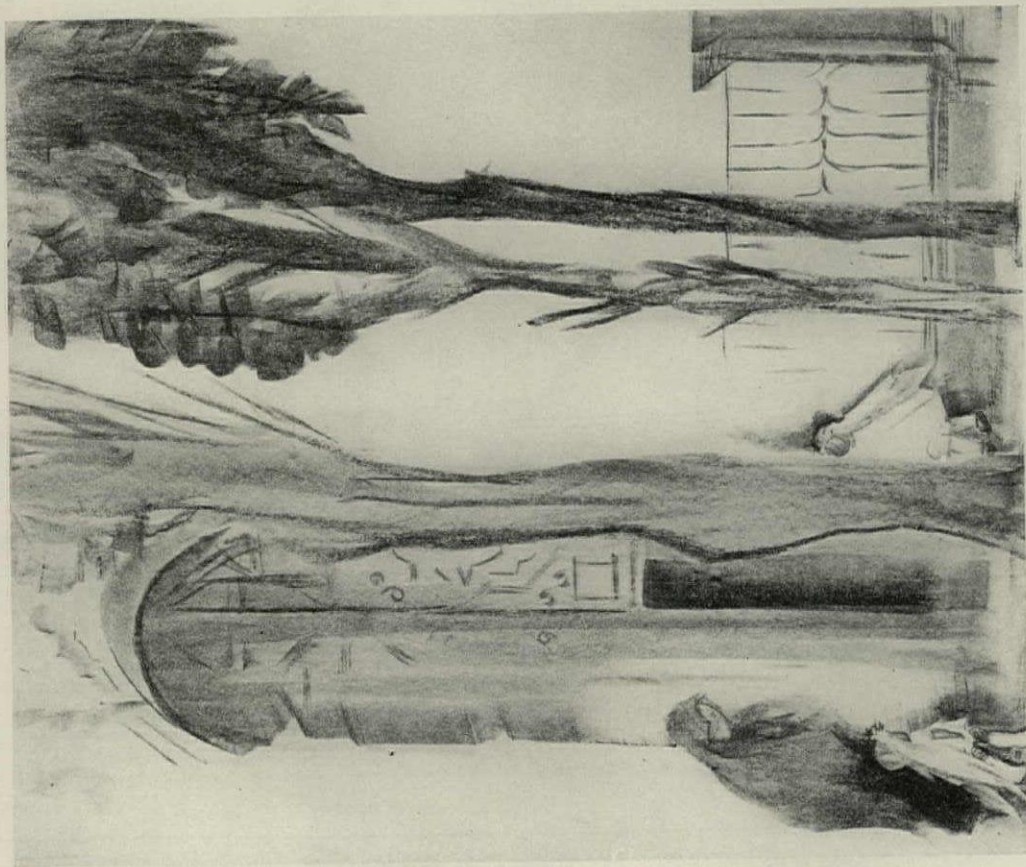
There is also a young genius in the family who, when she grows up, will have to be a super-woman to live with two geniuses, or geniï.



RESIDENCE IN PASADENA, CALIFORNIA—H. ROY KELLEY, ARCHITECT

FROM A PEN AND INK DRAWING BY ROBERT LOCKWOOD





FROM LITHOGRAPHIC CRAYON DRAWINGS BY DOROTHY STEWART OF SANTA FÉ, NEW MEXICO  
TWO MEXICAN SCENES RAPIDLY SKETCHED BROADLY AND WITH A DISTINCT MODERN FEELING



# THE PENCIL POINTS COMPETITION FOR AN EIGHT-ROOM RESIDENCE

*Judged at Yama Farms, Napanoch, New York, June 6, 7, and 8, 1930*

## REPORT OF THE JURY OF AWARD

*Paul Cret, Chairman*

THE GREAT MAJORITY of the projects submitted in this competition were designed along conservative lines and showed considerable skill of presentation but less imagination and originality than might have been desirable. Of those who tried to design in a modernistic manner too many made a bid for recognition by spectacular features more adapted to an exposition pavilion than to the house of a "man of culture." The jury was particularly impressed by the large number of designs which would, if built, provide houses of a high standard of excellence. This speaks highly for the training of the young architects and draftsmen of all sections of the country who participated.

The jury wishes to express its conviction of a growing appreciation of domestic design in this country and of an increasing ability in the execution of houses as indicated by much of the work entered in this competition.

There were 634 designs presented for the jury's consideration. Not only this great number but the exceptionally high average quality was remarkable and gratifying.

In the judging of an architectural competition juries usually proceed by the method of elimination. First those designs that violate the mandatory provisions of the program are discarded. Next those that show faults in plan and elevation. Defects in presentation which includes rendering and arrangement on the sheet are usually regarded very leniently by juries and conversely a brilliant presentation is not allowed in the eyes of a conscientious jury to prevail over defects in design. This was the procedure followed by your jury in this competition, except that toward the end, on account of the large number of entries and their high average excellence, it found itself faced with some twenty drawings that could not easily be eliminated on account of important defects, since they had none as far as we could see. The jury thereupon decided to change its attack from the negative to the positive field of operation and sought for designs which possessed excellencies over and above the mere requirements of the program, drawings that rose above the average, high as it was—architectural conceptions that were born of something deeper and fuller than mere talent or proficiency. Even where minor defects existed we did not believe that they should outweigh these greater qualities in design. In a way each of the prize designs exemplifies some important architectural virtue. The first, courage, strength,

simplicity; the second, sheer beauty; the third, clear thinking; the fourth, originality.

The jury in the face of such a large response, 634 competitive drawings, and such a high average of excellence, cannot but entertain great satisfaction in the ability of the younger designers of today and high hopes of a future that will be largely in their hands. With these general statements we will now turn to a consideration of the prize and mention designs, one by one.

*First Prize Design.* In spite of the simplicity of expression and rendering of this design, the plan frankly stresses the importance of the southern exposure for the principal rooms in the location selected and recognizes that the service portions, including the garage, should be placed toward the front but masked. The greatest possible area on the second floor is provided by the single roof which also makes for economy of construction.

The front hall and stairs are somewhat congested but the jury did not object to the encroachment of the stairway upon the living room in view of the dual purpose of this room and the possibility of an interesting treatment of the interior. The bedrooms and baths are ideally located and of good sizes with nice closets.

The building reflects great credit on its designer for notable restraint and clear planning. The rear elevation is not inferior to the front.

*Second Prize Design.* Planned for a north central location, the layout is excellent though not notable for originality. The elevation is remarkable, however, for its sheer beauty. It would be difficult to alter any part of it without injury.

While the garage doors are masked from the street the land to the south is not helped by this indirect approach.

The rendering of this sheet is especially sensitive and good. The detail of the design is simple and in keeping with the character of the house. Construction of this house would be most practicable because of the minimum of wall construction. The design offers great opportunity for the interesting use of material.

*Third Prize Design.* The character of this house makes it particularly appropriate for erection on the lot designated in the residential district of a city. The disposition permits a maximum development of the entire property. A noteworthy feature is the interesting treatment of the garden walls which tie pleasingly



into the main house structure. The fenestration is particularly delightful.

The approach to the front door and also to the garage from the street are well correlated. The arrangement of rooms is remarkably well carried out with good side and rear elevations. This house is different from the two preceding houses in that it is a more formal type but the designer has made it so without losing domestic character. The rendering is adequate and the smaller elevation drawings are very handsomely studied.

*Fourth Prize Design.* This design is a serious study done without recourse to the more usual precedent. The plan is original and unusual without serious loss in practicality, although the second-story bathrooms are too small. The entrance to the garage is obscured without being obstructed and the front and rear entrances are well separated. Especially to be commended is the restrained use of new forms where the temptation might be in the direction of becoming bizarre and extravagant.

The lack of outlook from the living room onto the street might be considered a minor defect but this is more than compensated for by the good provision which has been made for the outdoor life of the family by means of front and rear terraces and the possibility of a maximum development of lawn and garden.

*The Six Mention Designs.* For mentions, the jury selected six designs which vary considerably in plan and expression. No distinction has been made among these six—they may all be considered as of equal excellence. The one by Mr. Johnson, on page 519, is an exquisite piece of rendering, presenting a very good plan and a generally pleasing exterior but was not considered preëminent. The entrance hall is somewhat congested. On page 520, the design by Mr. Babb shows a good plan and a pleasing, though

rather conventional, treatment of the elevations, well expressed. Mr. Keally's design, page 521, has originality, good planning, and an attempt to get character through the strict expression of the features which are necessary, rather than by ornamentation. The front entrance and the garage entrance are, in the jury's opinion, too intimate. The design by Mr. Roberts, on page 522, has a very good front elevation, the rear elevation being slightly inferior. The plan is good although the great projection of the garage unit might be criticized. It is a type well adapted to a Southern climate and would be more suitable on a wider lot. Mr. Rowe's design, page 523, shows a brilliant rendering and a very good entrance detail. The design as a whole seemed a bit extreme but is very well handled and has an excellent plan. The jury felt that the desire for the picturesque led the designer away from an entirely truthful and direct expression of the problem. Mr. Yewell's design, though printed at the end, is not inferior to the others. It is placed well on the lot, has a good workable plan, and would build attractively.

It may be interesting to note that the first floor plans were checked for area by means of a polar planimeter, an instrument used largely in ship computations and in measuring engine indicator diagrams. This is, to the jury's best knowledge, the first use of this interesting instrument in an architectural competition. The judgment occupied three days and represents faithful and continuous application on the part of the judges.

Jury of Award { PAUL CRET, *Chairman*  
ROBERT P. BELLows  
FRANK J. FORSTER  
BENNO JANSSEN  
THOMAS E. TALLMADGE

Professional Adviser, RUSSELL F. WHITEHEAD

#### EXTRACT FROM THE PROGRAMME

**PROBLEM: Mandatory.** The design of a distinctive and modern house with eight principal rooms, to be built of materials chosen by the designer. The occupants are to be a cultured man, his wife, two children of high-school age, and a servant. Provision shall be made for overnight guests and for genial hospitality.

The house is to be located in the suburbs of a city or in the residential districts of a progressive town, anywhere in the United States. The assumed geographical location to be stated on the drawing. The site is assumed to be in the middle of a block and the land to be level. The lot is rectangular and has a frontage of seventy-five feet (75'-0") on the Street and a depth of one hundred and fifty feet (150'-0"). The Northerly end of the lot faces the Street. A restriction states that no house can be erected nearer than thirty feet from the highway property line and that no building may be placed directly on the other lot lines.

The total area of the first floor shall not exceed one thousand two hundred (1200) square feet, including the area of the garage and porches.

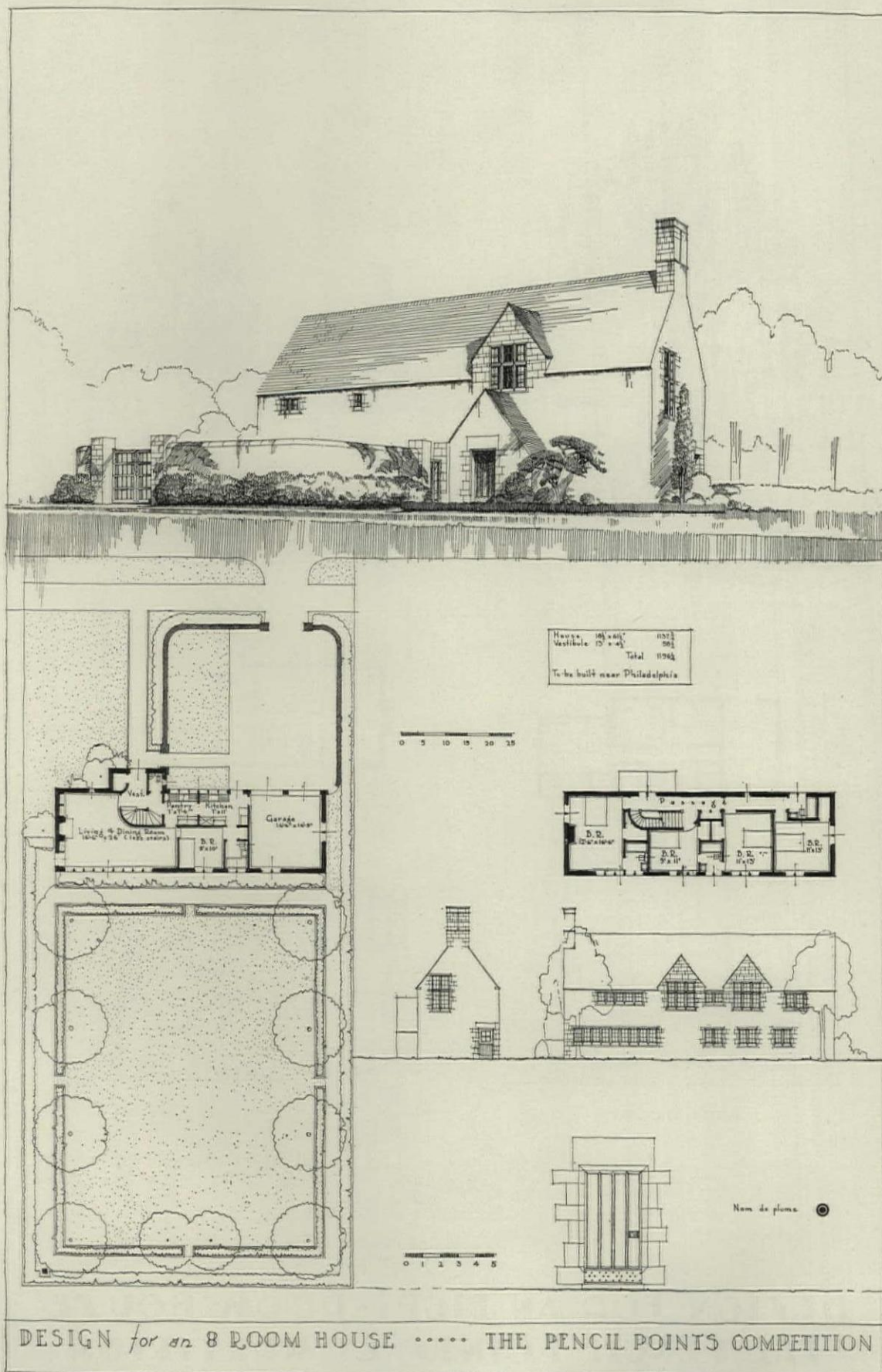
Provision is to be made for Living Room, Dining Room (separate or combined), Kitchen and Five Bedrooms. Four Bathrooms, one two-fixture Lavatory and Pantry are to be provided.

One of the Bedrooms and one of the Bathrooms are to be located on the first floor for possible use as maid's room or guest room. The necessary circulations are to be included. There shall be at least one Closet for each Bedroom, a Linen Closet and a Coat Closet. If cellar is to be used for other than utilitarian purposes accessible stairway shall be included.

A garage for two automobiles is required. It is assumed that the owner prefers that the garage be directly connected to the house.



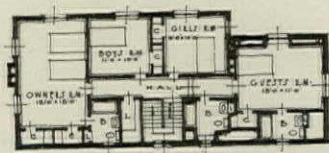
# PENCIL POINTS COMPETITION FOR AN EIGHT-ROOM HOUSE



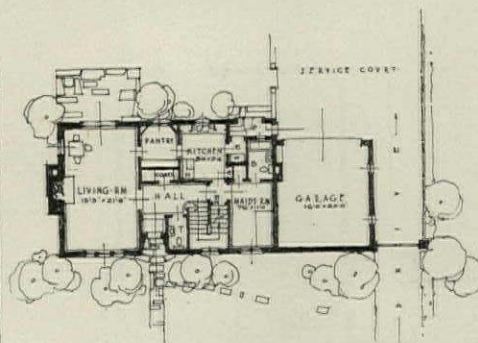
FIRST PRIZE

SUBMITTED BY JOHN T. GRISDALE, PHILADELPHIA, PENNSYLVANIA





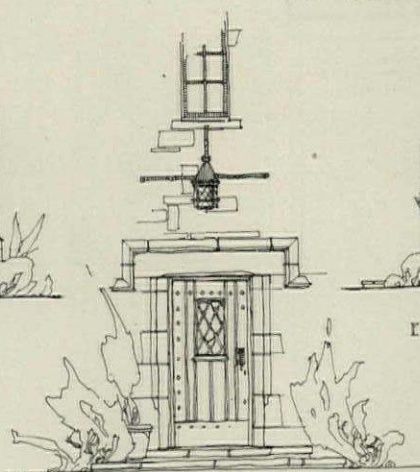
SECOND FLOOR PLAN  
SCALE: 1/4" = 10'-0"



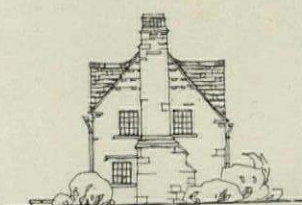
FIRST FLOOR PLAN  
SCALE: 1/4" = 10'-0"



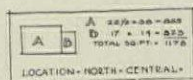
SOUTH ELEVATION



ENTRANCE DETAIL  
SCALE: 1/4" = 10'-0"



EAST ELEVATION



## DESIGN FOR AN EIGHT-ROOM HOUSE THE PENCIL POINTS COMPETITION

SECOND PRIZE

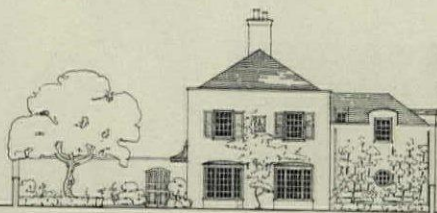
SUBMITTED BY OTHO MC CRACKIN, HUTCHINSON, KANSAS



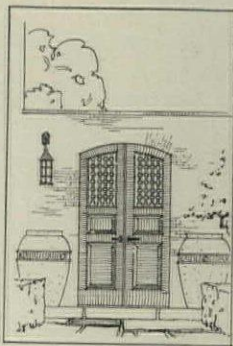
# PENCIL POINTS COMPETITION FOR AN EIGHT-ROOM HOUSE



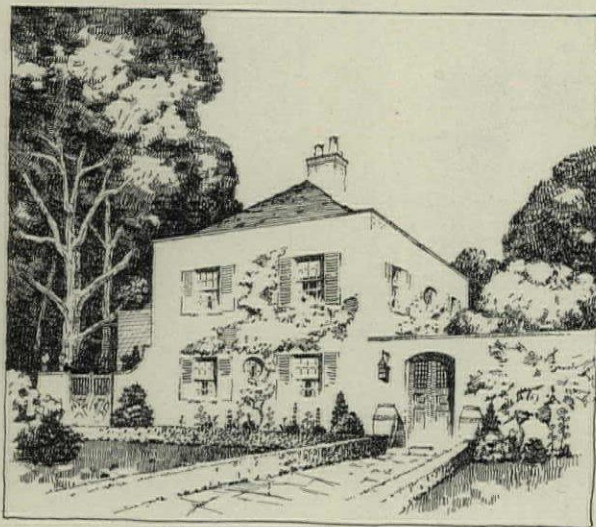
Elevation from Terrace



Elevation from Garden

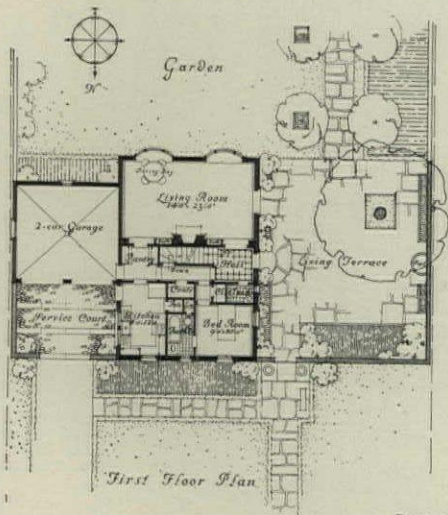


Entrance Gateway  
Scale of Feet

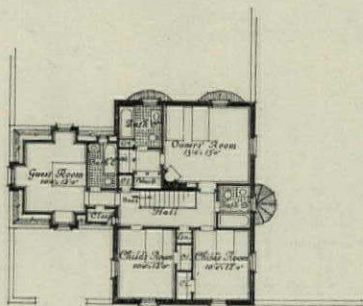


View from Street

**Area**  
Main block 25.50 x 47.5  
Garden 11.50 x 30.0  
Total 1177 sq. ft.  
**Location**  
North east portion of the United States



First Floor Plan



Second Floor Plan

Plans & Elevations  
Scale of Feet



DESIGN FOR AN EIGHT-ROOM HOUSE  
• THE PENCIL POINTS COMPETITION •

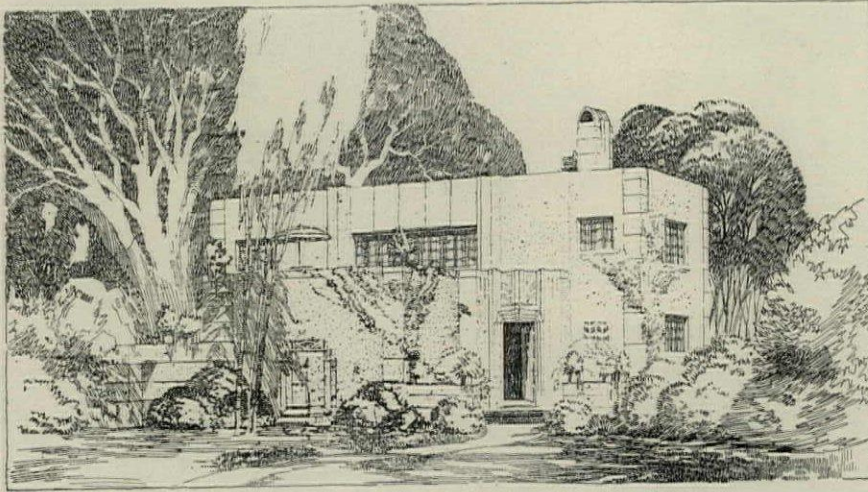


THIRD PRIZE

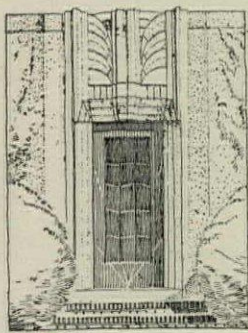
SUBMITTED BY BURTON ASHFORD BUGBEE, NEW ROCHELLE, NEW YORK



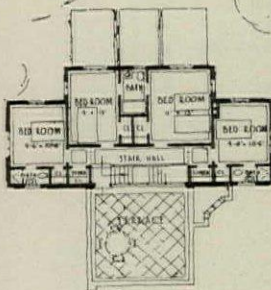
# PENCIL POINTS FOR JULY, 1930



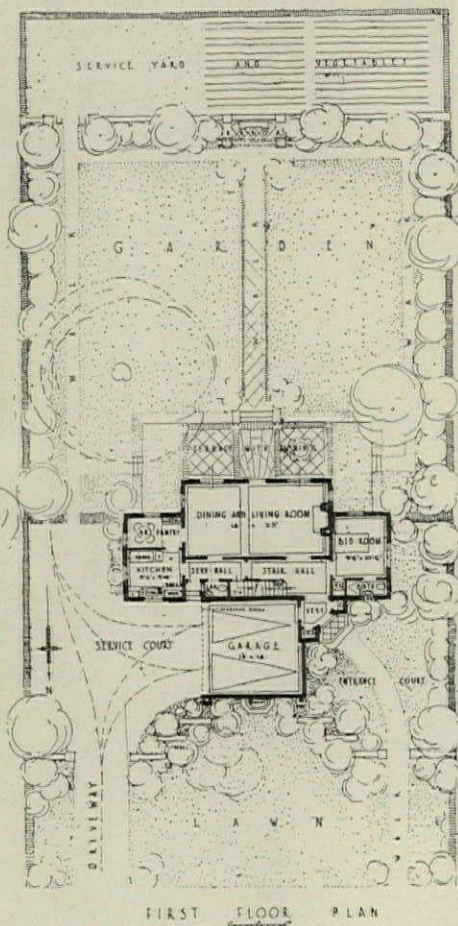
P E R S P E C T I V E



ENTRANCE DETAIL



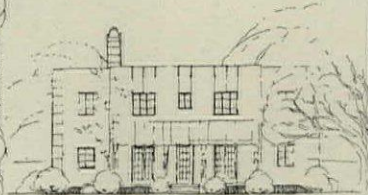
SECOND FLOOR PLAN



FIRST FLOOR PLAN



SIDE ELEVATION



GARDEN ELEVATION

RESIDENCE FOR THE GULF STATES	
AREA MAIN PORTION 31' x 34' 6"	1064.9
• BED RM WING 18' x 15'	270.0
• KITCHEN 10' x 15'	150.0
• GARAGE & ENTRANCE VEST.	233.1
TOTAL	1718.0

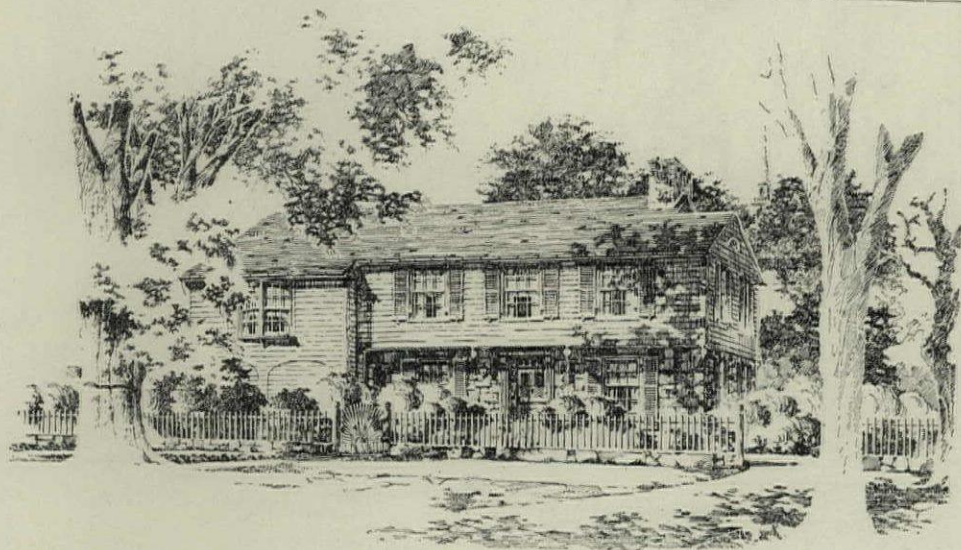
• DESIGN FOR AN EIGHT-ROOM HOUSE - THE PENCIL POINTS COMPETITION •

FOURTH PRIZE

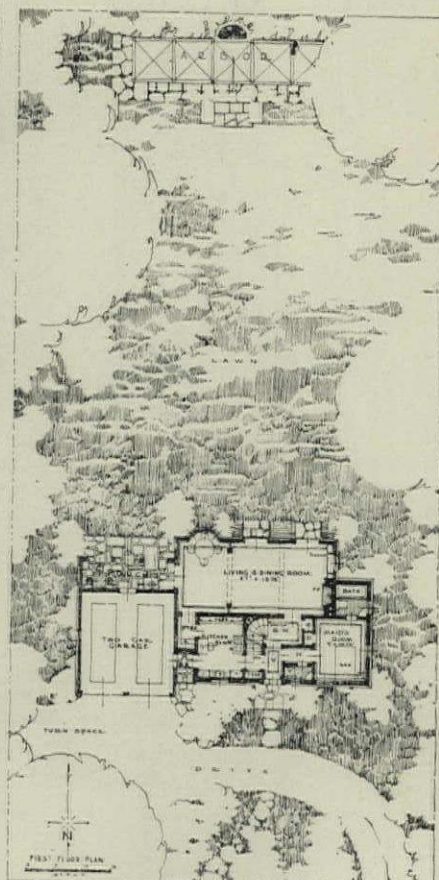
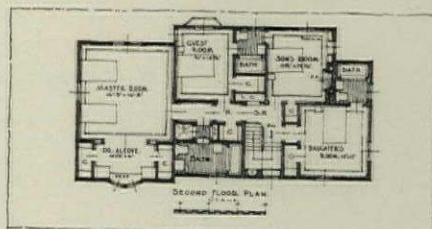
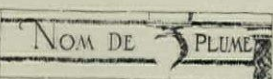
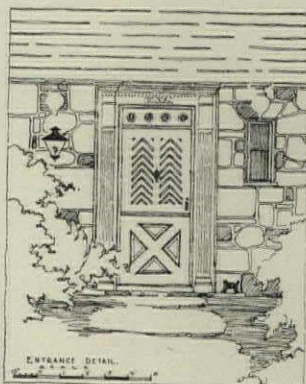
SUBMITTED BY JEFFERSON M. HAMILTON, NEW YORK, N. Y.



PENCIL POINTS COMPETITION FOR AN EIGHT-ROOM HOUSE



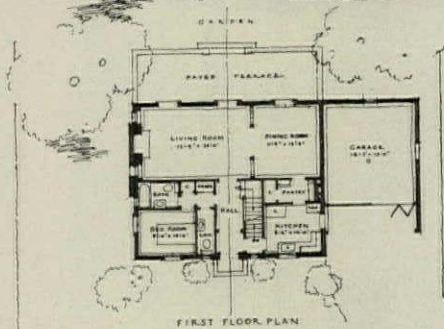
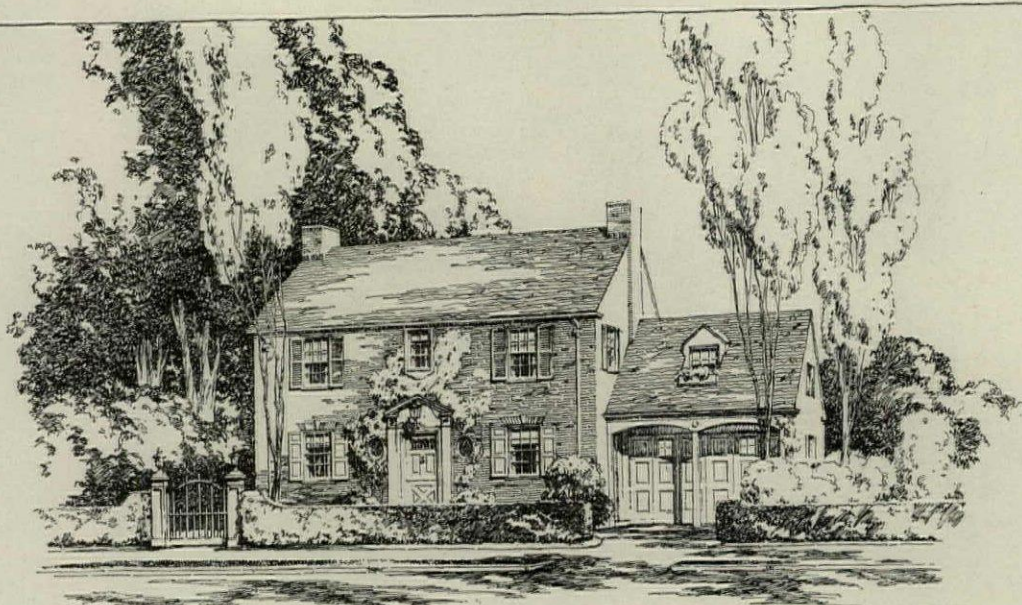
P E R S P E C T I V E  
P R E S E N T  
V I S I O N



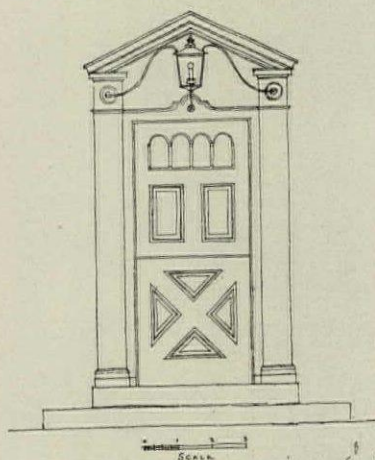
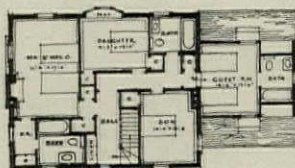
MENTION

SUBMITTED BY ELMER A. JOHNSON, MILWAUKEE, WISCONSIN



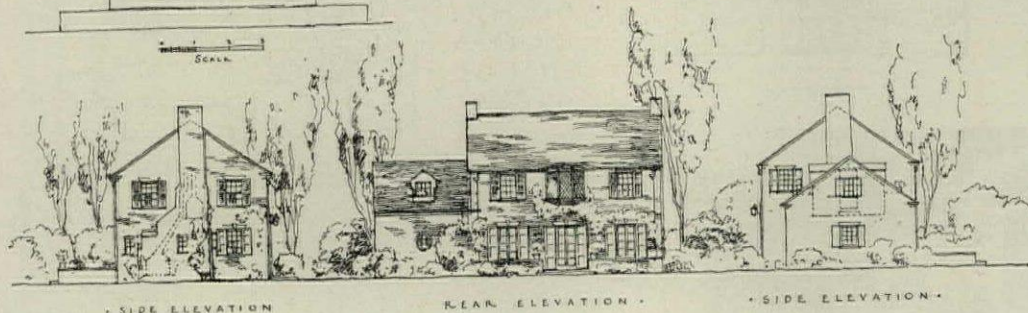
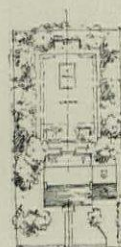


*Design for an*  
EIGHT ROOM HOUSE -  
THE PENCIL POINTS COMPETITION -  
*Submitted by* ~



COMPUTATION OF AREA	
MAIN HOUSE	26'-0" x 33'-6" = 872.50
GARAGE	17'-0" x 18'-0" = 306.00
TOTAL	1178.50

SCALE FOR PLANS & ELEVATIONS

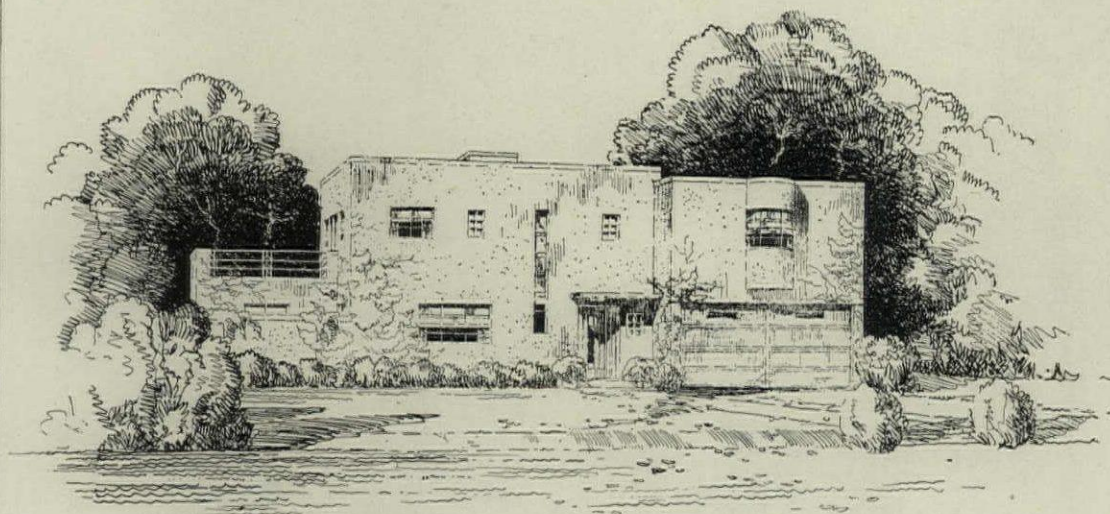


MENTION

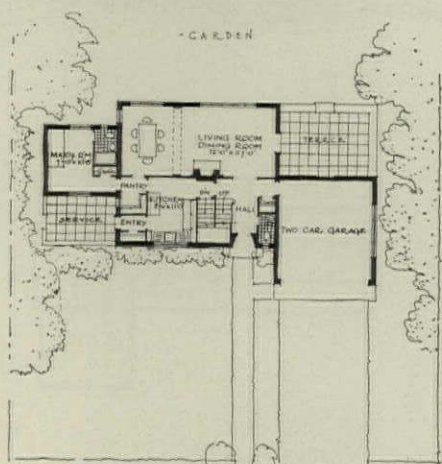
SUBMITTED BY ELMER BABB, BRONX, NEW YORK



# PENCIL POINTS COMPETITION FOR AN EIGHT-ROOM HOUSE



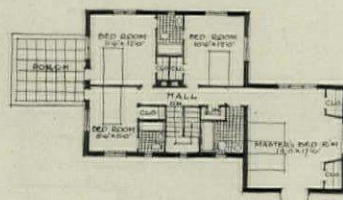
STREET FRONT



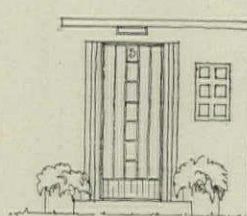
FIRST FLOOR PLAN

AREA  
MAIN PORTION 25'0" x 20'0" = 500 S.F.  
KITCHEN 12'0" x 10'0" = 120 S.F.  
GARAGE 20'0" x 10'0" = 200 S.F.  
TOTAL AREA 820 S.F.  
ROOMS: 8 ROOMS, 1 BATH, 1 CLO., 1 HALL, 1 KITCHEN, 1 LIVING ROOM, 1 DINING ROOM, 1 GARAGE.

Scale  
1" = 10'0"

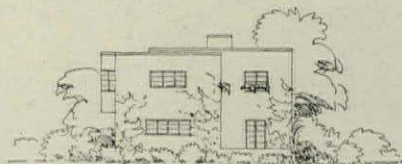


SECOND FLOOR PLAN

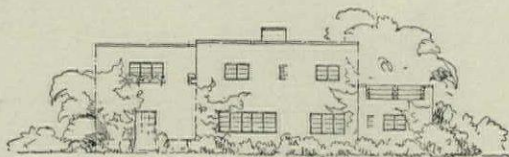


DETAIL

Scale  
1" = 10'0"



SIDE ELEVATION



REAR ELEVATION

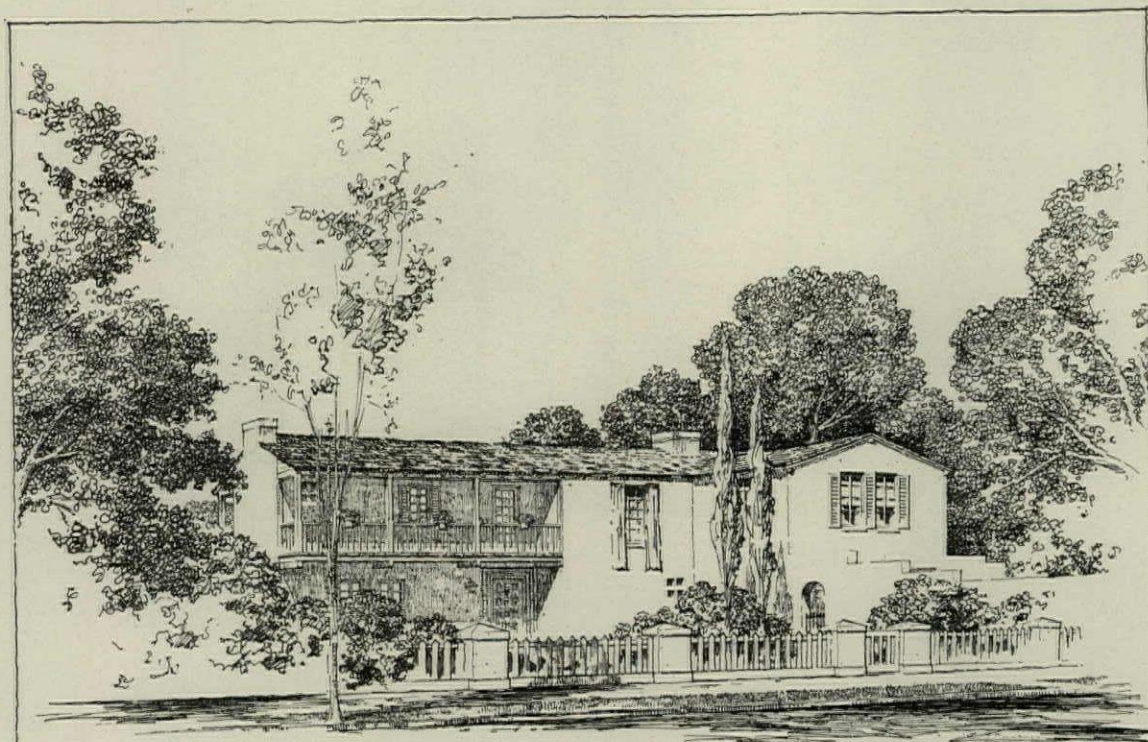


DESIGN · FOR · AN · EIGHT · ROOM · HOUSE · THE · PENCIL · POINTS · COMPETITION

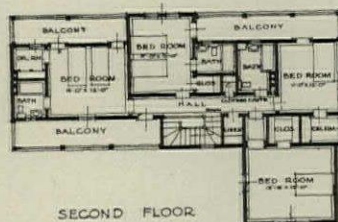
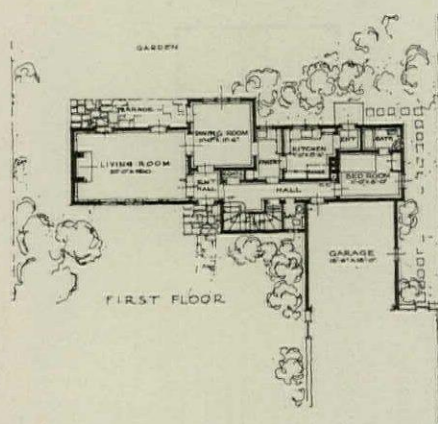
MENTION

SUBMITTED BY FRANCIS KEALLY, NEW YORK, N. Y.





ELEVATION FROM STREET

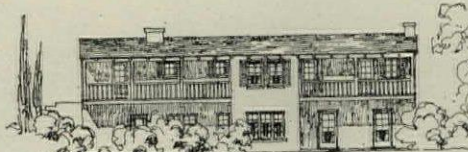


ENTRANCE DETAIL

SCALE  
IN FEET  
PLANS AND ELEVATIONS  
REDUCED TO THIS SCALE  
FRONT ENTRANCE DETAIL

COMPUTATION	
AREA OF LOT	40' x 100' = 4000
AREA OF HOUSE	20' x 30' = 600
AREA OF PORCH	10' x 10' = 100
AREA OF DRIVE	10' x 20' = 200
AREA OF GARAGE	10' x 20' = 200
AREA OF YARD	10' x 10' = 100
AREA OF FENCE	10' x 10' = 100
AREA OF TOTAL	5300

SUBMITTED BY — UGUESSWHO



REAR ELEVATION



SIDE ELEVATION

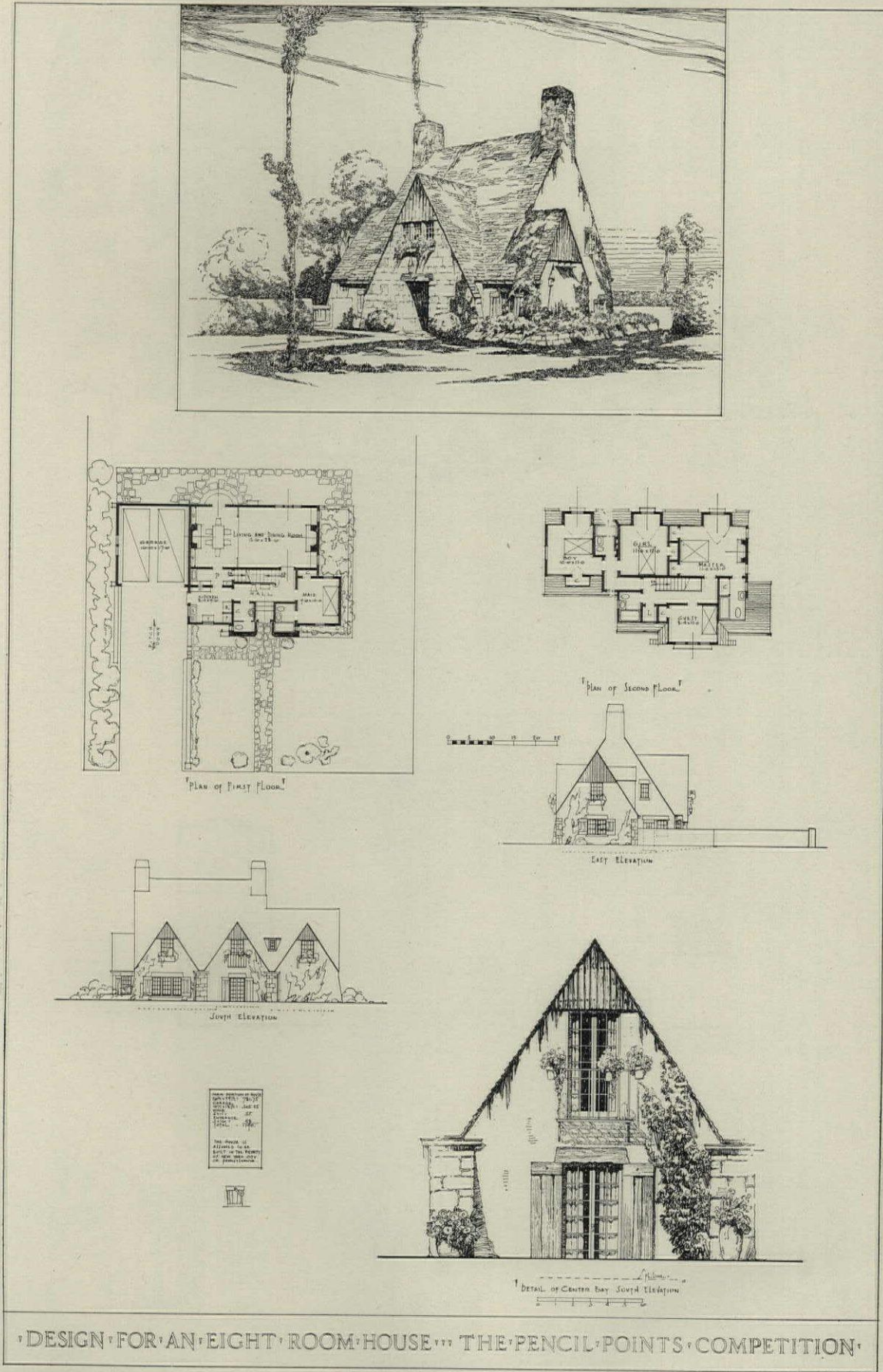
## DESIGN FOR AN EIGHT ROOM HOUSE. THE PENCIL POINTS COMPETITION.

MENTION

SUBMITTED BY ARTHUR D. ROBERTS, LOS ANGELES, CALIFORNIA



# PENCIL POINTS COMPETITION FOR AN EIGHT-ROOM HOUSE



DESIGN FOR AN EIGHT ROOM HOUSE THE PENCIL POINTS COMPETITION

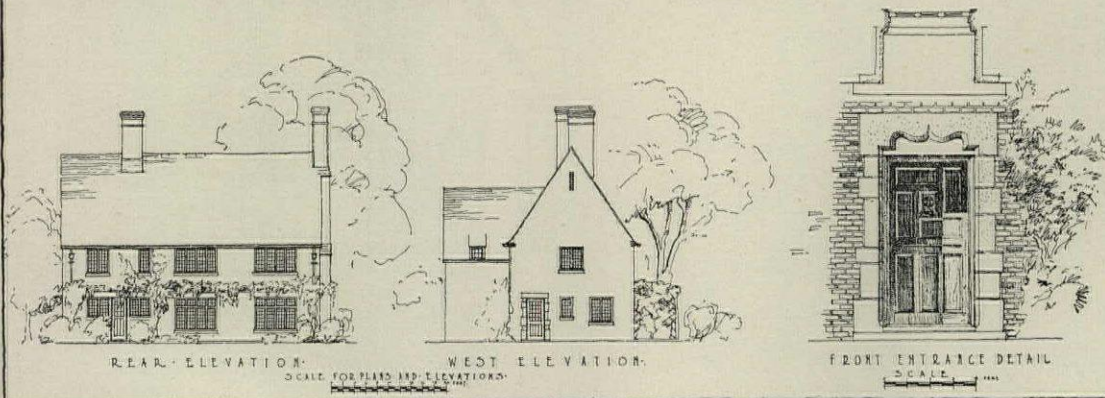
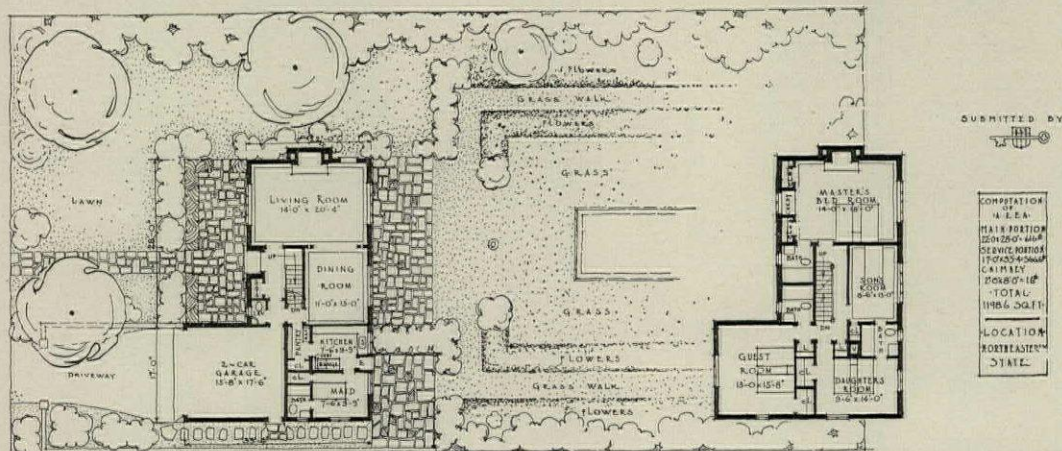
MENTION

SUBMITTED BY JOHN RICHARD ROWE, NEW YORK, N. Y.





# DESIGN FOR AN 8 ROOM HOUSE THE PENCIL POINTS COMPETITION



MENTION

SUBMITTED BY JOHN FLOYD YEWELL, NEW YORK, N. Y.



# ADVENTURES OF AN ARCHITECT

## 9—THE PROFESSOR OF ENGLISH AND THE ENGLISH PROFESSOR, OR HOW TO MAKE A GOOSE-EGG OUT OF WHAT A WREN HATCHED!

By Rossel E. Mitchell

"SI MONUMENTUM requiris, circumspice."  
But what do you see when you look?

"Pussy-cat, pussy-cat, where have you been?  
I've been to London to visit the Queen.  
Pussy-cat, pussy-cat, what saw you there?  
I saw a fat mouse right under her chair!"

Pussy-cat saw what her feline background prompted her to look for. The architect in London sees buildings, good and bad, the doctor sees hospitals, the educator sees universities, and all see the Tower. The broader one's general education, the more one sees and acquires by travel. Non-technical travellers are not expected to discriminate closely between various styles and "periods" of architecture and decoration. Educated people do usually know the difference between Gothic and Georgian. They can often distinguish between Romanesque and Renaissance. So I wonder what the eminent Christopher Wren would have thought of a professor of English who is the "hero" (or villain) of the following incident!

A minister friend in a Southern city wrote for me to consult him about a new church his congregation would shortly erect. Presto! I took the next train, literally armed to the teeth with church building information, ancient, mediæval and modern.

The pastor outlined his wishes for a sanctuary to suit a large congregation, and a building for religious educational and social activities along the most advanced lines of religious pedagogy and curriculum.

"The church structure is simple enough," he warned, "but past experience has shown me that it is most difficult to get a Sunday School building thoroughly adapted to modern teaching methods."

This latter having been one of my special hobbies, we quickly agreed on all essential points and he arranged for a meeting of his Board to discuss plans.

The Board came together twenty-odd strong. I suggested a James Gibbs sort of church building, with a tower, as suitable to the prominent site, in keeping with a community whose roots were derived from Eighteenth Century England. A style adaptable to the needs of a congregation which gives primary consideration to preaching, good acoustics and seating not too far removed from the pulpit. Our mutual ideas as to the church school were harmonious. Finally, every man present was asked to express his views. It appeared to be a walk-over for me, until the pastor called on a lean and thoughtful Cassius who had entered late, and who had thus far said nothing.

In a rather meek way, Professor Green began to talk. He occupied the chair of English in a prominent Southern College, and has since had opportunity to display his architectural erudition on a large scale.

He opined that he personally preferred the architecture of St. Paul's Cathedral. "Good," thought I, and ventured to suggest that was just what I recommended: a form of English Renaissance.

"Renaissance!" retorted he, "St. Paul's Cathedral is Gothic!"

"Gothic!" I said aloud. I seldom swear, but narrowly missed it this time. "Why my dear sir, St. Paul's Cathedral is a masterpiece of the Renaissance!"

His professorship grew indignant. "I guess I ought to know! I lived across the street from it for two years, and attended services there nearly every Sunday. It's Gothic!"

Was I dumbfounded? No, but rather flabbergasted. Used to speaking on my feet, I did not lack words. What puzzled me was whether to show up the damn fool or avoid an argument. I chose the latter course, and have been kicking myself ever since!

The pastor changed the subject and had a Building Committee appointed, with this educational aberration as a member. The next day I held a long conference with the minister and outlined my emotions and dismay at the confusion of the professor. He assured me he had put the gentleman on the committee largely out of deference for the institution he was connected with. He said my talk and information given the committee had met a universally favorable response. He wished me to do this work and would send for me in a few days. I therefore departed.

Days elapsed, and no call. A telephone call disclosed that he had just written me. His letter stated:

"The day after you left, Professor Green, on his own initiative, wired Mr. Gargoyle, a noted exponent of Gothic architecture, to come at once. We met him and he completely won the committee to a traditional Gothic type of church. I am sorry, for it does not meet my ideas of our needs at all."

In spite of my chagrin, I could not but admire the nifty salesmanship of a high-churchman architect who could thus "knock cold" a bunch of incorrigibly low-church "non-conformists" and sell them a bouquet of ecclesiastical traditionalism!

It was several years before I saw their very severe traceried and buttressed edition of Sir Christopher's *magnum opus*. I trust the dour professor is highly satisfied, and that his English pupils do not find his dissertations on ballads and epics as cock-eyed as his notions of architecture. When he passes on I would like to write *his* epitaph for that church:

St. Paul's Cathedral here you trace,

According to Professor Green.

Perhaps you will not know the place

If ancient London you have seen.

But then, you may with him agree—

He never was blind and never could see!



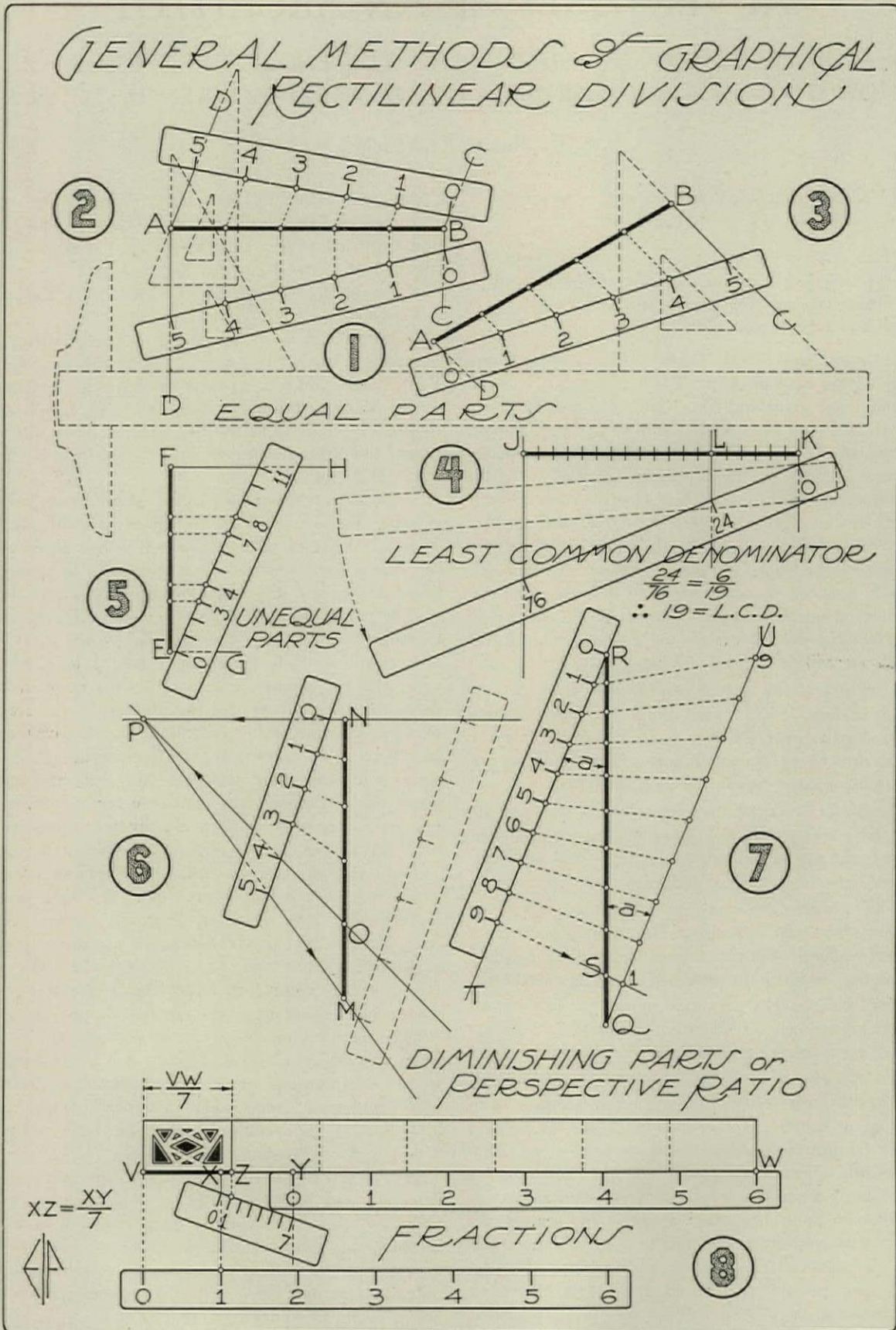


FIGURE 99



# THE GEOMETRY OF ARCHITECTURAL DRAFTING

## 11—MORE DRAFTING-SCALE TACTICS

By Ernest Irving Freese

EDITOR'S NOTE:—This article, which is copyrighted, 1930, by the author, continues the series begun last August.

THE DRAFTING-SCALE now assumes the accommodating rôle of "lightning calculator." It reduces computation to drafting—mathematics to geometry. Its unit distances no longer represent units of measurement but *units of arithmetic*—abstract numbers—factors and multiples, divisors, dividends and quotients, multipliers, multiplicands and products.

Aside from the utterly direct system of spacing heretofore developed in Part 10, the next simplest use of the scale as a ready reckoner is variously presented in Figure 99, herewith, at Diagrams "1," "2," and "3." Every draftsman, early in his career, learns this graphical and expeditious method of dividing a line or a distance into any number of equal parts. The method is essentially dependent upon the cooperation of the T-square and triangles: it is peculiar to the *drafting-board*. And it is fast and precise when properly done. This is how: Let  $AB$  be any line that must be divided into any number of equal parts, say five. Indent the extreme points,  $A$  and  $B$ , and project therefrom the parallels  $AD$  and  $BC$  in a direction closely approaching, but preferably *equalling*, an angle of 90 degrees in respect to  $AB$ . These parallels should be drawn with a fine hard pencil-point along an edge of some one of the sliding instruments in normal working position. Possibly these parallels already exist; they may be center lines, or boundaries of the plane to be divided, or what not—for it is seldom, in practical drafting, that an *isolated* line occurs. Now lay any suitable scale across these parallels at such a slant that the intercept reads 5. Endeavor to select a scale that will accomplish this without its resultant slant becoming greater than 30 degrees in respect to the line  $AB$ . Obviously, if the scale comes *parallel* with  $AB$ , the division can be done *directly*. Next, with the divider-point held snug to the edge of the firmly-held scale, indent the intermediate points—in this case, 1, 2, 3, and 4. Then lines projected through these points, in a direction paralleling the limiting parallels, will divide the given line or distance,  $AB$ , into the required number of equal parts.

At Diagram "4," Figure 99, let it be required to divide  $JK$  into the least number of equal parts that will cause one point of said division to fall on the fixed point  $L$ . This amounts to finding the *least common denominator* of the fractional parts  $KL$  and  $LJ$ . Project long parallels from the given points as shown. Now, so maneuver one or another of your scales into such a position that, with *zero* registering with either extreme parallel, any other two graduation marks on the scale will register simultaneously with the other two parallels, respectively. By starting the scale from a position paralleling the given line,

and then slowly and appraisingly revolving the scale about zero as a hinge, the position of simultaneous registration will be discovered. If it cannot be done with one scale, try another. The final position of the scale indicated in the Diagram tells you that  $KL$  is  $24/76$ ths of  $JK$ , which, obviously, reduces to  $6/19$ ths. Hence, 19 is the *least common denominator* of the fractional parts  $KL$  and  $LJ$ . Wherefore, if the entire line,  $JK$ , be divided into 19 equal parts, then  $KL$  will just contain 6 of them, and  $LJ$  will just contain the remaining 13, as shown. So now, you have seen how you can determine the spacing of ornamental units, exposed rafter ends, brackets, dentils, or what not, so that some one of them will center over or under irregularly spaced openings or other fixed and unchangeable structural or architectural features. If the finding of the least common denominator results in an undesirably close spacing—as it is quite apt to do—then a slight variation of the above general method will still yield any approximately-equal spacing wanted. For instance, suppose you *wanted* 6 spaces in the distance  $KL$  but that the resultant unit space would *not* exactly divide  $LJ$ . All right: lay any scale across the two parallels  $K$  and  $L$  so that, with zero on the  $K$ -line, any number divisible by 6 will register with the  $L$ -line. I shall assume that the latter number is still 24, as in the Diagram. Then the scale spacing-unit is 4, since this is  $1/6$ th of 24. Now, keeping 24 in registry with the  $L$ -line, but paying no further attention to the zero end of the scale, shift the hinge point to 24 and continue to revolve the scale, but this time either downward or upward, just sufficient to cause a number divisible by 4 to register with the  $J$ -line. The spacing-interval between  $L$  and  $J$  will then be slightly less or slightly greater than that between  $L$  and  $K$ , but the eye could seldom detect the difference. In this case it is the *eye* that must be satisfied rather than a condition of exact geometric equality. Finally, the method above developed has no limitations: it can be practically applied to the finding of the least common denominator of *any* given number of fractional parts.

Now suppose  $EF$  of Diagram "5," Figure 99, to be the height of a stone or terra cotta base course that you desire to divide into 5 courses such that the alternate ones shall be, say, one third the width of the others. There will then be two narrow courses and three wide ones required, and, since the wide ones are to be three times as wide as the narrow ones, the *denominator* of the fractional parts will therefore be 2 times 1 *plus* 3 times 3, which is 11. In other words, the narrow courses will each be *one* eleventh of  $EF$ , and the wide courses will each be *three* elevenths of  $EF$ . Lay any scale between the limiting



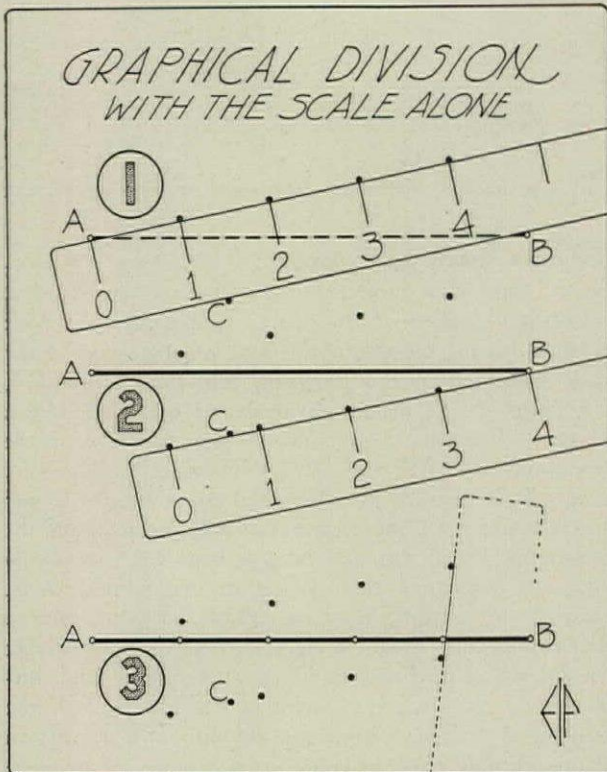


FIGURE 100

horizontals,  $EG$  and  $FH$ , at such a slant as to read 11 therebetween. Mark off the unequal proportionate parts, as shown, and, with the T-square, project the required horizontal jointing through the resultant points. In a similar manner, any line or distance can be readily divided into *any number of unequal parts* having a common denominator.

At Diagram "6," Figure 99, let it be required to divide any height, say  $MN$ , into any number, say 5, of perspectively-diminishing courses or bands, so that the actual distance so divided will appear greater because of thus emphasizing the natural effects of perspective. Make  $MO$  the desired width of the initial course, which can be *any distance exceeding one fifth of  $MN$* ; that is, it must be greater than the *average*, since the succeeding courses are to regularly diminish in perspective ratio. Then, after thus fixing  $MO$ , draw extended lines through  $M$ ,  $O$ , and  $N$ , meeting at *any* point  $P$ . Preferably, however, the point  $P$  should be located by a 45-degree line through  $O$ , and a perpendicular through  $N$ , as shown. Next, since the desired number of courses is here 5, place any scale across these converging lines in such a position that it will read 5 between the limiting lines  $NP$  and  $MP$ , and, at the same time, so that one spacing-unit will occur between the lines from  $M$  and  $O$ . *This can always be done.* Then indent the intermediate points, in this case 1, 2, and 3, and project them, collinear with the point  $P$ , to the line  $MN$ , which latter then becomes divided in the required manner. A variation on the above method is shown at Diagram "7." It is more compact than the other, and only slightly less expeditious. In this case,  $QR$  is a wall, say ten feet high, or a roof with a ten-foot rake, that is to be covered

with ten courses of . . . oh, split shakes, we'll say. The starting course,  $QS$ , is to have an exposure of 16", and the remaining nine courses are to diminish in the perspective ratio thus established. Make  $QS$  equal

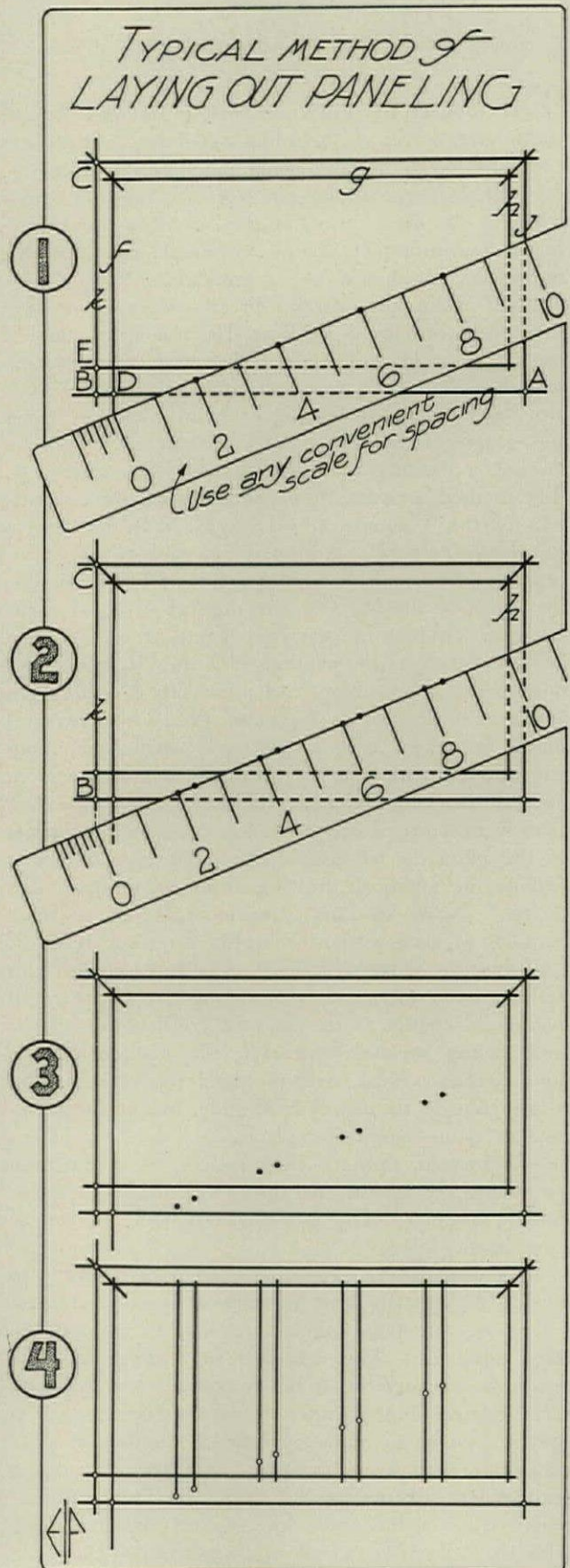


FIGURE 101



16", at the scale of the drawing. Indent the extreme points *Q* and *R*, and through these points draw the limiting parallels *QU* and *RT* making an exceedingly acute angle, *a*, with the given line. From *R*, on *RT*, mark off any 9 equally-spaced points with any scale—since 9 is the number of parts into which the yet-undivided portion *RS*, of the given line, is to be resolved. From the point 9, on *RT*, project a line through *S* to the point 1 on *QU*.

With the bow spacers set to the resultant distance *IQ*, space off the consecutive points on *QU* up to 9, as shown. Lines connecting the two sets of points, in the manner shown, will divide *QR* into the required number of coursing-points in the required ratio. Now, just as a pastime, divide another line, of the same length as *QR*, into the same number of equal spaces, and note how much longer the *perspectively-divided* line appears. In a horizontally-coursed wall or roof, the illusion would be quite emphatic. So, again, geometry lends a hand to the designer who strives to make things appear what they "ain't."

You can see from Diagram "8," Figure 99, how to cut off any one fractional part of a line that is longer than the scale. Take the line *VW*, for in-

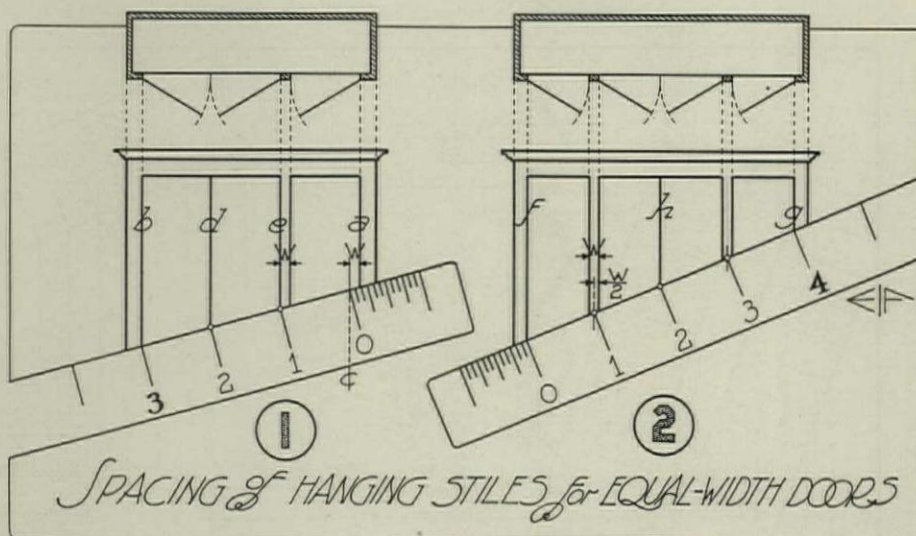


FIGURE 102

stance: say it is desired to determine one seventh of this for the purpose of detailing one of the seven typical repeating units or panels, as shown. Make *VX* any distance less than  $1/7$ th of *VW*, and make *WY* six times *VX*; that is, cut off one unit from one end and seven minus one, or six, units from the other end. It is now apparent that, by taking  $1/7$ th of the gap *XY*, which is *XZ*, as an addition to the distance *VX*, you get the distance *VZ* which is exactly  $1/7$ th of *VW*. Now I'll tell another one you never heard of:—

Figure 100 illustrates this one, which is a method of dividing any straight line into any number of equal or proportionate parts *with the scale alone*. No T-square. No triangles. No pencil. Just a scale—

and, oh yes, maybe a common everyday pin. This method is *not* peculiar to the drafting-board, nor, as a matter of fact, to the *scale*: it can be done with a steel square, or a yard-stick, or with a one-by-six stick of Oregon pine! Anywhere: on the drafting-board, the floor, or the side of a house! It's worth knowing, and so simple that you'll wonder why you didn't discover it. Say *AB* is the line. As at Diagram "1," lay any scale, or a yard-stick, or the blade of a steel square, or a one-by-six piece of Oregon pine, in such a position that its opposite parallel edges come in line with *A* and *B*, respectively. From *A*, mark off, by indentation,

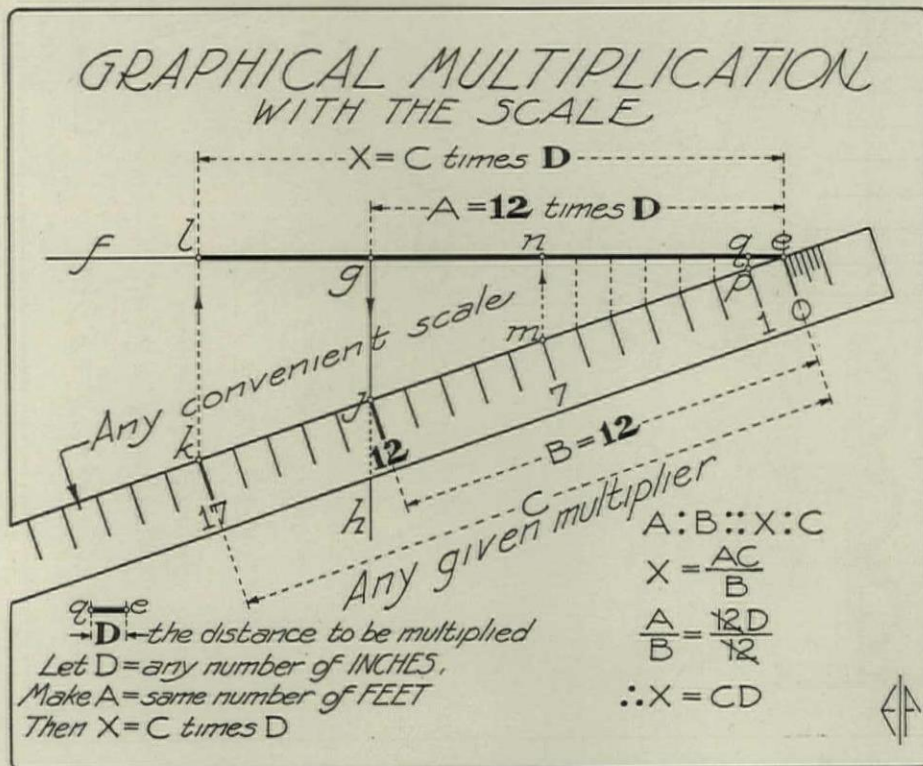


FIGURE 103



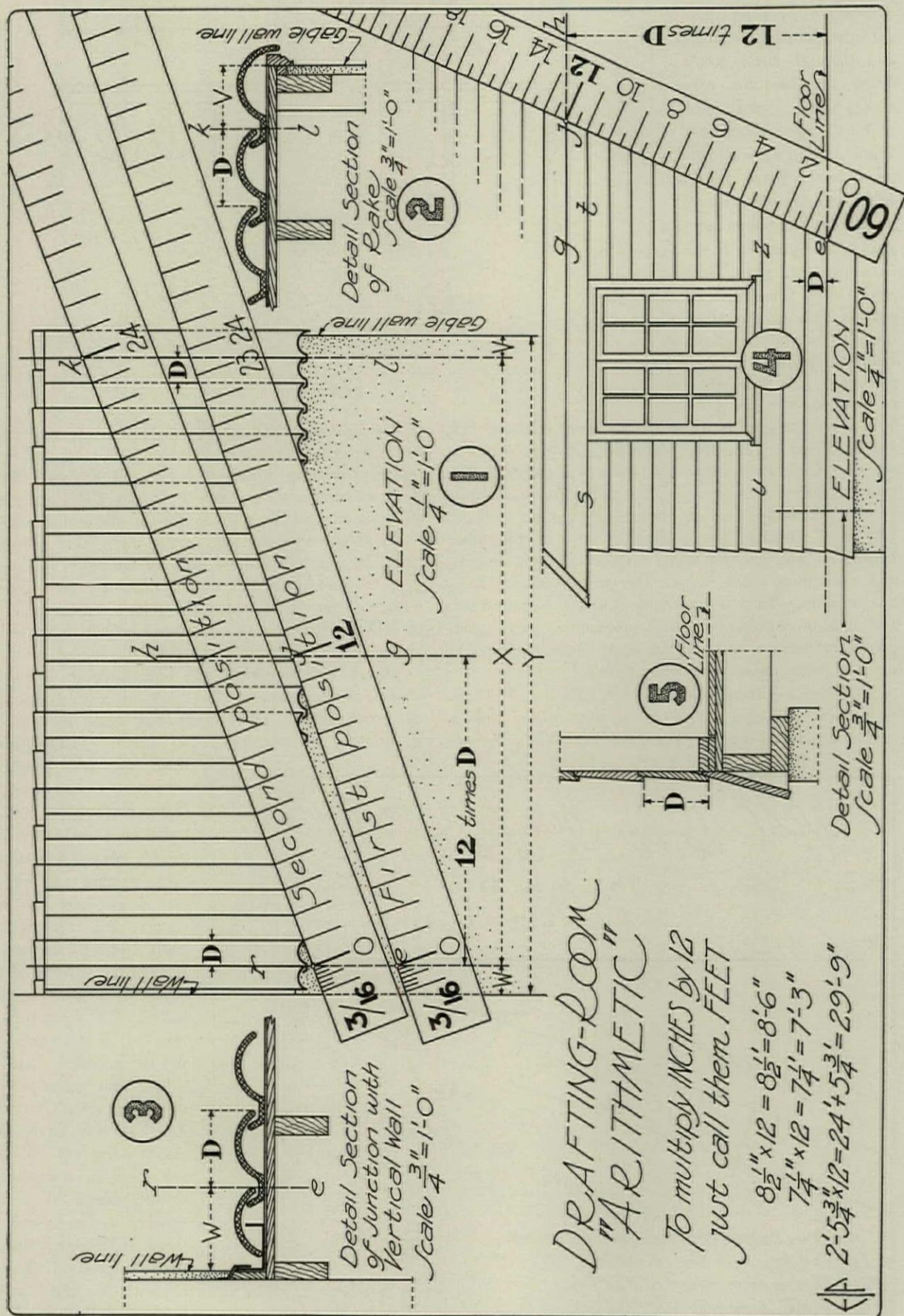


FIGURE 104



one less equal space (of any magnitude) than the total number of equal spaces into which the line  $AB$  is to be divided. Also indent any aligning-point,  $C$ , along the opposite edge. Now slide the straightedge into alignment with  $B$  and  $C$ . From  $B$ , toward  $C$ , repeat the markings as shown at Diagram "2." Then, as Diagram "3" shows, a straightedge placed successively in line with each pair of points, will cross the given line at the required points of division. Clearly, a line can also be proportionately divided by a similar method.

To lay out the five-panel wainscot of Figure 101 proceed as follows: Lay off  $AB$  and  $BD$  first. Then  $BC$  and  $BE$ . No other scale measurement is necessary. The other lines of the frame are run around by T-square and triangle operation as indicated, making use of the 45-degree line to turn the upper corners. Lay any suitable scale between the parallels  $f$  and  $j$  so that the intercept shows a number of units divisible by the number of panels required. Perform the division merely by indenting the intermediate points along the scale's edge, as shown. Then, without moving the scale out of line with the marked points, slide it parallel with itself until the mark that was at  $j$  now registers with the inner rail line  $h$ ; this position being shown at Diagram "2." This also brings the zero of the scale into line with  $k$ . Again mark off the same points. Upon removal of the scale, the drawing now looks like Diagram "3." Each point is located through which, as at Diagram "4," both edges of the stiles are then directly drawn.

Figure 102 gives two practical examples of proportionate subdivision. In these two cases, the width of the intermediate stiles is less than the framing stiles. The method of spacing is clearly self-explanatory.

Now you shall see what kind of a multiplier the scale is. The basic principle of graphical multiplication is depicted in Figure 103. Suppose you are required to space off a distance of  $10\frac{1}{4}$ " seventeen times. The spacing-table given in Part 10, heretofore, yields no equivalent for this. Hence, this particular distance can not be "spaced" directly. You could, of course, calculate the total distance of 17 spaces, then lay this off and obtain the required spacing by graphical division, as before indicated at Diagrams "1" and "2" of Figure 99 herewith. But there's an easier way. Like this: First lay off, directly, a single distance equal to a dozen required spaces, whatever it may be. You see, no calculation is required to multiply inches by 12. You merely change their name to feet, and the deed is done. Twelve times  $10\frac{1}{4}$  inches is  $10\frac{1}{4}$  feet. Lay this off from  $e$  to  $g$  at the same scale as the drawing. Draw any line through  $g$ , preferably the perpendicular one  $gh$ , as shown. Now lay any scale in such a position that it reads 12 between the fixed point  $e$  and the line  $gh$ , or between a line through  $e$  and a paralleling line through  $g$ . Then, along the raking scale, mark off the required 17 equal spaces to  $k$ . The thus-located points, projected in a direction paralleling  $hg$ , will give the required  $10\frac{1}{4}$ " spacing along the line  $ef$ ; and  $el$  will therefore equal 17 times  $10\frac{1}{4}$ ". But maybe you want to lay off a lesser number of

spaces than 12. Well—same way. The above system always establishes the proper position and slant of the spacing-scale to yield the spacing required. You can then continue the spacing, or curtail it, to any degree desired. To space off  $eq$  seven times, you first lay off a single distance that is equal to twelve times  $eq$  which, again, is  $eg$ , and so determine the position of the spacing-scale as before. Then, as the Figure shows,  $en$  is bound to be seven times  $eq$  because  $em$  is seven times  $ep$ . And don't forget that quaint old drafting-room doctrine:—"twelve times inches is feet."

Two actual examples of drafting-room multiplication are displayed in Figure 104. It's all done with the scale. At Diagram "1," the first position of the scale, so designated, was determined by using the maximum allowable spacing-interval for this particular kind of tile. But this first position immediately indicates that the tile will not "space out" exactly in the fixed distance  $X$ , since no graduation mark of the scale "hits" the line  $kl$ . Hence, to work out on the job, the tile spacing must either be "stretched" or "crowded," for, obviously, interlocking units such as these cannot be "split." In other words, the Diagram shows that either 23 or 24 rows must occur between the lines  $re$  and  $kl$  which limit the regular spacing. But, since the maximum allowable spacing-interval was used to establish the first position of the spacing-scale, it is also obvious that the tile spacing can not safely be "stretched" to  $1/23$ rd of the distance  $X$ , but that it must be slightly "crowded" to  $1/24$ th of this distance. Wherefore, the scale is shifted to a second position, so designated, that brings the 24-mark exactly on the limiting line  $kl$  while still maintaining the zero mark on the other limiting line  $re$ , as shown. The final spacing is then marked off along the scale's edge and the tile lines drawn directly through the thus-fixed points. No calculation has been made. The whole thing has been done "in a jiffy." And the indicated spacing will work out on the job. And the roof won't leak because some underbidding roofing contractor saw a chance to "save" one row of tile—and took it! So there you are: a simple manipulation of the drafting-scale has prevented a ruined ceiling. Gee!—ometry.

At Diagram "4" of Figure 104 the same simple system of multiplication was used to accurately establish the otherwise non-spaceable lines of the siding, and this spacing was then used to establish the head and sill lines of the windows and the soffit line of the cornice. After being spaced out in this manner, on the working drawings, the heights were then carefully dimensioned by using the unit distance,  $D$ , which is the siding exposure, as the unit of measurement—the drawings indicating the number of such units occurring between any two levels. By "working backward," the sash size was then determined from the full size details of the window frames and the number of "units" occurring on the scale elevation between the limiting siding-lines  $uz$  and  $st$ . Note that the regular spacing,  $D$ , starts conveniently from the finish floor line as datum, as indicated on the accompanying scale detail at Dia-



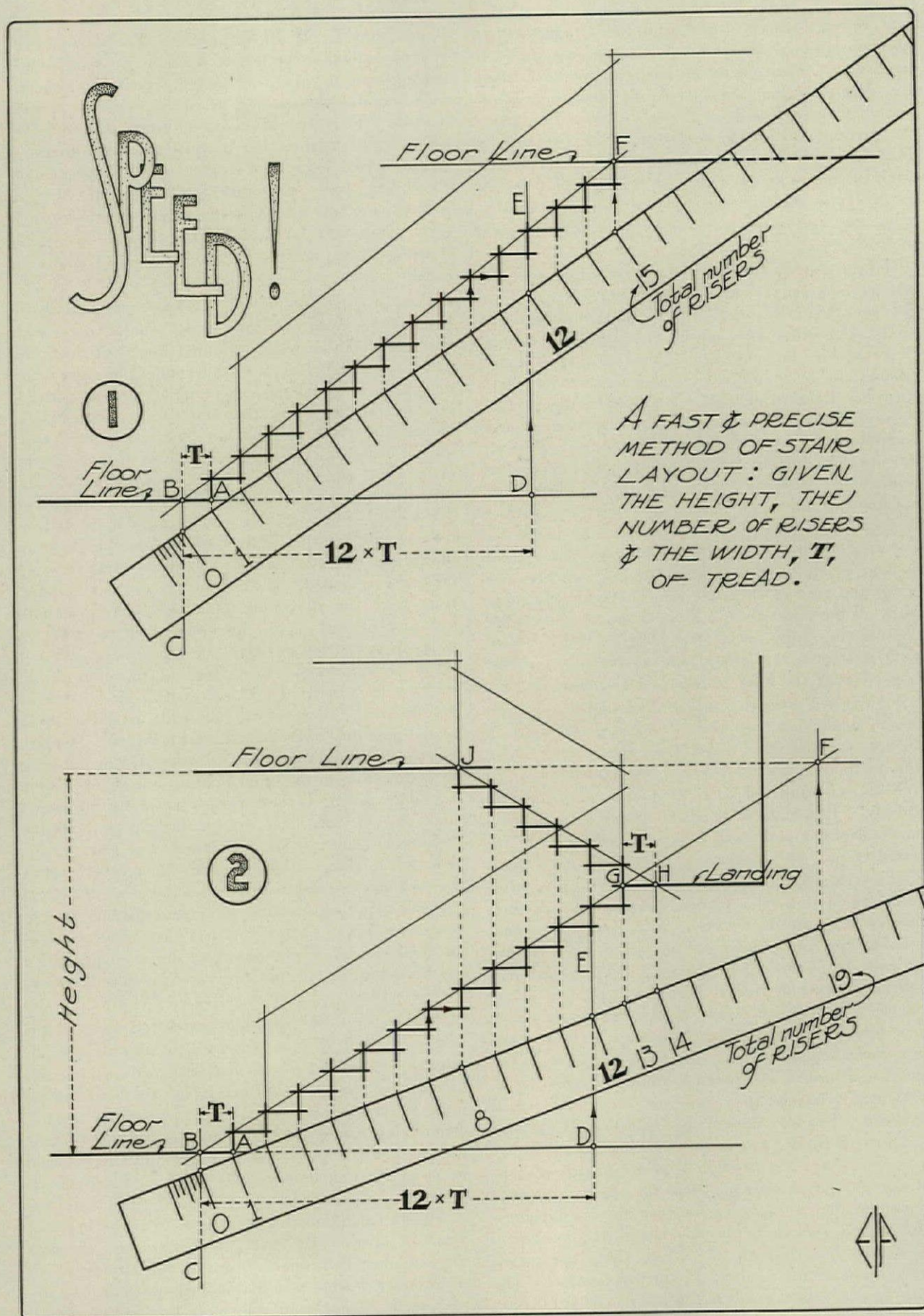


FIGURE 105



gram "5." The spacing of siding and shingles deserves just as much careful architectural consideration as the coursing of masonry—but no one except a blind man could be pardoned for saying that it gets it. It can't be "worked out" on the job without being premeditated in the *drafting-room*. Which brings us right back home. We'll now go upstairs:—

Figure 105 shows how it's done. This is the fastest method ever evolved for laying out stairs when neither the treads nor risers can be *directly* spaced in accordance with the methods previously shown in Part 10. And it loses no accuracy by virtue of its speed. It requires but *one* placement of the spacing-scale to materialize both treads and risers. And the only data you need are the *total height*, the *number of risers*, and the *width T*, of a tread. Let's go: Make *AB*, on the floor, equal to *T*. Now take the number of inches in *T* as *feet*—whether it be a whole number or a fractional one—and lay off *BD* equal to this number of feet, at the *scale of the drawing*. Draw the verticals *BC* and *DE*. Lay any convenient scale across these two verticals so that the intercept reads 12. Hold the scale firm, and, counting from the line *BC* as *zero*, mark off along the raking scale the total consecutive number of *risers*, as shown. This is best done by indenting the points with one point of the dividers held snug to the scale's edge. Project vertically to *F*, the location of the last riser. Draw *FB*. Project the other marked-off points to this gradient line, which immediately fixes the face of the risers as well as the intersection points through which the tread lines can then be drawn with the T-square. The process is typical. Diagram "2" shows how it works when the stairway contains an intermediate landing—which condition is certainly far preferable to the uninterrupted run shown at Diagram "1." The whole "trick" of the above method consists in making the number of treads *equal* the number of risers, and this has been easily accomplished by the addition of the *imaginary tread*, *AB*, on the floor.

The "rise" and "run" of a stairway are builders' terms, used in framing. They should not, but often are, confused with "riser" and "tread." The *rise* of a flight is the summation of the *risers* therein. The *run* of a flight is the summation of the *treads*. Hence, as Diagram "2" of Figure 106 shows, a *riser* is the *vertical* distance between any two corresponding points, *a* and *u*, of any two consecutive *steps*, and the *tread* is the *horizontal* distance between the same two points. Hence, a sloping line drawn through any two corresponding points of two steps, gives the true "gradient" of the stairway and the "pitch" of the handrail, whereas, the rise and run do *not*. This is made evident in Diagram "1" of Figure 106. Here, the lines *ge* and *ac*, or any paralleling ones, would establish the true slope, or *gradient*, of the stairs, but the lines *fe* and *ec*, determined from the respective rise and run of each flight would establish nothing but a repetition of a common mistake. For the purpose of full size detailing, Diagram "2" shows the *correct* method of graphically determining the riser from the known tread. It

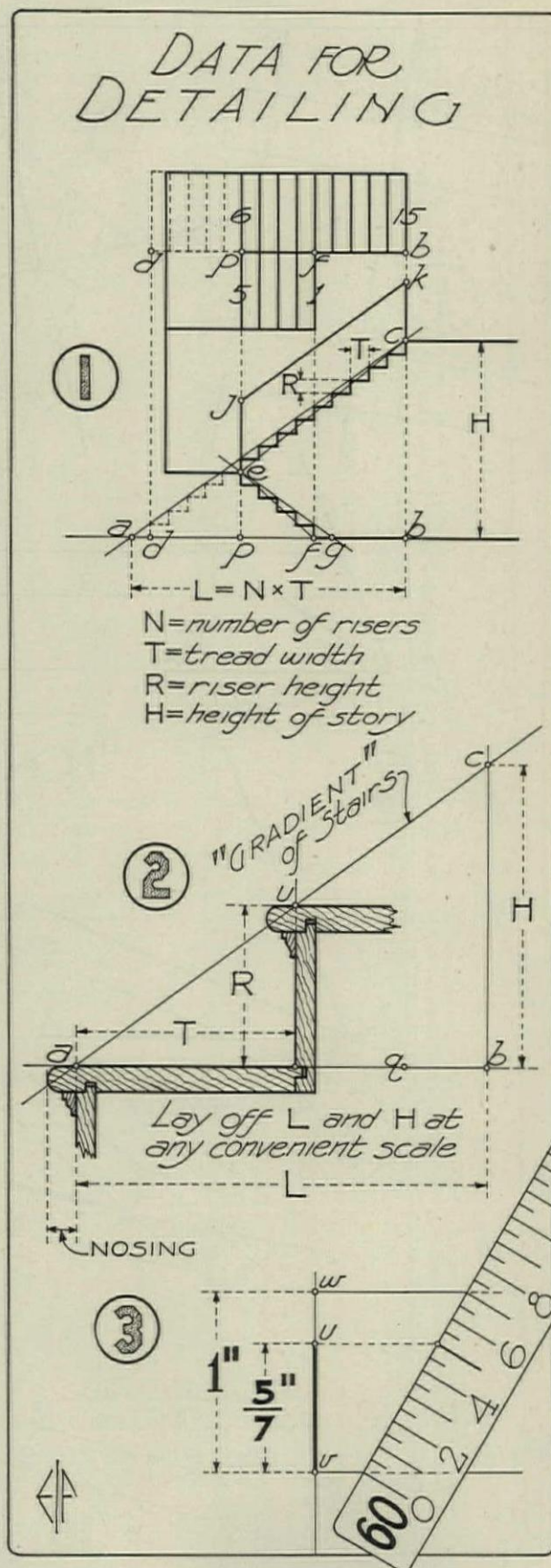


FIGURE 106

amounts to adding one tread to the "run" to get the distance *L*. An easy way to lay off *L* is to make *aq* equal 12 treads, then add *qb* as required. Or, as at Diagram "3," you can first *calculate* the exact height



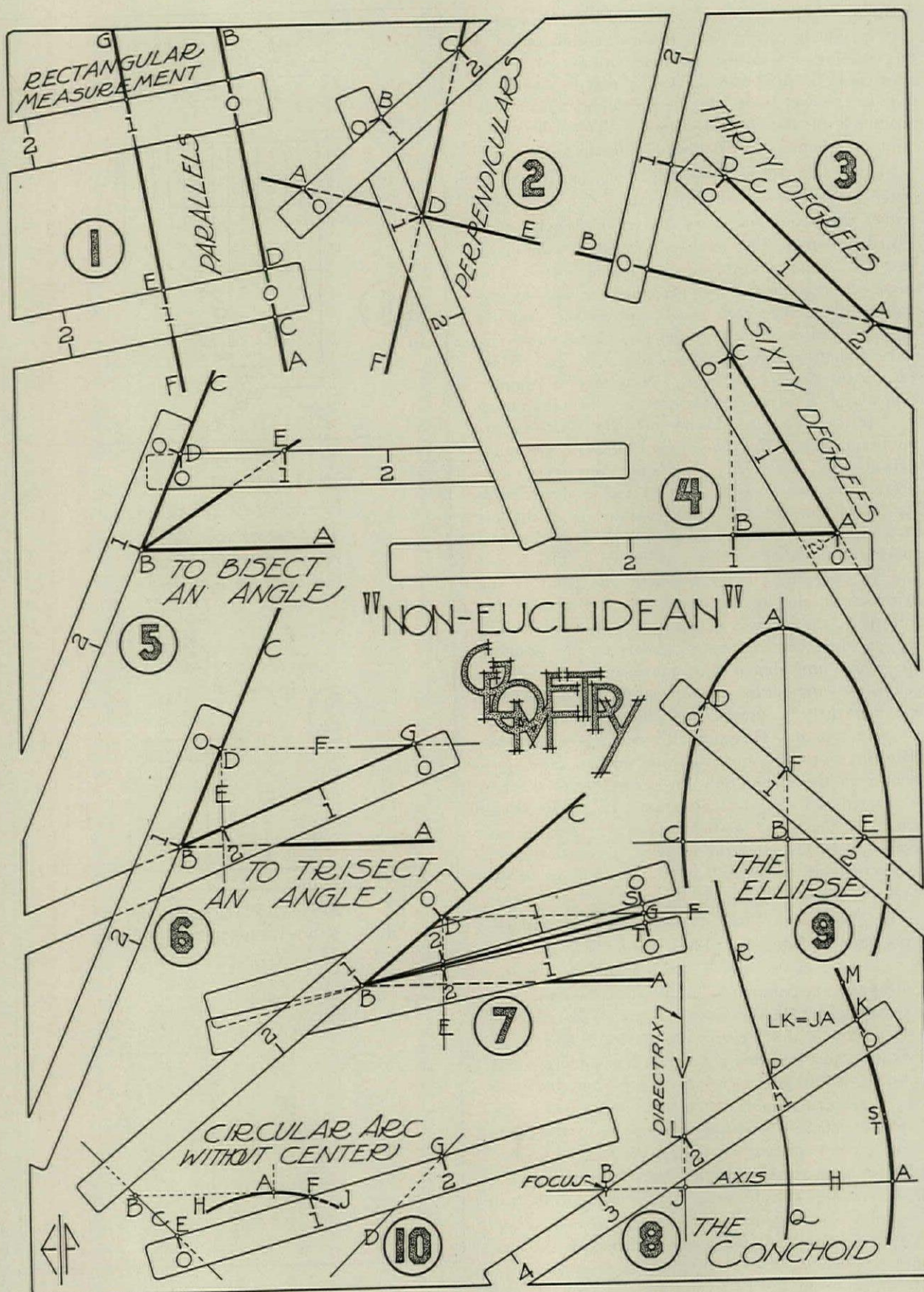


FIGURE 107



of a riser and then determine the odd fractional part as there shown. Suppose you get a riser of  $7\frac{5}{7}$ " that must be "full sized." Lay off eight inches up to  $w$ , and then subtract  $2\frac{7}{7}$ ",  $wu$ , by proportionate graphical division of the last inch  $vw$ , as shown. The decimal scale of 60 parts to the inch is shown as a spacer. But any convenient scale would do as well.

Now for a few interesting manipulative exercises—the calisthenics of the drafting-scale—manual geometry. If Euclid had not foolishly limited himself to an ungraduated straightedge, he could have done things undreamed of in his geometry. We're on our way. The ten numbered Diagrams of the "Non-Euclidean" geometry arrayed in Figure 107 are "exercises" that will, at least, imbue the performer with a most wholesome and final respect for that exceedingly versatile instrument—the modern drafting-scale:—

**EXERCISE 1:** Let  $AB$  be any straight line. Place a double-edged scale across it so that any two opposite graduation marks coincide with the line at  $C$  and  $D$ . Then  $ADE$  is a right angle. Mark  $E$ . Shift the scale farther along the line and mark  $E$  again. Then the line  $FG$ , drawn through the marked points, will be parallel with  $AB$ .

**EXERCISE 2:** Put your scale down anywhere. Mark any three points,  $A$ ,  $B$  and  $C$ , so that  $BC$  equals  $AB$ . Shift the scale in any other direction and make  $BD$  equal  $AB$ . Then the lines  $AE$  and  $CF$ , drawn through  $D$ , will be perpendicular to each other. Again: let  $AE$  be any given line and  $D$  any point on it. Bring the scale's edge to  $D$ , making any angle with  $AE$ . Mark  $B$ , any unit distance from  $D$ . Shift the scale so that the intercept  $AB$  reads the same unit distance. Mark  $C$ , same distance from  $B$ . Then  $CF$ , drawn through the given point, will be perpendicular to the given line. Again: Let  $AE$  still be the given line, but  $C$  the given point not on it. Revolve any scale about  $C$  until the intercept  $AC$  registers any two units. Mark  $B$ , midway of  $AC$ . Shift the scale so that the intercept  $BD$  reads one unit. Then  $D$  is the point where a perpendicular "dropped" from  $C$  would meet the given line.

**EXERCISE 3:** Let  $AB$  and  $C$  be any two parallel lines any unit distance apart. Lay a scale across them so that  $DA$  reads two units. Then  $DA$  makes an angle of thirty degrees with  $AB$ .

**EXERCISE 4:** Let  $ABC$  be a right angle. Mark  $A$  one measure from  $B$ . Revolve the scale about  $A$  until the intercept  $AC$  becomes two measures. Then  $CA$  makes an angle of sixty degrees with  $AB$ .

**EXERCISE 5:** Let  $ABC$  be any given angle. Mark  $D$ , one measure from  $B$ . Mark  $E$ , one measure from  $D$ , and in a direction paralleling  $BA$ . Then  $EB$  bisects  $ABC$ .

**EXERCISE 6:** Let  $ABC$  be any acute angle. Mark  $D$ , one measure from  $B$ . From  $D$ , draw  $F$  parallel with  $BA$ , and draw  $E$  perpendicular to  $BA$ . Lay the scale across these two lines in such a manner that the distance between them reads two measures and, at the same time, so that the scale's edge lines with  $B$ . Then the angle  $ABG$  is one third of  $ABC$ .

**EXERCISE 7:** (Same as Exercise 6, but especially

suitable for trisecting angles of less than 45 degrees.) Let  $ABC$  be the angle. Mark  $D$ , one measure from  $B$ . From  $D$ , draw  $F$  parallel with  $BA$ , and draw  $E$  perpendicular to  $BA$ . Revolve the scale about  $B$ , so shifting it as to maintain its zero mark two measures from the line  $E$ , until the zero mark almost, but not quite, registers with the line  $F$ . In this manner, mark the two points  $T$  and  $S$ , both very close to the line  $F$ , and on opposite sides of same, as indicated. A line between these close-together points will now definitely locate  $G$  on the line  $F$ . Then the angle  $ABG$  is one third the angle  $ABC$ , as in Exercise 6. In the former exercise, the trisecting point  $G$  was definitely located directly, whereas, in this exercise it has been so located by taking advantage of the fact that the highest degree of precision attainable in drafting could not differentiate the infinitesimal straight line,  $TS$ , from the conchoidal arc of which it is the chord. The next exercise will make this fact apparent.

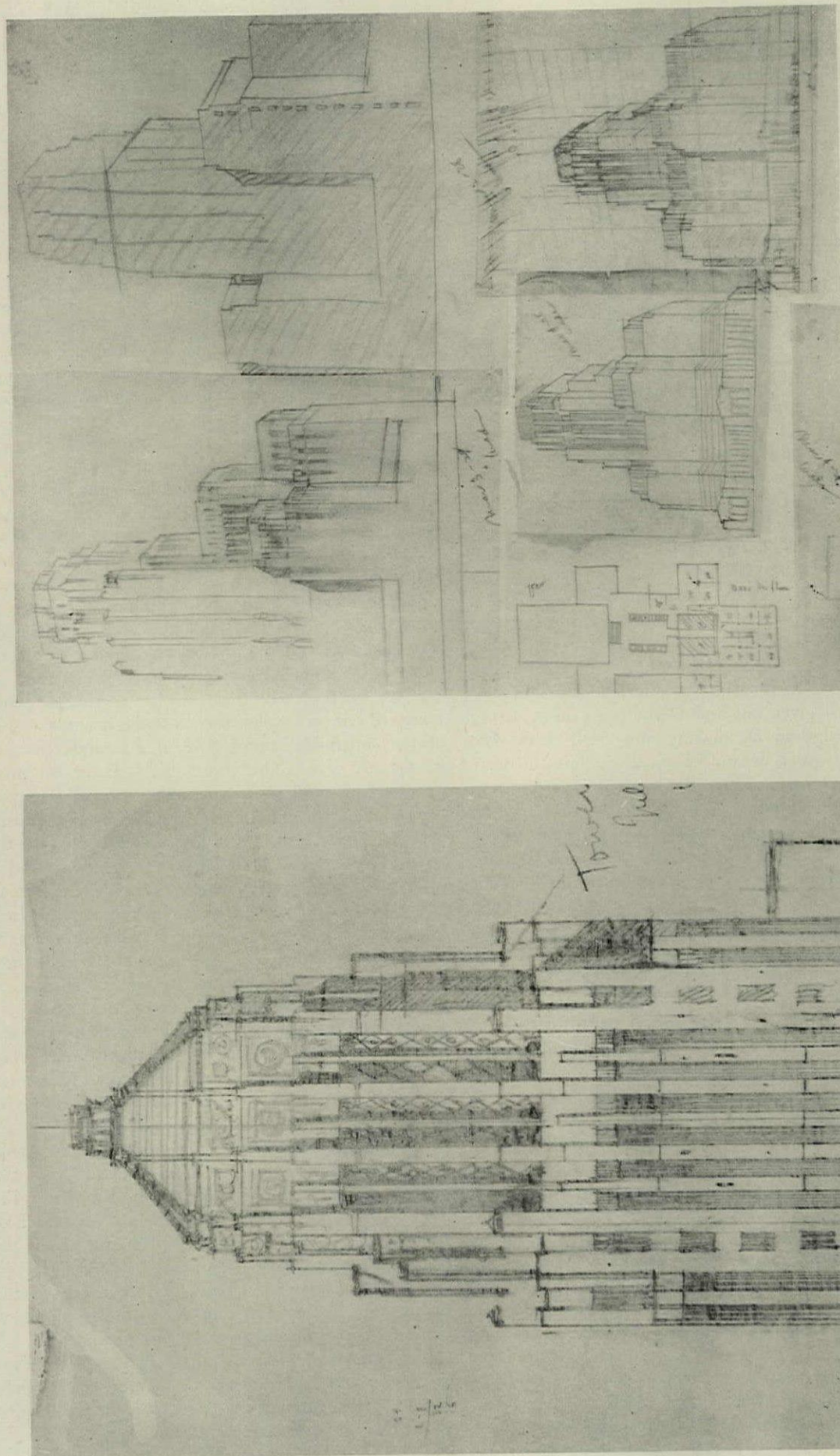
**EXERCISE 8:** Let  $H$  and  $V$  be any two straight lines crossing at right angles, and let  $B$  be any point on one of them, say on  $H$ , as shown. Let the scale be revolved about  $B$  in such a manner as to always maintain any one mark of the scale, say the mark at  $L$ , in registration with the other line  $V$ . Then any other mark on the scale will plot a conchoidal curve. The points  $P$  and  $K$ , for example, generate the conchoids  $QR$  and  $AM$ , respectively. Now then, you can see very clearly that, insofar as the purpose of Exercise 7 is concerned, the exceedingly short arc,  $TS$ , of the conchoidal curve  $AM$ , is a straight line, that is, the arc  $TS$  is the chord  $TS$ . Later on in this geometry, I shall show you more uses of this curve.

**EXERCISE 9:** Let  $AB$  and  $CB$  be the semi-axes of a required ellipse. On the scale shown, let these two distances be  $DE$  and  $DF$ . By so moving the scale about as to always maintain  $F$  on the  $A$ -axis and  $E$  on the  $C$ -axis, point  $D$  will plot the ellipse. In the Diagram, one semi-axis is taken as twice the other, but the method holds regardless of the relative measurements. If more convenient, a paper strip, or the T-square, or any other straightedge, marked off as shown, can be used as a trammel instead of the scale.

**EXERCISE 10:** Let the point  $A$  be the crown point of a required circular arc, the known radius being so great as to throw the arc center off the board. Make  $AB$ , in a direction perpendicular to the axis, equal to the radius. Through  $B$  draw the extended line  $C$  at an angle of 45 degrees to  $AB$ . Repeat the layout on the opposite side of the axis, as shown. Then the diagonal lines  $C$  and  $D$  are trammel axes. Lay a scale, or a paper strip, or the T-square, across these diagonals in such various positions that the intercepted distance,  $EG$ , is always twice  $AB$ , that is, twice the radius. Then the mid-point  $F$ , on the trammel, will plot the course of the required circular arc  $HJ$ . To plot a quarter circle by this method, the trammel axes  $C$  and  $D$  would have to meet. But, since their intersection is the center of the circle, it is plainly seen that if the board were extensive enough to contain said axes, it would also contain the arc center. Hence, this method is of limited application.



PENCIL POINTS FOR JULY, 1930



ONE OF MANY STUDIES FOR THE TOWER AND SOME PRELIMINARY MASS STUDIES TO DETERMINE GENERAL SHAPE OF STRUCTURE—SEE TEXT OPPOSITE  
 BUFFALO CITY HALL—DIETEL AND WADE AND SULLIVAN W. JONES, ARCHITECTS



# SOME RADIO PUBLICITY

AN ADDRESS ON ARCHITECTURE, DELIVERED OVER  
STATION WKBW, BUFFALO, NEW YORK, LAST JANUARY

By John J. Wade

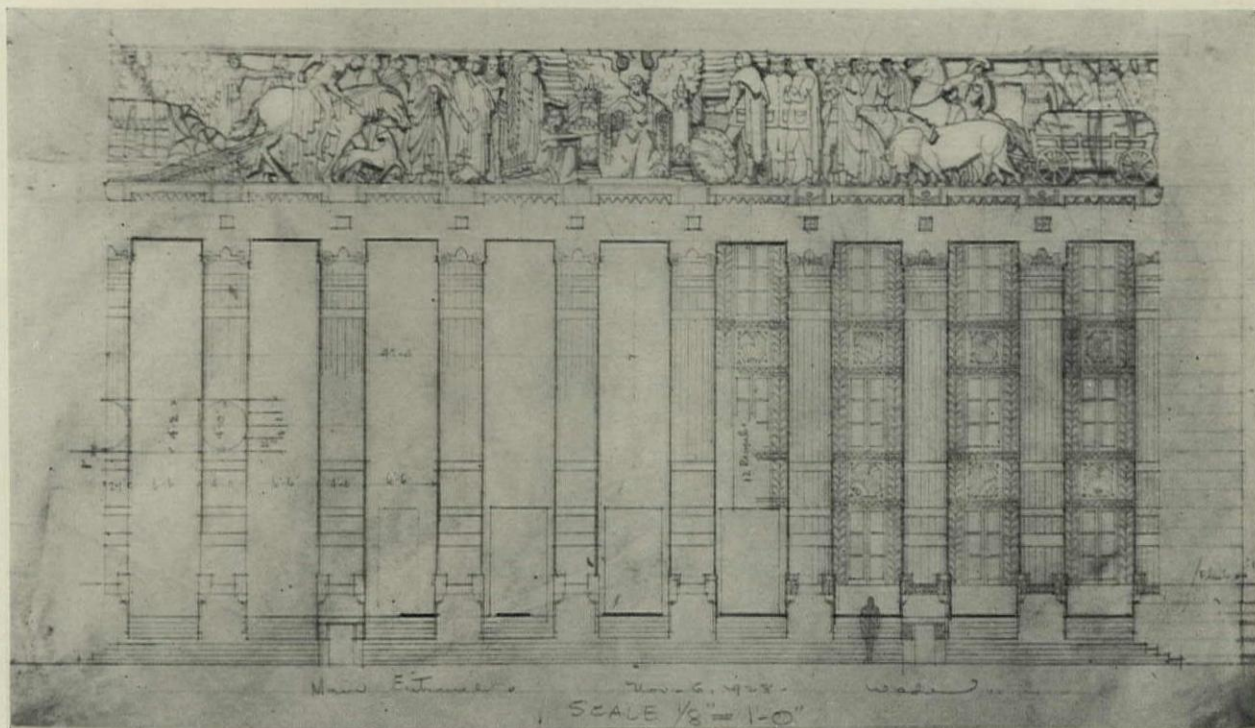
EDITOR'S NOTE:—The illustrations used with this article were published in the Buffalo Courier-Express on the morning preceding the radio talk so that listeners could follow the references. Talks such as this can help materially in developing public appreciation and understanding of architecture.

ALWAYS, THE HISTORY of mankind has been written in terms of architecture. To the discerning eye, each fragment of tablet, each bit of carved stone or metal, adds its bit of knowledge about the races which have gone before. In precisely the same manner, we are writing today in terms of architecture the story of our time for future races of mankind to read, and reading these, to understand us as we are. But architecture is something more than a mere external harmony of form and color and something more than a mere historical record of this or any other time. There has been a very definite reason for every building that has ever been erected.

This reason is related directly to the lives of the people who built it or caused it to be built. That is why it forms so excellent a record of their lives and their work. It has been very well said that the chief difference between civilization and savagery is that civilization brings with it a great increase in the number and the complexity of a people's needs. All of the beautiful buildings of the past have been created to serve necessary purposes; that is, to meet the needs

of the people of that time. Each such building has merit, measured inevitably by the question of how well it serves those purposes for which it was built—in a word, by how well it works and fulfills its functions. No amount of ornamentation—no excellence in the quality of its materials—no fine artistry in putting together its parts can reclaim a building that does not at once declare its purpose and perform the functions for which it was brought into existence.

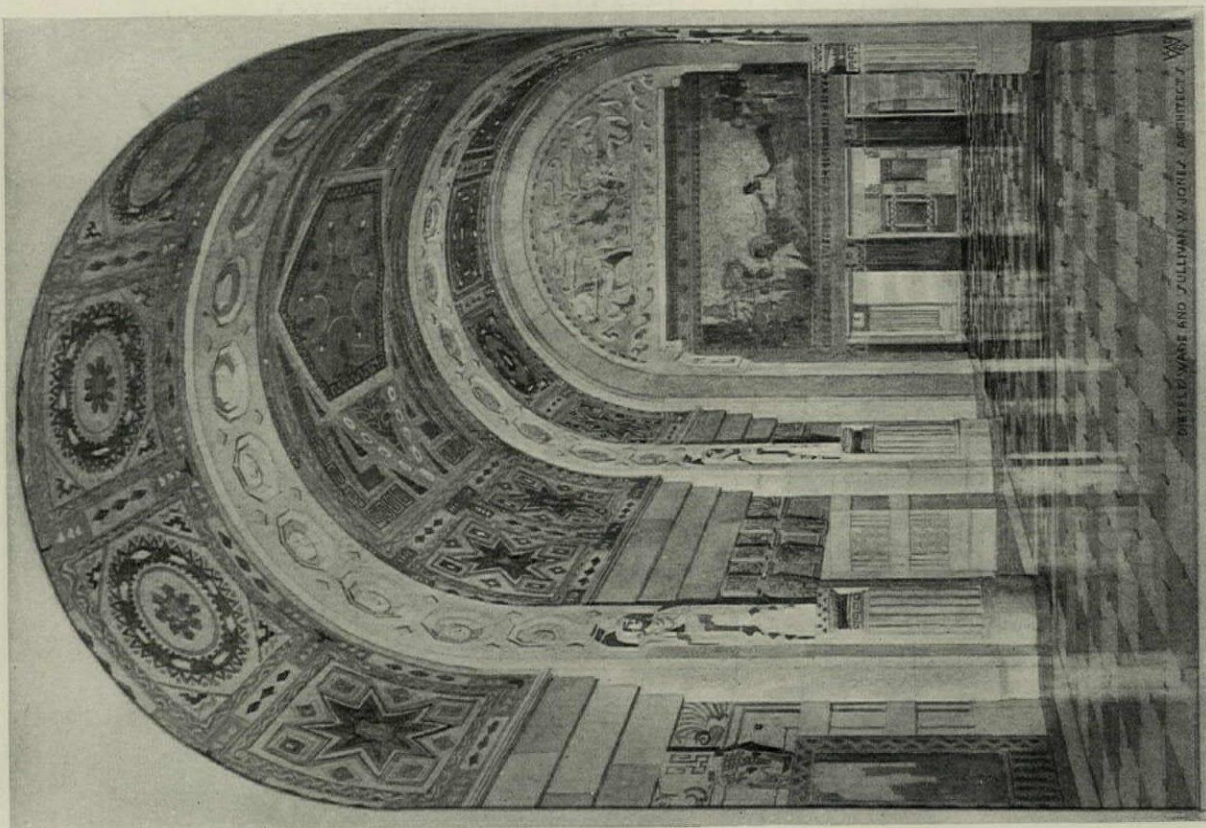
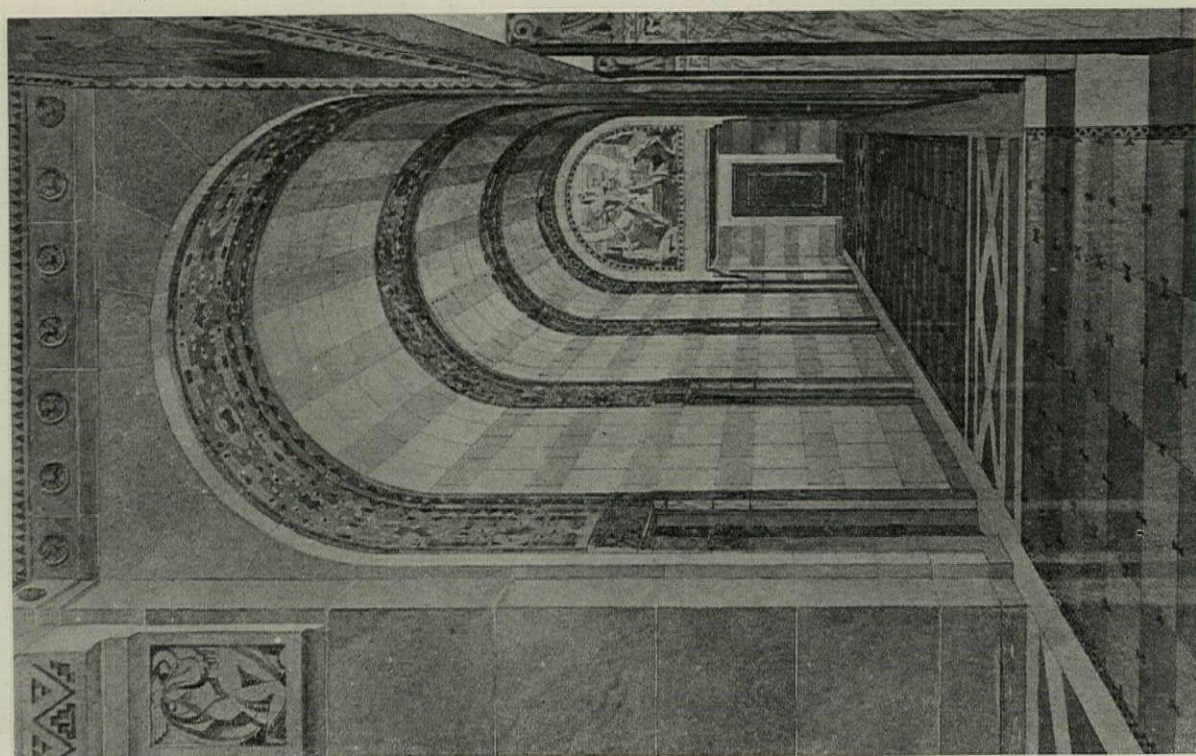
From time to time we hear of people agitating for what they are pleased to call a distinctive American national style of architecture. This impulse to express nationalism in architecture is a natural one. It does credit to the patriotism, at least, of the people who promote it. But those who point to the architecture of Egypt, of Athens, of Byzantium or of Gothic France, and plead for a style of architecture that will be equally distinctive of America, lose sight of something. They lose sight entirely of the great difference in size between the tiny states of the Mediterranean coast and the vast domain which we call the United States of America.



MAIN ENTRANCE LOGGIA, BUFFALO CITY HALL—DIETEL AND WADE AND SULLIVAN W. JONES, ARCHITECTS

THE SCULPTURE SHOWN ON THIS STUDY IS NOT THE FINAL DESIGN





ONE OF THE FOUR GROUND FLOOR CORRIDORS AND THE ROTUNDA OF THE GROUND FLOOR  
BUFFALO CITY HALL, BUFFALO, NEW YORK—DIETEL AND WADE AND SULLIVAN W. JONES, ARCHITECTS



Architecture which would truly represent the wind-swept coasts of rock-bound New England would be absurd in the fragrant gardens and the sunlit beaches of Florida. The giant redwoods so characteristic of California would be gigantic folly in architecture for the treeless plains of Kansas. In the little kingdoms of the classic past, the peoples were homogeneous. They occupied small areas dominated for the most part by single great cities. But in the immense continent of America, we have all sorts of people, all varieties of climatic conditions and all kinds of occupations, and no one city can claim to be the center of the national life of our people as did Athens or Byzantium or Rome or Paris or Babylon.

Consider the fisheries of New England—the manufacturing of the Midlands—the lumbering of the Northwest and the dreamy cotton-raising of the South. These cannot all be knit together into a common unit without producing a mere polyglot jumble. And architecture is expressive of nothing without harmony and unity. No American building is erected to serve all of America at one time; each is built to meet the needs of a particular locality.

We can, however, and we should, have in each of these various localities such as Buffalo and its immediate tributary area, architecture which is expressive of the life of that locality. Keeping in mind this brief survey of the nature of architecture then, let us look at our newest contribution to Buffalo's architectural history. Let us examine the plans for the new City Hall now under construction on the West side of Niagara Square.

First let us remember that it is to be a machine. It is designed for the efficient conduct of the city's business. The arrangement and inter-relationship of its parts must conform to the working needs of the business of managing the affairs of Buffalo, N. Y., a city of nearly 600,000 inhabitants, located in a certain place on the banks of the Niagara River. The translation of its interior into rooms and co-ordinated groups of rooms must be adjusted to the organization chart of the city government; the flow lines of traffic must be clearly traceable.

The greatest possible measure of flexibility has been given to this frame of function, because there will be future changes. If this building is to endure and continue to serve the public purposes most effectually, it must possess adaptability to new conditions that are likely to arise as time goes on. That is to say, you cannot put stairways, for instance, where they might be ideal today, if such location of the stairways will interfere with probable future changes.

We can, however, and we have, for example, made all of the interior partitions on the departmental floors, easily and economically movable. If it develops, let us say, that in the department of Public Works, the partitioned sections allotted to the Water Bureau are too small, they can be enlarged. If the section allotted to the Building Bureau is too large, the space can be reduced. This adjustment can easily be made by shifting the partitions to secure the desired rearrangement. It is difficult for these various departments to know

how their internal arrangements will work out until they have been tried. Under this plan of ours they will be able to try out the first or tentative arrangements of partitions and if changes are then desired, they can be made until precisely the most satisfactory scheme is achieved. These changes will be practically without cost to the city and they will not mar the beauty of the interior.

If I seem to dwell over-long on this matter of efficiency in the operation of the building—rather than on the efforts to achieve beauty—it is only that I may impress on you the importance of fulfilling the purpose for which it is being built. We as a city are not spending six and one-half millions of dollars just to make a certain locality more beautiful. We are spending the money because this new building is needed for certain very definite purposes. If at the same time we can make it beautiful, so much the better.

You would not, for example, be willing to trade a good, smoothly-running automobile for one which is more beautiful to look at but which will not run. However, we are not forced to choose between ugliness and efficiency as against beauty without efficiency. We can combine them. As a matter of fact, the building or other machine which functions best is likely also to be the best-looking. This is true of every machine. The instrument which works well has a beauty of its own. For example in the human body the arm or the leg which best answers the uses of an arm or leg is better-looking than a limb which is not able to function for the useful purpose for which it is intended.

So, then, it becomes the duty of the architect to plan a building which will work best. When this has been taken care of, he may then organize the various parts in such manner that grace and dignity of functioning may go hand-in-hand with grace and dignity of appearance. We do not build beauty onto the structure purely to achieve beauty. We try to build beautifully and in keeping with its character, what must be built in any case to answer the purposes for which the building is authorized in the first place.

In accomplishing this aim, endless trial is made of combinations which will never be used. This is done to find out precisely the form which will be most nearly perfect for the purpose. Before the arrangement of the masses of the main structure was decided on—as it appears in the pictures of the building as it will look when completed—more than 500 sketches were made, only to be thrown away. If this fact is kept in mind it may be easier to follow what I am about to say.

In every one of these preliminary sketches showing the relationship of the masses to one another, it was necessary to make provision for all of the interior parts. Elevators and corridors, toilets, stairs and so on must be diagrammed in relation to the working areas. Plans of this nature are designed for each mass elevation in order to decide the best means of achieving efficiency plus beauty.

Having decided on the desired mass, the plans were more fully developed. A careful check was made to make certain that provision had been made for every



necessary function of the building—in a word, to make sure it would be workable and efficient. At this stage we had a fair idea of the conception and proceeded to crystallize it in the form of a model in plaster. From this model we were able to work in three dimensions, revising it endlessly by the weeding out of ungraceful and awkward corners and the like. This went on until there was practically nothing left of the first model. Then a second working model was made and subjected to the same treatment—and finally a third model which proved satisfactory.

This third model is very similar to the illustration showing the exterior of the building flooded with light at night. While reference is being made to this picture, I might mention that the illumination of the entire building, as shown in it, has a very definite purpose. That purpose is to drive home to people—particularly to visitors in Buffalo—the fact that in this city electricity is both cheap and plentiful. In this way it advertises one of Buffalo's greatest industrial, commercial and social advantages.

If you will look at the illustration showing one of the studies of the tower, and at the study of the entrance colonnade, you will see something of what took place, after preparing the plans and models, in arriving at a satisfactory façade. So far we have been discussing the structure as a whole. In a general way I might say that the same process was and is being followed, multiplied many hundreds of times, in the countless details. Every possible point of variation was gone over scores of times or even hundreds of times, to the point of exhaustion, seeking the highest approach to perfection in the finished work. Take, for example, the reproductions of the clay sketch or study models of proposed column capitals and a spandrel design. Note that the left-hand corner and the right-hand corner of the capital are different. These were the two best and were developed on the same cap to aid us in making the final decision as to which one to use. Incidentally, you will notice also that the word "Vintage" is in two type-styles for a similar decision. In a building of this character, where all of the ornamentation has been created on original lines, a special type-style must be designed for the lettering. This type-style must conform to the spirit of the ornamentation that prevails throughout the building.

If you think that this seemingly simple matter of lettering does not cut into an architect's sleep, just try sometime to design a complete alphabet in agreement with the feeling of something new.

And so it goes on and on, the endless chain of detailing. The architect must not only know where each stone or pipe or window is to go, but he must set it down on paper so that the mechanics who come after him will know precisely what they are to do without the possibility of error.

Let us look for instance at the simple matter of a door. Any one of the 2,165 doors in the new city hall will do. Each door, down to the last detail, must have its own identification. Each is accurately listed, given a number, told on what floor it will go, whether it will be of wood, steel or bronze, whether it will be

glazed or solid, whether it will have a transom, kick plates, pull bars, push plates, transom adjusters or checks, how wide it will be, how high and how thick, whether its threshold will be marble, slate or bronze, how many hinges it will have, of what size and of what material, the type of lock and knobs and their design. When all of these things are done, it does not mean that the architect is through with that door. He must still supervise the work and see to it that the door is made and hung in a skillful and workmanlike manner—exactly in keeping with the instructions which he has put down on paper.

Nothing whatever is left to chance or to the whim of the contractor, the mechanic, or the manufacturer of materials. From the time when the city decides to erect a building until the keys are finally turned over for the finished job, the architect is in the closest possible touch with every phase of the planning and the work—guiding, advising, making decisions and sometimes spurring on any contractor who may be slow in handling his share of the work.

On the other hand, delays in erecting a building are often the fault of the architect himself. He must be ready with his detailed plans covering each part of the job before the sub-contractor can do anything. This is called servicing the contractor and the utmost care is taken to have this service perfect.

Now there are two ways for an architect to proceed with these detailed plans which the workmen must use daily and hourly, because they show exactly where every stone, pipe or window is to go. One way that is followed by some architects with success is to complete the detailing of the entire exterior of the building and then to start detailing the interior. Our method is different in this particular—we move forward with the detailing of the exterior and the interior at the same time. By following this method we find it comparatively easy to keep well in advance of the needs of all of the various trades. At the present time, although the contractors are still working on the foundations, detailed drawings are ready up to the fifteenth floor on the outside and up to the third floor on the inside of the building. This is some months ahead of the prospective needs of these plans in both cases. We expect to keep this lead up to the end of the job.

Delays of the architect in providing these detailed drawings are a frequent cause, not only of delays in completing a building, but also of discrepancies involving extras. If, for example, the plumbing pipes come into conflict with a steel beam at any particular point, the detailed plans will show it. They will also show exactly how the pipe is to be detoured around the steel beam. The sub-contractors and the mechanics can proceed only when the plans are put into their hands by the architect. They are usually anxious to get their share of the work finished. With complete and careful servicing by the architects—a service which keeps the detailed plans constantly a good margin ahead of the need of them—I see no excuse whatever for any delays in completing the job.

Has any of you listeners ever dreamed of doing a





A NIGHT RENDERING OF THE BUFFALO CITY HALL

hard day's work in your sleep? Such a day's work as shingling a house for example. If you have, you will no doubt remember that you were as tired in the morning after dreaming of doing a hard day's work as if you had actually executed the work with your hands, instead of merely doing it with your mind in a dream. If you have had this experience, you will realize the full meaning of what I am driving at when I say that the architect erects a building completely in his mind and on paper before any one of the mechanics can do his part. It is not saying too much when I say that it is as much labor to design a hinge and show the carpenter where to put it in a drawing, as it is to

put in the screws which fix the hinge in its place. On some one of the hundreds of blue-prints will be found the number and location and shape and size and material of every stone, steel beam, electric conduit and sewer pipe as well as all minor pieces of materials that go into a building. Moreover the architect must see to it that each piece of material is of exactly the prescribed quality and is put in place by workmen of sufficient skill to do it properly.

Let us not discount the importance of the contractor's part and the parts assigned to each of the hundreds of workmen. Full reliance is placed on their thoroughness, honesty, and skill unless there



should be reason to believe otherwise. Just as in the case of an army in the field the general plans the campaign and supervises the movement of the troops—in the same way, an architect plans a modern building with his associates and his staff and then directs the operations toward each objective. The contractors and the workmen carry out these carefully planned directions.

It is not enough for the commanding general merely to map out a plan of campaign and then go away and forget all about it. In the same way the architect finds that it is not enough merely to plan his building. He must keep in constant touch with its progress. He must see to it that action follows his planning and conforms to it exactly as he intended that it should.

If you were to visit Niagara Square right now, you would see a huge hole in the ground. Below the surface of this gash in the crust of the earth are 180 great caissons of solid concrete. These caissons average about five feet in diameter and each extends downward from 25 to 30 feet to bed-rock. Upon these 180 caissons the weight of the building, 184,000,000 pounds, will rest. These are quite as much the concern of the architects as the façade, the tower, or the shape of the building itself.

While this foundation is being prepared, stone is being shaped and cut in the quarries at Kasota, Minnesota; Amherst, Ohio; and Briar Hill, Ohio. At Lackawanna are being fabricated the steel beams which will soon rise in a network above the foundations.

Did it ever occur to you radio listeners that when the steel beam is riveted perfectly into its steel column, and when each stone, quarried and milled hundreds of miles away fits exactly into the place prepared for it, that this is not an accident? All of this work is done on paper long before it is done with the actual building materials. Each of the shops where material is being made ready is working on exact shop-drawings, with a record and number of every piece of material and where it is to go. These shop-drawings are prepared in exact agreement with the drawings in the office of the architects where they originated and thoroughly checked by them. Moreover, by frequent inspection trips to quarries, foundries, and mills, the architects constantly check the quality and the production as well as the progress made in getting the materials ready. No errors or delays can be permitted. As the building advances, progress is shown on a chart in the architect's office covering the work of all of the various contractors and trades and the dates when each of the phases of the work should be started and when completed.

Ornament that is to be carved in stone is first drawn up in the architect's office to the actual size in which it is to be carved. Models in clay are then made from these drawings, giving the architect an opportunity to examine and correct them in three dimensions. After this is done they are carved in stone at the quarry and finally put in place. Other materials such as cement, paint, and all compound materials are put to chemical tests to make sure that they are equal in every way to

the requirements demanded in the architect's specifications. After this has all been done, permission is given the contractor to use those materials which have been proved by test satisfactory.

When the thirsty department clerk on the top floor of the new city hall, five or twenty-five years from now, draws a glass of water from the faucet it will be there for him because the architects' staff has planned in perfect detail, the size, the materials and the route of the pipe to the point where it becomes available. The route of this pipe is carefully detailed—where it must detour to pass around structural beams and so on—to say nothing of the accurate planning of the hydraulic force needed to permit its flow.

A word now about the style of architecture. Having organized the functions within the building into an effective working relationship to one another, we now proceed to enclose them within such outer garb as will at once harmonize with their necessary functions, unify the various elements into a harmonious whole and give expression in terms of architecture to those characteristics of Buffalo as have distinguished it among the cities of America and of the world.

The design is in the modern spirit. We have not gone back to the Greeks, to the Egyptians or to the Italians of the Renaissance for our inspiration. Our building being of the present time its dress must be in keeping with the age. A native Buffalonian, decked in the flowing robes of Athens, the feathers of a red Indian or the wide-sleeved kimono of a Japanese Samurai would not be more ludicrous on the streets of Buffalo today, than would be a modern building, erected for modern purposes, clothed in the garments of a Greek temple or an Egyptian tomb.

We may and do admire the grace of line and the sheer beauty of the architecture of the past, and the splendid spirit in which it sings to us of the glories of the past. But we must remember that the needs of a public building in Buffalo in 1930, A.D., are not the same as the needs of the city of Athens in the time of Pericles. We must build and clothe our building to meet the present-day conditions. We must seek to build beautifully in the same spirit that actuated the Greek and the Roman, the French and the English architects at the time of their greatest glory—even though what we are building will not be the same and it will not look the same. We cannot accomplish our purpose by feebly imitating the exact formulas by which they met their problems; problems which were quite different. We must meet our own problems in our own way.

Let us consider, for example, the site and setting for the new city hall as compared with the government buildings of Europe. In Europe public buildings are set back from the highways. They express, in their long approaches, something of the awe and reverence which kings have always tried to inspire in their subjects. The ordinary citizen in Europe has for centuries been taught to approach the government in fear and trembling. Government is not his servant but his master.

With us in America it is different. We look upon





SKETCH MODEL FOR CAP OF MAIN COLONNADE

our city and other governmental divisions simply as means of transacting our joint or public business. When we have dealings with our city government we do not wish to feel that it is a power aloof from us and hard for us to approach. We like to feel that it is efficient and businesslike. We want to get there, get our business done and get away again. We want our servants not aloof, but handy. So, a city hall which is practically on the sidewalk, easy of access and free from all unnecessary red tape, suits our purpose best. Another way in which we Americans express the same idea is in the fact that every new administration promises to us, above all things, to give us a business administration. That is in harmony with the American spirit and tradition. It is what the people want above every other consideration. A city hall easy to get at and easy to do business in expresses the idea architecturally.

There is no wind-swept stretch of empty esplanade to face, no weary flights of seemingly endless steps to climb, no frowning statues of dead kings to salute, nor any other symbol of the citizen's subjection and surrender. No! Such things are out of tune with modern life in Buffalo and America. They belong to the dead past with Roman emperors and Egyptian kings. In this building we are recording the spirit of Buffalo in the America of today. Our city hall will be on the sidewalk in the heart of the city's commercial and industrial life, where public servants may respond quickly and efficiently to the will of the citizen.

Within and without, in its masses, its ornamentation, its graceful contours and its avenues of flowing traffic, the new city hall will be expressive of the masculinity, the measured, overwhelming sureness and strength of modern industry, the punch of Buffalo, if you please, with its industry, its commerce, and its electric power resources.

With all of this designing, this ornamentation, this expression of architectural symbolism and the operation of a great structure, the architects have not permitted themselves to forget that all these things cost money. The architect must know market values of materials so that in his planning he may come within the amount of money appropriated for the purpose. It is interesting to note that the final contract prices for the new city hall total about \$11,000 less than the city has authorized. It is the architect's business to see to it that proper economy is exercised when he is preparing his plans and specifications. This does not always mean cheapness in price or merely low figures in first costs. It involves as well, due consideration for the expense of up-keep, replacements and operation. It is often wisest to specify materials which cost more in the first place but which show a saving in durability, in operation or in subsequent replacements. In our choice of materials we have sought to express in colorful harmony the power and purpose, the life and character of a great and growing community whose interests are centered in this building; but in all of these things we have never lost sight of the fact that for every dollar spent, the people desire a dollar's worth of building.

When the new city hall is turned over to the city, which should in time for the proposed Buffalo centennial of 1932, I am persuaded that Buffalo may well take pride in it and that it will encourage private owners to emulate it in character, in dignity and in durability.



MODEL STUDY FOR ONE OF THE SPANDRELS

SHOWING THE PRODUCTS OF THE SOIL AROUND BUFFALO



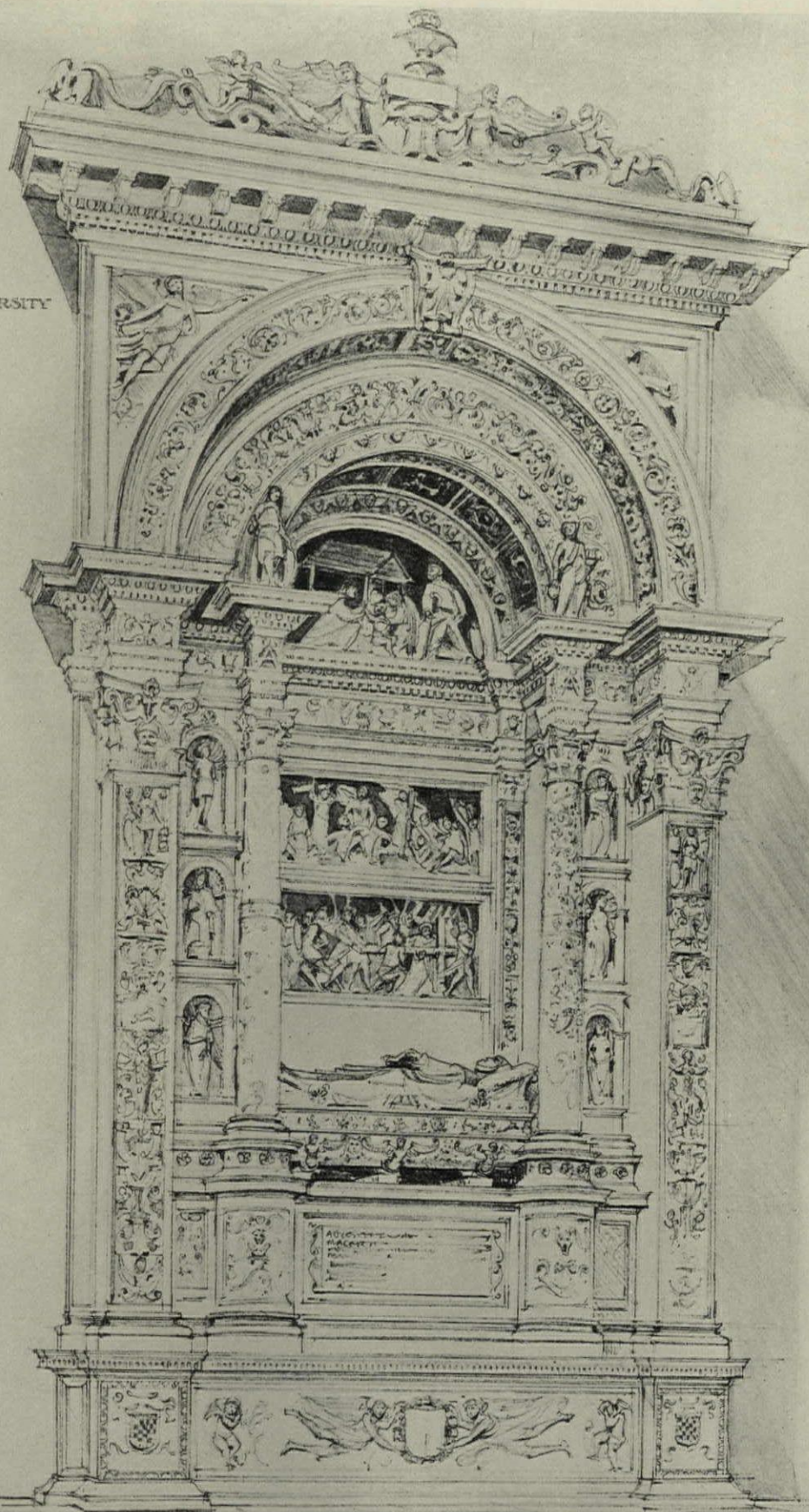
I have said little about the beauty of the structure, because I believe that beauty is in the eye of the beholder. I hope that you, who comprise the great audience combined in The Buffalo Courier-Express and Station WKBW will feel in looking upon it in its completion at least something of the thrill of pride which we architects have felt as we have seen it grow on paper under our hands. We hope you will feel

with us that we who live in Buffalo are, truly speaking, citizens of a great and powerful metropolis; that you will feel we have done well in placing upon the topmost tower of this structure dedicated to your service, a jewelled crown—a diadem of emeralds, rubies, sapphires—symbolic of the power the majesty and the beauty which have brought to Buffalo her title of Queen City of the Lakes.





SEVILLE  
TOMB IN UNIVERSITY  
CHAPEL



RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN

A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PENCIL POINTS



PENCIL POINTS FOR JULY, 1930

VOLUME XI

NUMBER 7

*"This plate represents the tomb of Don Pedro's wife, Dona Catalina. It was sculptured in Genoa by Gazzini, and is perhaps the more beautiful of the two. The sculptured reliefs under the arch represent the Procession to Calvary and the Nativity, the whole background being coloured deep blue. These, and several other tombs in this Chapel, were brought from the Carthusian convent, the former burial place of the Ribera family. Owing to the obscure light of the chapel it is impossible to do full justice to the details."*

A. N. PRENTICE.





GARDEN GROUP—"BOY AND FAWN"  
GAETANO CECERE, SCULPTOR



PENCIL POINTS FOR JULY, 1930

VOLUME XI

NUMBER 7

*This garden group is an enlarged model of the sketch which won a prize last spring in the Garden Club of America Competition for sculpture in the small garden. The figure is 33" high.*





DRAWING BY LOUIS KURTZ, RESIDENCE AT GREENWICH, CONNECTICUT  
OFFICE OF W. STANWOOD PHILLIPS, ARCHITECTS



PENCIL POINTS FOR JULY, 1930

VOLUME XI

NUMBER 7

*This drawing was made in pencil on a very thin tracing paper. It was then mounted on a gray board and touched up with light water colors. The original measured about 20" x 30".*





*Courtesy Goodspeed's*

FROM AN ETCHING BY DECARIS  
"THE RENAISSANCE TOWER"



PENCIL POINTS FOR JULY, 1930

VOLUME XI

NUMBER 7

*This reproduction was made from one of Decaris' large etched plates, the size of the original being 26 $\frac{1}{4}$ " x 17 $\frac{1}{2}$ ". It shows the artist's penchant for choosing points of view which give startlingly violent perspective. The effect is strong and dramatic. An article on Decaris, by Samuel Chamberlain, appeared in PENCIL POINTS last December.*



## ROME PRIZE IN ARCHITECTURE AWARDED

THE ROME PRIZE IN ARCHITECTURE for 1930 has been awarded to Walter Louis Reichardt of the University of Pennsylvania. In the fourteen-hour preliminary competition there were seventy-nine entrants. The preliminary problem was a design for *A School of Arts and Crafts*. As a result of the preliminary competition the jury chose the following nine final competitors: Frederick T. Ahlson, Yale University; Carroll Coletti, Yale University; Everett S. Cofran, Massachusetts Institute of Technology; Charles DuBose, University of Pennsylvania; Walter Louis Reichardt, University of Pennsylvania; John Edward Miller, Catholic University of America; Robert B. Mitchell, University of Illinois; Earl Chester Morris, Columbia University; and U. Floyd Rible, University of Pennsylvania.

The subject of the program for the final competition was *A Church and Parish House*.

## THE PROBLEM

The congregation of a Protestant church, whose history is bound up with that of the old American city in which it is situated, wishes to build a Church and an adjoining Parish House in a style which shall be in harmony with the traditions of the early Republic. The worship of the church is congregational, with preaching for its main feature, and with no tendency towards ritualistic practices. The preacher should be well seen and heard by the whole congregation which will number about 450, seated in pews. The church should have an adequate vestibule or lobby. It may have a gallery if desired. Space shall be provided for a large organ, without, however, making it a main feature of the interior. The mixed choir should be inconspicuously placed.

Either behind the church, or at one side of it, shall be a Parish House containing in one or two stories the following rooms:—

1. An Auditorium seating 200; 2. A Gymnasium containing about 1500 square feet; 3. Six clubrooms for boys' and girls' clubs; 4. Six rooms for Sunday School classes of twenty each; 5. A room for choir practice; 6. A private office for the pastor, and one for his assistant workers, both accessible from the church itself as well as from the outside.

The site selected is a lot practically level, measuring 150' by 250', its narrower side facing a public green, and with streets of equal importance on the three remaining sides.

John E. Miller of Cleveland received Honorable Mention in the final competition. His drawings and those of Mr. Reichardt are shown on pages 554 through 557. The Jury of Award was composed of five New York architects: Wm. Mitchell Kendall, *Chairman*, Chester H. Aldrich, Louis Ayres, Charles A. Platt, and James K. Smith.

In describing his drawing Mr. Reichardt says that he "felt that the site offered him required a structure that would be essentially formal in plan as well as elevation. The various units called for allow one to do this easily, as the church itself may be taken as the principal unit, and the auditorium and gymnasium as smaller units balancing each other. Since these units will all be used extensively, either together or separately, it was thought well to express them clearly in elevation, since the main elevation, that facing the Green, is of paramount importance.

"The style chosen is inspired mostly by the work done in Boston and Philadelphia, for the author has felt that those two cities reflect best that which is truly American



WALTER LOUIS REICHARDT

in character. Of course, this assumption is merely a personal opinion, and the work done in the South has much to be commended.

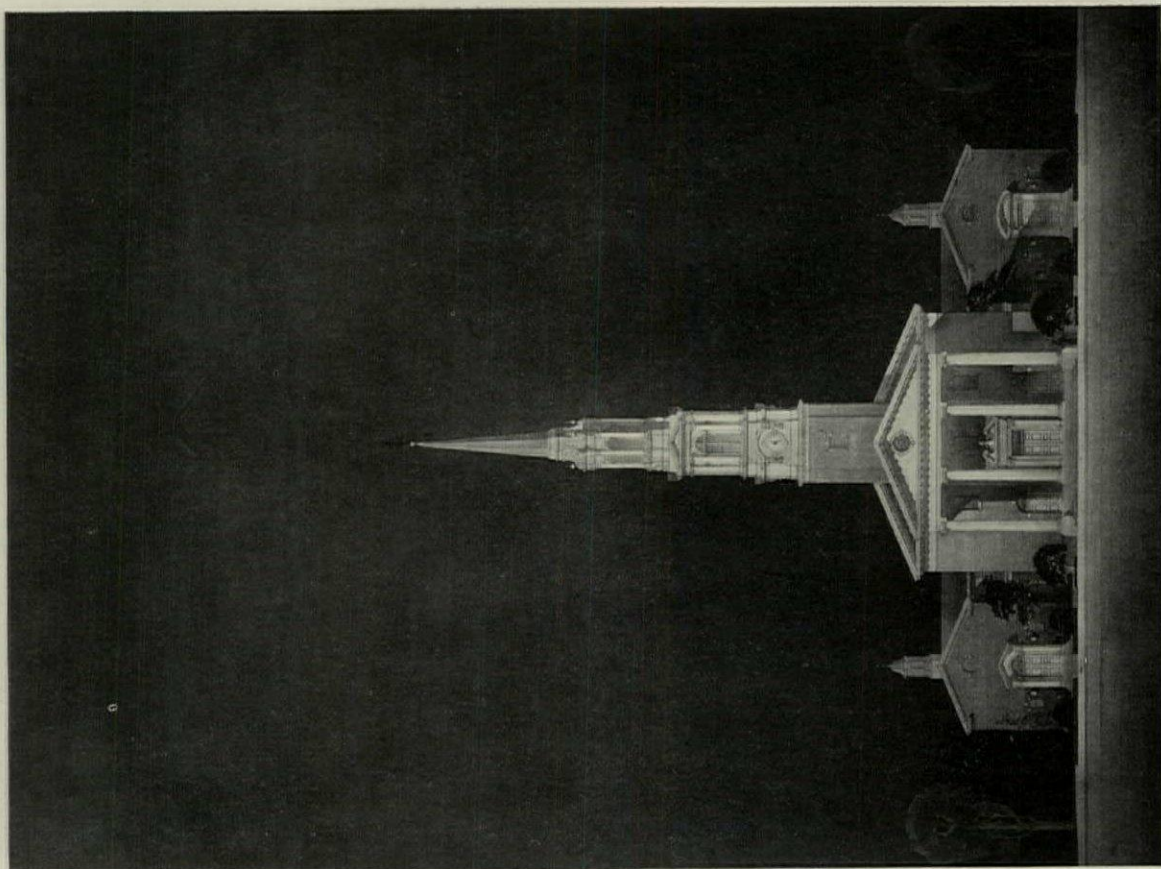
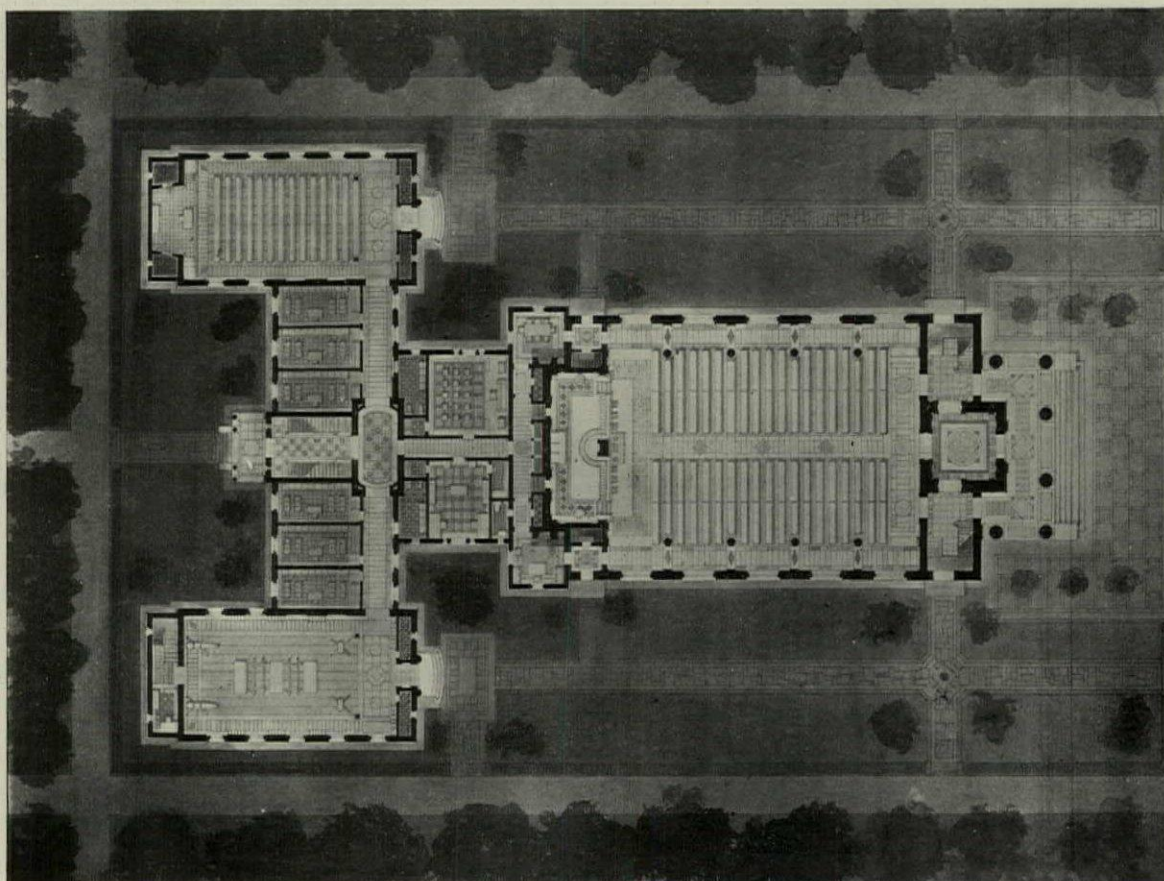
"A portico was thought to be a fitting entry, for a shelter is a utilitarian feature as well as a pleasant one. The space about the portico has been kept open, with a simple mosaic pattern and with small trees planted about the sides. The exterior has been purposely kept plain and severe, with the doorways and the steeple as the features. The steeple is of wood, and it is designed to be the dominating feature on the green, being an ever-present reminder of the services that the church offers to the community. Like so many of the early churches, the interior presents a contrast to the plainness of the exterior."

The Fellowship is provided by the Daniel H. Burnham Fund. The appointment is for a term of three years, with an annual stipend of \$1550, residence and studio at the Academy, and an additional allowance of \$500 for transportation to and from Rome.

WALTER LOUIS REICHARDT, winner of this year's Rome Prize, was born in Los Angeles, California, in 1908. He received the degree of Bachelor of Architecture last month from the University of Pennsylvania, where he completed the five-year course in four years. He had previously studied architecture at the Polytechnic High School in Los Angeles and has been employed in the offices of Reginald D. Johnson and Winton L. Risley, architects, of Los Angeles.

Mr. Reichardt plans to remain at his home in Los Angeles during the summer and will sail early in September for Berlin to visit relatives before going to the Academy October 1st.



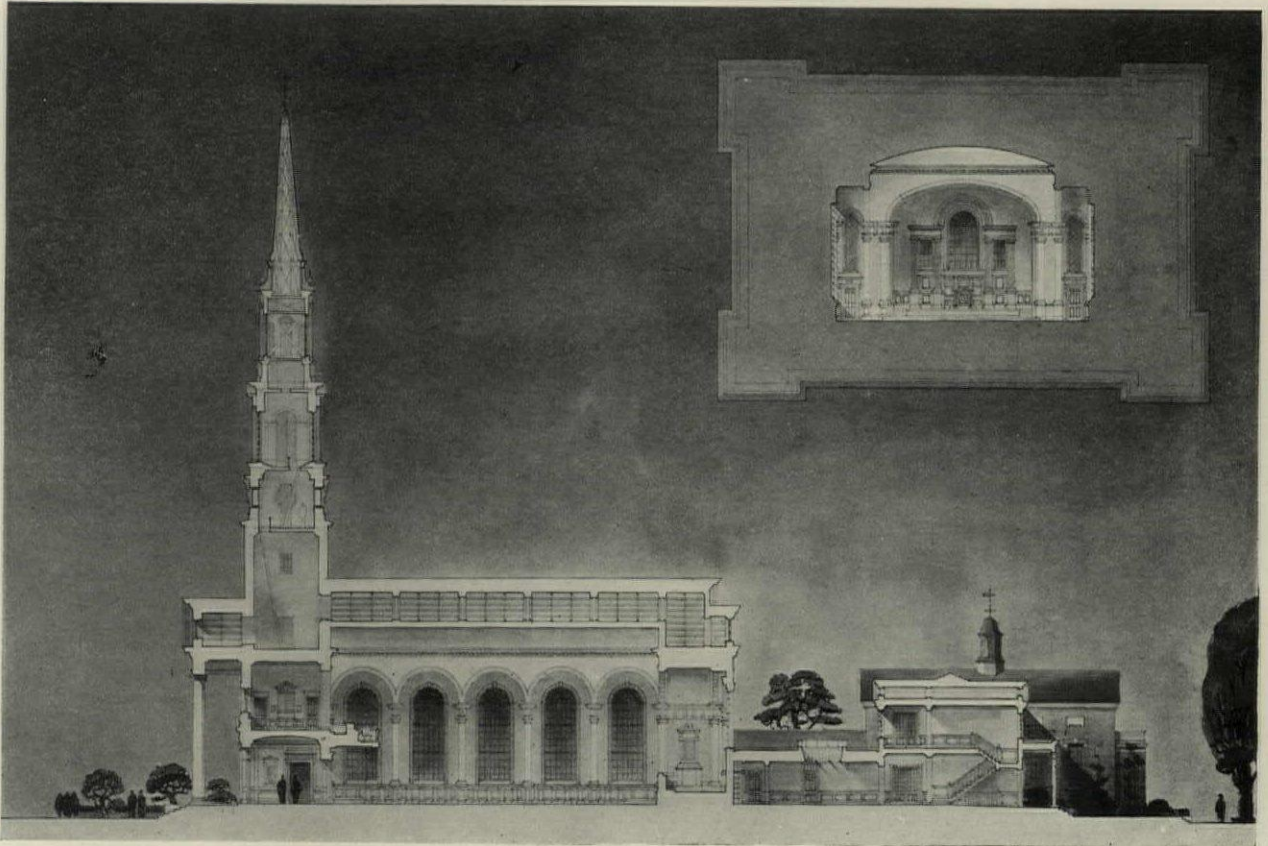


PLAN AND FRONT ELEVATION OF PRIZE WINNING DESIGN FOR "A CHURCH AND PARISH HOUSE," BY WALTER LOUIS REICHARDT

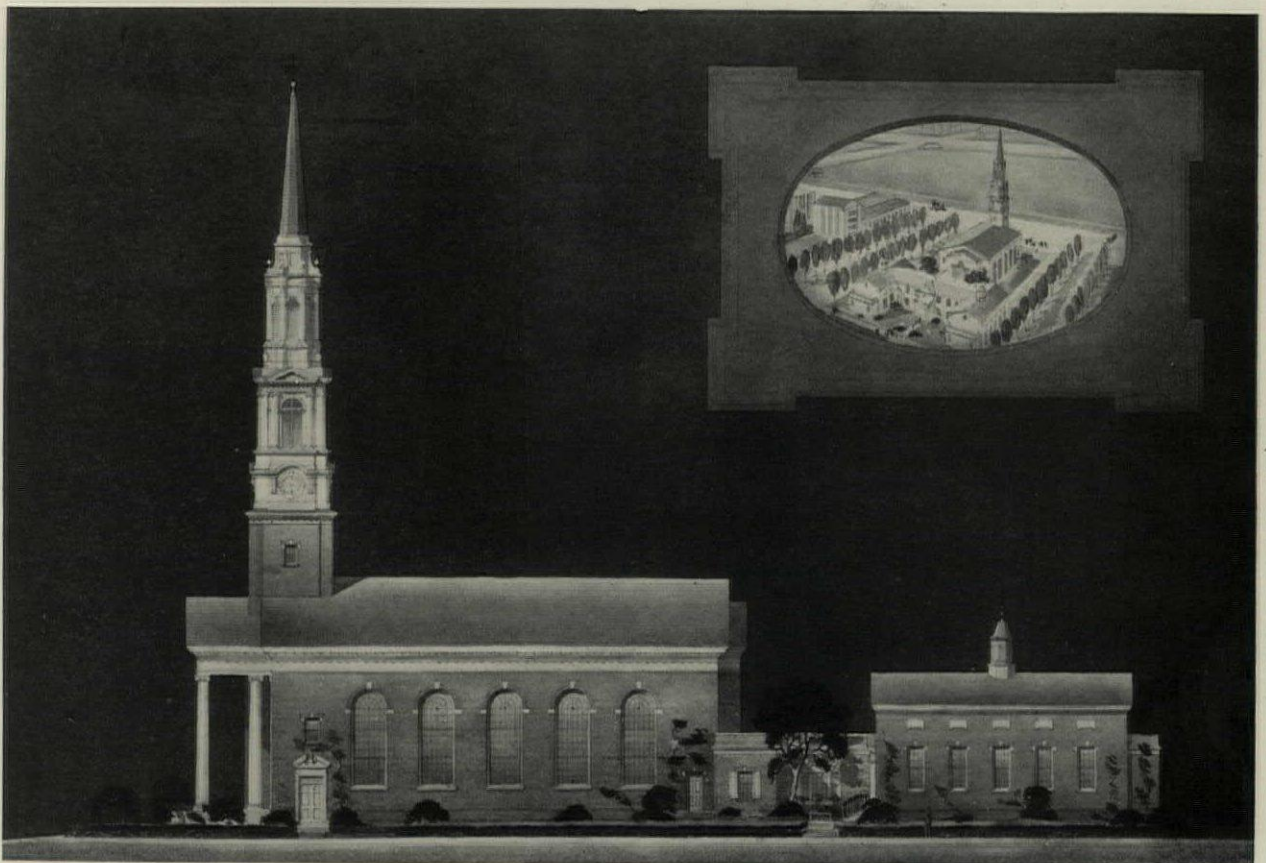
COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE FOR 1930

(See text on page 553)





LONGITUDINAL SECTION



SIDE ELEVATION

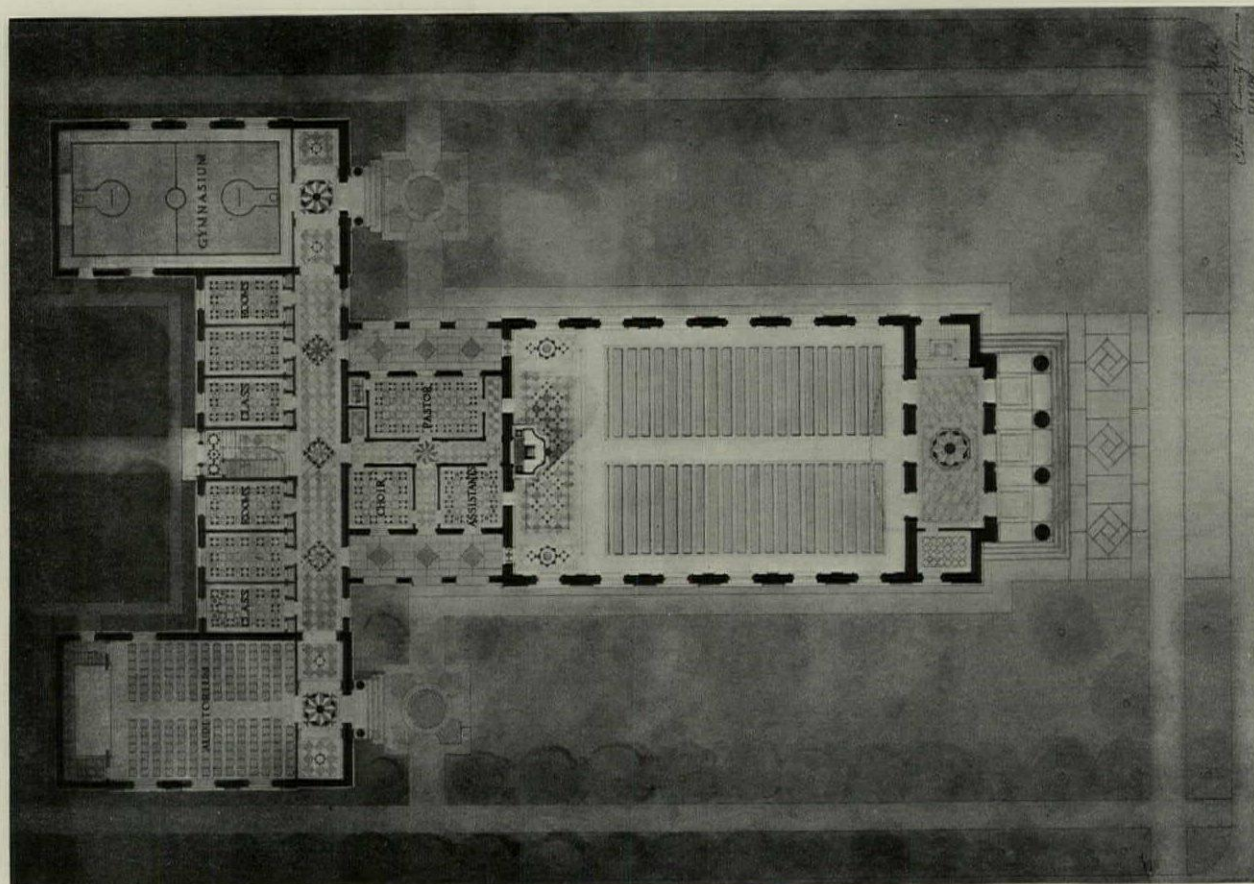
WINNING DESIGN FOR "A CHURCH AND PARISH HOUSE," BY WALTER LOUIS REICHARDT  
COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE FOR 1930

(See text on page 553)





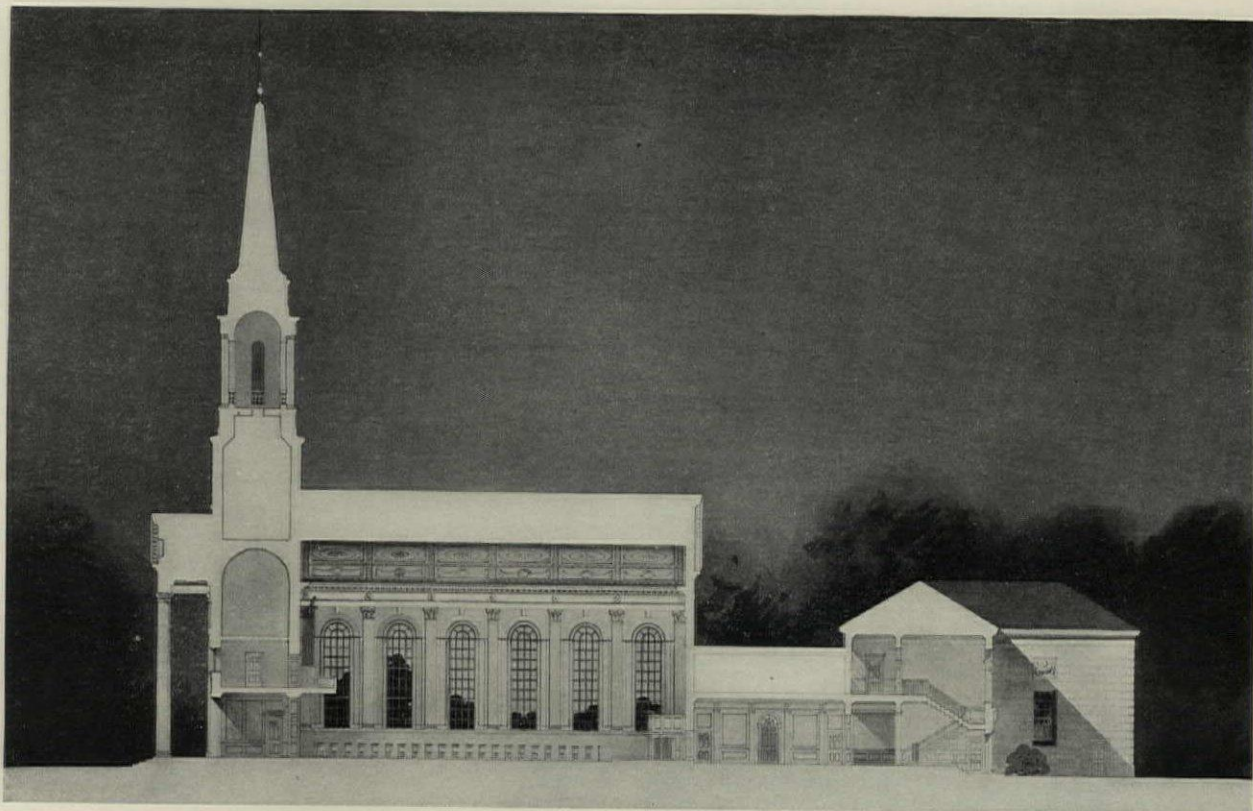
FRONT ELEVATION



PLAN

HONORABLE MENTION DESIGN FOR "A CHURCH AND PARISH HOUSE," BY JOHN E. MILLER  
 COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE FOR 1930  
 (See text on page 553)





LONGITUDINAL SECTION



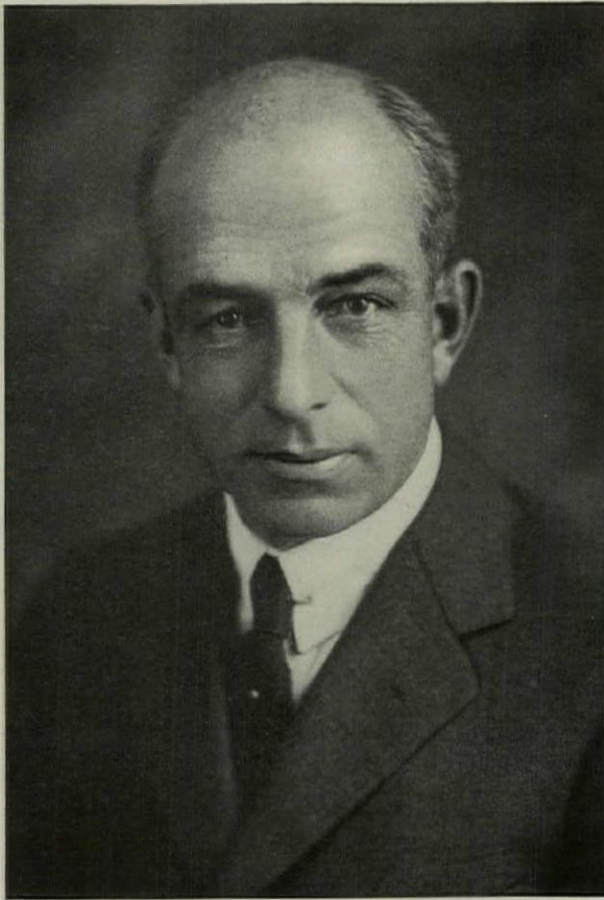
A CHVRCH AND PARISH HOYSE

SIDE ELEVATION

HONORABLE MENTION DESIGN FOR "A CHURCH AND PARISH HOUSE," BY JOHN E. MILLER  
COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE FOR 1930

(See text on page 553)





EDWIN H. BROWN  
1875-1930

EDWIN HACKER BROWN died of pneumonia at his home, Point Lookout, Lake Minnetonka, Minnesota, on April 21st.

Mr. Brown was born in Worcester, Mass., July 29, 1875. He attended Harvard University, graduating in 1896 with the degree of Bachelor of Arts, and from Worcester Polytechnic Institute with a degree of S.B.

Mr. Brown entered the firm of Hewitt & Brown in 1910. For many years he was prominent in the profession, being active not only in local but in national affairs also. Among some of the monuments of his work in Minneapolis are Hennepin Avenue M. E. Church, the McKnight Building, the Metropolitan Bank Building, Northwestern National Life Insurance Company building, Dunwoody Industrial Institute, new Y. W. C. A., the residence of C. S. Pillsbury, and many others.

In the war he served as field director for the bureau and camp service of the American Red Cross at Camp Cody, Deming, and later in a like capacity at Washington. He was chairman of the Minneapolis chapter of the American Red Cross.

To him more than anyone else was due the organization of the Architects' Small House Service Bureau.

Mr. Brown was vice-president of the Minnesota State Federation of Architectural and Engineering Societies. He was a Fellow of the American Institute of Architects, and served as its national secretary. He was still serving on the Hoover commission of the Department of Commerce on basic Building Codes at the time of his death.

Other organizations with which Mr. Brown was af-

iliated are the American Society of Mechanical Engineers, American Society for Testing Materials, Association of Harvard Engineers, Engineers Club of Minneapolis and the Phi Gamma Delta fraternity.

He was a member of the Minneapolis Club, Woodhill County Club, Lafayette Club, Harvard Club, Skylight Club, Six O'Clock Club, and Professional Men's Club.

He married Susan Christian in 1912 and is survived by his wife and two sons.

#### SAINT LOUIS ARCHITECTURAL CLUB

THE ANNUAL ELECTION of the Saint Louis Architectural Club was held on May 20, 1930.

Prior to the balloting, Dr. Arthur E. Bostwick, Librarian of the St. Louis Public Library, addressed the Club on the "Steedman Memorial Library." This fine collection of architectural books, together with a room to house it, was recently donated to the Library by Mr. George F. Steedman for the exclusive use of the architects and draftsmen of the city.

The honor of wielding the presidential gavel for the coming year was awarded to Charles O. Eames after a hotly contested fight. Appearing on the balcony following the election, President Eames received, with becoming modesty, the plaudits of the multitude that had clamored in vain to gain entrance to the packed hall.

Eames has also been distinguishing himself outside of club activities. He is the winner this year of the first prize of \$250.00 awarded by the *St. Louis Post-Dispatch* for drawings in black and white. Our bet is that if Charles does half as well with the presidency as he does with a lithograph pencil, he will be a world beater.

Other officers elected are as follows: vice-president, Erwin C. Schmidt; secretary, George Votruba; treasurer, Richard Johnson; executive board members, John A. Bryan and Allan Gordon.

A few of the planks in the new platform follow:

A plan to increase the scope of our employment service in order to aid as many draftsmen as possible to locate positions.

A wide participation in civic affairs relating to city planning and improvement.

A plan to acquaint the public with the duties and indispensability of the architect.

With these able officers to lead us in carrying out this ambitious program, our artistic souls are filled with the hope of making the ensuing year the most brilliant in the history of the club.

#### A CORRECTION

We greatly regret that an error occurred in the June issue on page 418 where the lithograph, "Paysage Espagnole," was wrongly attributed to Russell Limbach, whereas it was really the work of George Bennett Russell of New York. We hope to make amends to Mr. Russell by publishing more of his work in an early issue of PENCIL POINTS.



## THE WESTCHESTER COUNTY SOCIETY OF ARCHITECTS

ON JANUARY 16TH, 1929, the Westchester County Society of Architects held its first meeting. After a little more than a year of activity it has come to be recognized as an organization of vital importance in the building affairs of the second richest county in New York State.

The purposes of the Society are to promote fellowship; to encourage in every manner professional advancement among its members; to protect the interests of its members and others of the profession; to safeguard the public interests in matters of design and construction; to help all public officials in the administration of the laws relating to buildings and their environment; to interest itself in the welfare of all matters pertaining to or associated with the practice of architecture and the allied arts.

The Society is composed of individual architects legally registered in the State of New York and having an office in Westchester County.

The members work together in regular monthly meetings held successively in the various cities and towns of the County. The business meetings are preceded by a dinner during which the members are brought together in social fellowship. The dinner is usually attended with a talk by an authority or specialist in some phase of interest to the architectural profession.

The activities of the society are transacted by the different standing and special committees—"it is their care that the wheels run truly."

It was largely due to the concentrated and powerful action by *all* of the members of the Society under the dynamic leadership of W. Kenneth Watkins of Rye that the Mastick Bill to regulate the practice of architecture in New York State became a law. Throughout the year the Society has studied and has been active in legislative matters relating to the practice of architecture and its allied arts.

Not the least important of the accomplishments of the Society has been the bringing together from all parts of Westchester County its practicing architects in a spirit of good fellowship.

The Society held its First Annual Golf Tournament in June at the Bonnie Briar Country Club, Larchmont, and "a good time was had by all."

At the dinners the Society has had the privilege of listening to exceedingly interesting and educational talks by experts in the various fields of activity related to the practice of architecture. The keen interest in these dinners and talks is indicated by the regular large attendance by members from all parts of the County.

Upon the formation of the Society there were eleven architects listed as members. Throughout the year the membership has steadily increased, due to the energetic work of James W. Clyde of Mt. Vernon, William H. Jones of Yonkers, and their Membership Committee. There are now forty-six active members who come to the meetings from thirteen different towns. This practically represents all of the registered architects practicing in Westchester County.

The officers of the Society are Howard B. Peare, *President*; William H. Jones, *Vice-president*; William C. Halbert, *Secretary*; and George H. Gilbert, *Treasurer*. The address of the Society is 202 North Avenue, New Rochelle, N. Y.



PLINY ROGERS

*An Appreciation by Eddy Fairchild*

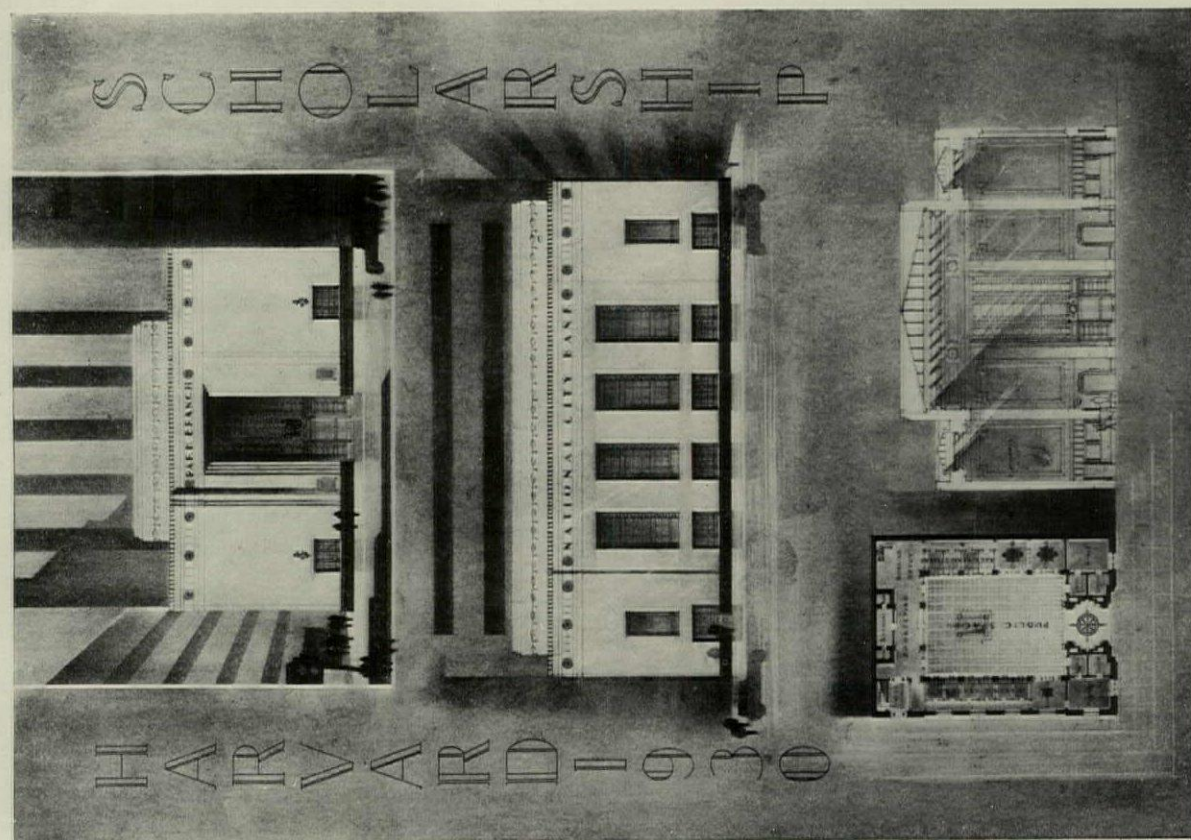
PLINY ROGERS IS DEAD. It happened two weeks ago [June 1st]. It has given me that awful feeling of shocked surprise and incomprehension of why such things occur. He was only forty-eight years old and, until his last illness of a few weeks, was strong and active, with apparently many good years in store for him.

Pliny Rogers was born in Saginaw, Michigan, and prepared for his profession at the College of Architecture, Cornell University. While attending the University, he won several prizes, one of them being the Andrew D. White prize. After six years as a designer with Tracy and Swartwout, he went to the office of Electus D. Litchfield, for whom he was head designer. From 1919 to 1926 he was a member of the firm of Litchfield and Rogers. Since that time Mr. Rogers has been practicing independently. It is particularly regrettable that he should have been called away while he was in the midst of developing his ideals.

Above all other types of architecture, Pliny Rogers loved the Colonial. And so it was perfectly natural that he should have put his heart and best efforts into creating some of our finest examples of this type. After spending years assimilating and recreating the characteristics and spirit of the Early American and Colonial architecture, he reached a stage where he excelled in this respect.

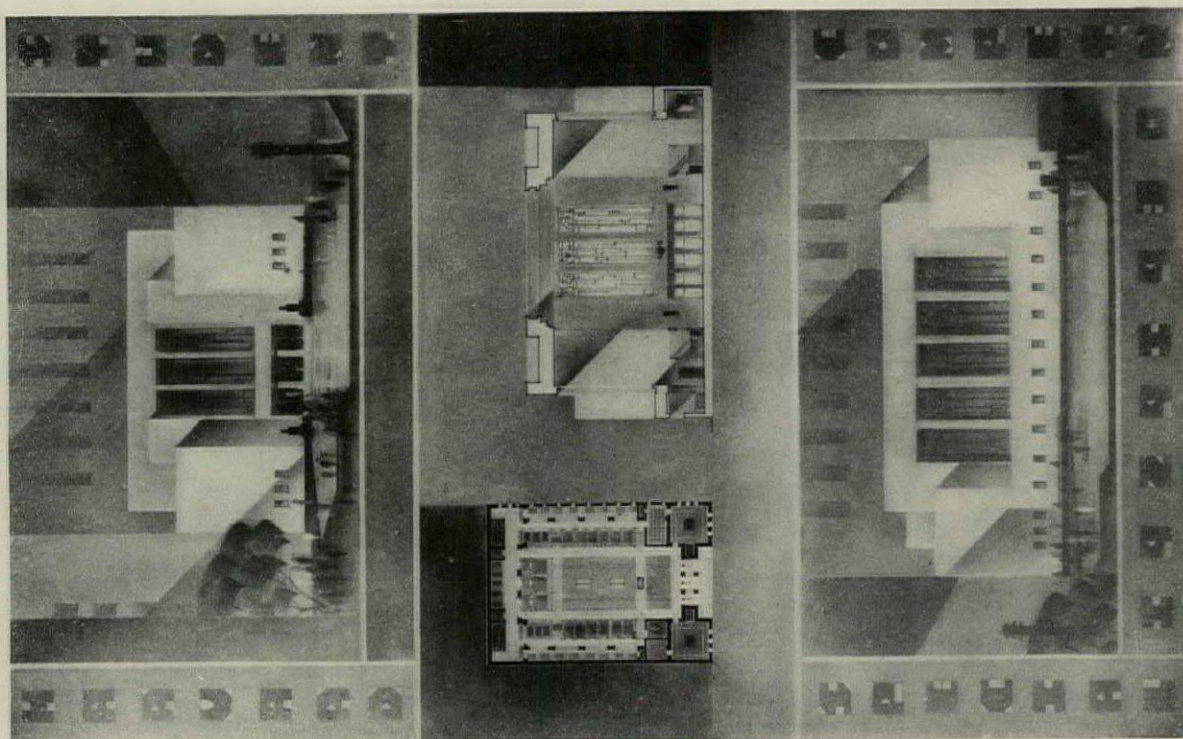
Having known and worked with Pliny Rogers for many years, I can say with great certainty that his work was produced with a sincere effort to do the best, down to the smallest detail. He gave his personal attention to everything and did considerable drafting and sketching himself—something all too rare in these days of high pressure architecture. He was a real draftsman and architect and had built himself a fine reputation by much extremely well done work. His death is a decided loss to architecture and many friends will miss him.





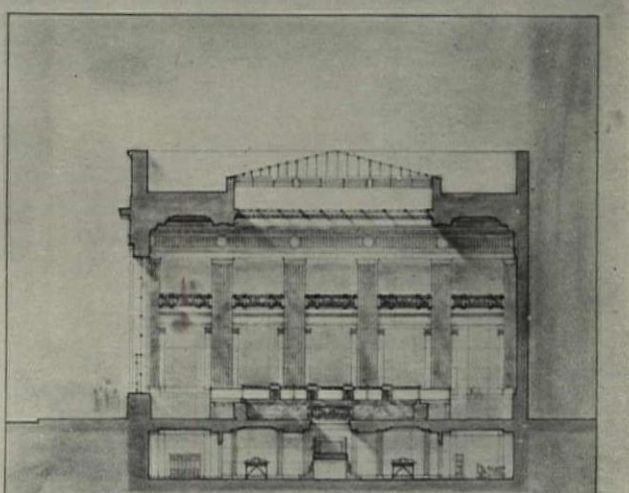
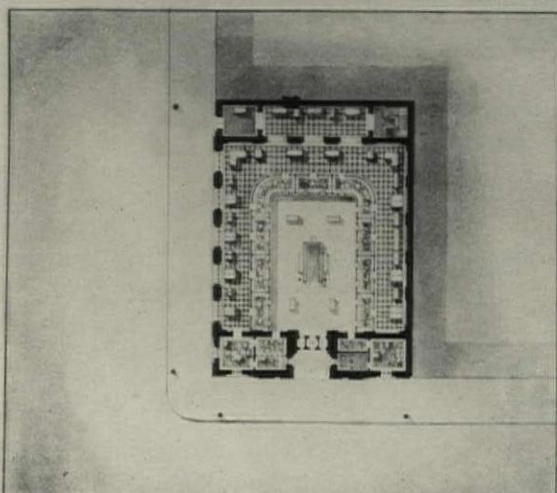
BY GEORGE LESTER LARSON

TWO OF THE PRIZE WINNING DESIGNS IN THE COMPETITION FOR SPECIAL STUDENT SCHOLARSHIPS FOR HARVARD UNIVERSITY



BY ARTHUR ALBERT THOMPSON





ANOTHER PRIZE WINNING DESIGN FOR "THE BRANCH OFFICE OF A LARGE BANK," BY MARIO JOSEPH CIAMPI

### STUDENT SCHOLARSHIPS AWARDED AT HARVARD SCHOOL OF ARCHITECTURE

THE COMPETITION FOR Special Student Scholarships for the Harvard School of Architecture is held each year for men who have had at least three years of office training, and who are twenty-one years old or over. They may receive the Certificate for Special Students—generally after two years in the School. This year the subject of the program was "The Branch Office of a Large Bank."

#### THE PROBLEM

This bank, located in a medium sized city, is a branch of an important New York bank. The piece of property on which it is proposed to erect it is a rectangular corner lot, 110 feet long and 80 feet wide, on two streets of equal importance. The two other sides of the lot are party walls. The entrance to the bank can be placed on either street, according to the parti adopted for the interior arrangement. A certain research of monumental qualities in the architecture, both of the façade and the interior, is expected. The ensemble must be dignified enough to represent well the power of the main institution in New York.

The building, containing only one story and a partial mezzanine, will comprise: 1. Main entrance for the public. 2. Public space or hall. 3. Usual accommodation provided for paying tellers, receiving tellers, bookkeepers, foreign exchange, stocks and bonds, information, etc. 4. Entrance to the vaults which are to be in a basement. 5. Offices for the president, secretary, waiting space. 6. Ladies' room with toilets. Clerks' rooms, locker rooms, coat rooms, can be in the basement. 7. Service entrance on one of

the streets. 8. There could be found, partly around the hall in rear or side, if desired, a small mezzanine gallery for additional clerical space; but all services included from No. 1 to No. 7 must be on one floor.

Twelve consecutive hours are allowed for the preliminary sketch and one week for the final drawings. The winners' designs are shown herewith.

George Lester Larson, of Boston, Mass., twenty-five years old, attended the Boston public schools and graduated from the Mechanic Arts High School. He worked for some years in the Boston Architectural Club classes, and attended the Morgan Atelier in New York one summer. He was in the office of Guy Lowell, in Boston, for many years; later, in the office of Henry & Richmond. In New York he was in the office of Laurence Emmons, where he intends to return. He entered the School of Architecture in the fall of 1929.

Arthur Albert Thompson, of Cambridge, Mass., twenty-three years old, is a graduate of the Cambridge High and Latin School, where he studied architectural drawing under Miss Alice S. Willoughby and received much of his preliminary training under the guidance of William J. Mooney. From 1926 to 1929 he was in the office of Parker, Thomas, and Rice in Boston and was a student at the Boston Architectural Club. He won the Special Student Scholarship for the year 1929-30 and has now won it a second time for the year 1930-31.

Mario Joseph Ciampi, of San Francisco, Cal., twenty-three years old, graduated from high school in California and worked for three years at the San Francisco Architectural Club. He has worked in the offices of A. A. Cantin and Dodge A. Riedy, of San Francisco. He will enter the Harvard School next fall as a special student.



## PHILADELPHIA ARCHITECTS' BASEBALL LEAGUE

THE THIRD SEASON OF THE Philadelphia Architects' Baseball League opened Wednesday, May 21st. Two of the offices represented in the league last year found it impossible to enter this year. However, we are pleased to announce a new team representing the office of I. H. Francis, Consulting Engineer. This office does the engineering problems for many of the architectural firms in Philadelphia, and, therefore, is closely associated with the architectural profession.

The offices represented this year in the league are Ritter & Shay, John T. Windrim, Board of Education, Ballinger Company, and I. H. Francis.

The winner last year was the Board of Education, which lost the inter-city championship to the Board of Education of New York.

The games are played at the Northeast High School Field, Philadelphia, every Wednesday and Thursday at 6:15 o'clock.

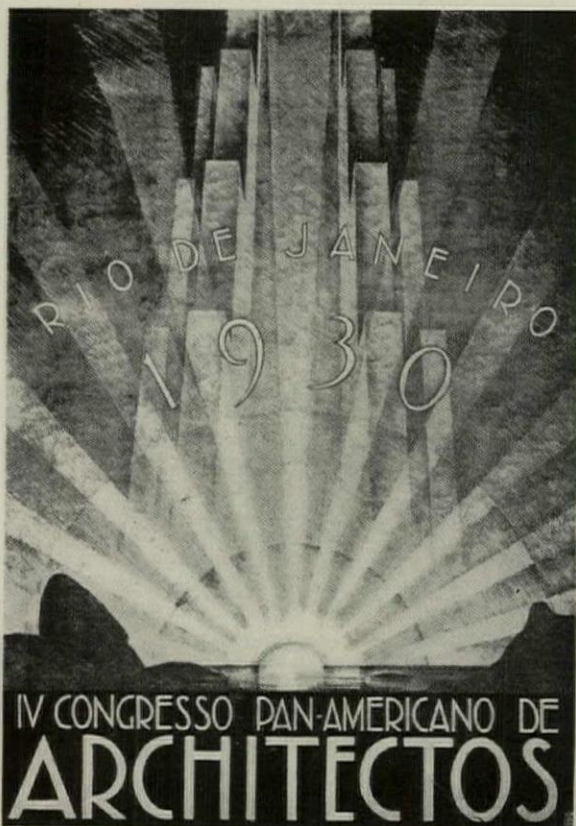
The officers for the ensuing year were re-elected from last year as follows: M. M. Dryer, President, William J. Rankin, Treasurer, and J. E. Doan, Jr., Secretary.

## STANDING OF THE LEAGUE

TEAM	W.	L.	P.
John T. Windrim	1	0	2
I. H. Francis	1	0	2
Ritter & Shay	0	1	0
Ballinger Company	0	1	0
Board of Education	0	0	0

ENGINEERS' BOWLING LEAGUE OF CHICAGO  
FINAL TEAM STANDING

1—Holabird & Root, No. 1	59	31	.656	74297	825.42
2—Childs & Smith	56	34	.622	69723	774.70
3—Sargent & Lundy	55	35	.611	77623	862.48
4—City of Chicago—Bridge Dept.	53	37	.589	74785	830.94
5—W. H. Kien & Co.	51	39	.567	70839	787.10
6—Allen & Garcia, No. 2	50	40	.556	70012	777.91
7—American Bridge Co.	48	42	.533	72651	807.23
8—Utilities Power & Light Corp.	45	45	.500	68898	765.51
9—Holabird & Root, No. 2	48	45	.511	70597	784.41
10—Burrell Engineering Co.	41	49	.467	63478	729.63
11—Roberts & Schaefer	39	51	.433	69006	766.73
12—American Ass'n of Engineers	38	52	.422	66111	734.57
13—Frank D. Chase, Inc.	37	53	.411	63023	700.26
14—J. H. Heuser	34	56	.378	68051	756.12
15—Graham, Anderson, Probst & White	35	55	.378	66579	739.77
16—Allen & Garcia, No. 1	34	56	.378	64680	718.67



POSTER FOR THE FOURTH PAN-AMERICAN CONGRESS OF ARCHITECTS, HELD LAST MONTH IN RIO DE JANEIRO

## ANNUAL MEETING, BROOKLYN CHAPTER A.I.A.

THE ANNUAL MEETING of the Brooklyn Chapter of the American Institute of Architects, held at the Crescent Athletic Club, Brooklyn, May 26, 1930, was well attended.

The reports of the several officers of the Chapter and the chairmen of the various committees indicated a healthy condition of affairs and some little advancement in the educational work of the year.

The business of the evening consisted first of the adoption of certain amendments to the By-Laws with the purpose of interesting the non-resident registered architects within the Chapter's jurisdiction to the point of becoming affiliated with the Institute through the Chapter.

Then came the discussion on the formation of the organization of statewide scope and consisting of delegates from the several organized architectural groups together with representatives from groups of twenty each of unattached registered architects throughout the state for the purpose of the defense of the registration statute and the advancement of the status of the architect.

This was followed by the election and installation of officers for the 1930-1931 term, which resulted as follows: Charles C. Wagner, *President*; William A. Sanders, *Vice-president*; Geo. Francis Kiess, *Secretary*; Herbert C. Bowman, *Treasurer*.

As a closing feature, the Chapter was entertained by an interesting talk covering the experiences of one of its delegates to the recent Annual National Convention of the Institute held at Washington, D. C.



## A STATEMENT REGARDING THE PENCIL POINTS EDUCATIONAL FUND

IN JANUARY of this year we announced that we had appropriated the sum of \$10,000 to start an educational movement having for its object to inform laymen intending to build concerning the nature and value of architectural services. The responses we received from this announcement were so encouraging that in February we sent another letter to all architects advising them that we would receive subscriptions to a fund which would be expended over a period of two years along dignified but progressive lines with the idea of bringing about a better understanding of the questions involved for the benefit of both parties—the investors who naturally want to secure the greatest value for each building dollar spent, and the architects and draftsmen who are in a position to furnish the services required.

Contributions to the fund were very slow in coming in owing to a variety of reasons. The depressed state of business had something to do with it; but we also believe it to be true that many architects feel that such a campaign would injure their professional standing and many others think that such a campaign would not be successful in achieving its object.

In order to get a definite expression of opinion from members of the profession we sent a third communication on April 21st, with which a ballot slip was enclosed to be marked and returned to us. This letter was sent to all practicing architects in the United States and Canada whose names appear on our records—about 8,500 in all. The results of this ballot are tabulated herewith.

1053—I believe that the laymen of the U. S. and Canada should be informed now concerning the nature and value to them of the architect's services.

186—I do not believe that such a campaign is necessary or advisable.

726—I would like to see the publishers of PENCIL POINTS conduct the campaign.

I will contribute \$25.00 a year for two years to the PENCIL POINTS Educational Fund.

75—Check already sent.

31—Check for 1930 enclosed.

66—Check for 1930 will be sent by July 1st.

114—Check for 1930 will be sent by October 1st.

185—I would prefer to see such a movement carried on under other auspices.

145—Non-Committal.

It will be seen that only 1,422 of the 8,500 marked and returned the ballots, which seems to us to indicate either lack of interest in the proposed campaign or a lack of faith on the part of the architects that we are the proper people to conduct such a movement on their behalf. The amount of money contributed and pledged is insufficient to accomplish the objects of the

campaign, and since there seems to be no reasonable expectation that the fund will reach adequate proportions we have decided to invite no further contributions and to return the money already contributed.

It is our belief, as it has been for a long time, that the investors of the country are losing a great deal of money each year because of their failure to appreciate the value of the architect's services. It is our belief that the architects and draftsmen of the country are losing millions of dollars each year because of this state of affairs. It is our belief that it is the duty of the architects to the public as well as to themselves to bring about a better understanding of the matters involved. And it is our opinion that sooner or later the architects will see the wisdom and the necessity of conducting such a campaign or of retaining competent individuals or organizations to do it for them.

We announced in January that even if the architects did not contribute to our fund we would spend the sum which we had appropriated in publishing and distributing a document which would clearly set forth the advantages to the investor of retaining an architect. For several months past we have been working on this document. We have discussed this with many architects located in different parts of the country and have studied carefully all of the books, articles and pamphlets which have been published on the subject.

The manuscript of the document was completed some weeks ago and has been put in type. Before actually running the edition we considered it advisable to submit the document as a whole to a number of architects, both large and small, interested in various types of buildings, and we must admit that what we have done has failed to secure the approval of a majority of those who have studied it. The criticism has been made that our document is too long. But we have found it impossible to condense the material without omitting portions which we regard as essential to a proper understanding of the matter by the layman who has had no contacts with a building project.

Portions of the document which are entirely satisfactory to some men we find are quite unsatisfactory to others and we have been unable to reconcile the widely divergent points of view expressed. One architect to whom the draft was submitted made the statement that in his opinion its general dissemination would be injurious to the architectural profession. Another equally prominent man endorses our presentation entirely and feels that everyone contemplating a building project would be greatly benefitted by reading it.

Now certainly the last thing we want to do is to publish a booklet which is going to hurt the architect. Nor do we consider it advisable to distribute a booklet which would be regarded by a majority of the architects as an inadequate presentation of the value of their services to the building public. So we have decided to offer what we have written for general criti-



cism in advance of publication in pamphlet form. And in the following pages of this issue of PENCIL POINTS you will find the text and the illustrations of our document as we have prepared it. Please read this carefully and tell us what you think about it. If you feel that we have presented the matter fairly and successfully please tell us so. If any part of it in your opinion is untrue, misleading, or lacking in clarity, please let us have your criticisms. If a substantial majority of the architects of the country feel that the distribution of this document by us would be of service to them and to the profession it is our intention to publish it as originally announced and to get it into the hands of those intending to build so far as our funds will permit. Should it appear after the criticisms have been received and reviewed that it is impossible to reconcile the different points of view expressed we shall make no effort to distribute the document beyond the members of the profession itself.

In reading this document please bear one thing especially in mind. We are attempting not only to induce the man who is going to spend money for a building of any type to retain an architect, but we are endeavoring also to make it clear that the architect should receive an adequate fee for what he does. Because they do not know what an architect does for the fee he charges, most people feel that the architect is an expensive luxury, whereas in our opinion quite the reverse is true. Most business men are willing to grant that the contractor is entitled to a profit of ten per cent. net for building a building. But these same men have an entirely different attitude toward an architect's fee. On a job costing, let us say, \$100,000 the owner expects to pay a profit of \$10,000 to the builder, but he sees no reason why an architect should get \$6,000 for his services. He doesn't realize that of this sum \$4,000 or more is represented by actual cost to the architect in doing his work; that the net profit therefore is not over \$2,000 and frequently much less. This, in our opinion, is all because the architects have never informed the building public. If the idea prevails, as it does in hundreds of thousands of cases, that all the architect does is "to get out a set of blueprints" it is difficult for the owner to see where he gets value received for what he spends. But if the owner can be brought to appreciate all the things which

the architect can and should do for him as set forth in our document he should be willing to pay and pay well for such a valuable service.

We are informed on competent authority that in a certain section of the country a survey was made of a large number of residences, some erected under the supervision of an architect and others without architectural services of any kind. It was found that, on the average, the houses erected without the assistance of an architect cost 14% more than those under architectural control. Of course it was found, as was to be expected, that on the average the houses handled by architects were better looking, better planned, and generally more satisfactory. How does the owner fare in such a situation when he goes it alone? He pays more for a poorer house. How does the architect and draftsman fare? He doesn't fare at all, but is just cut out of a large volume of business which he could handle to advantage. It will be clearly seen, therefore, that the owners of these houses would have been far better off had they retained competent architects and paid them 10% on the work.

We know perfectly well that the document we have prepared is not perfect. We regard it as a first attempt to clarify a very difficult and complicated situation. The doctor and the lawyer have a simple situation to deal with as compared with the architect. Everybody knows what a physician or a lawyer is supposed to do. It will never be possible to state the functions of an architect in a ten-word telegram, but the services which an architect is prepared to render may be definitely stated and sooner or later they will be. Thousands of architects tell thousands of clients every year just what they can do for them. It should be possible to make a statement of the facts which is satisfactory to all architects who intend to give good service to their clients. We naturally are not interested in the small number of men practicing as architects who are neither honest nor conscientious and whose only idea is to get as large a fee as possible and to give as little as possible in return.

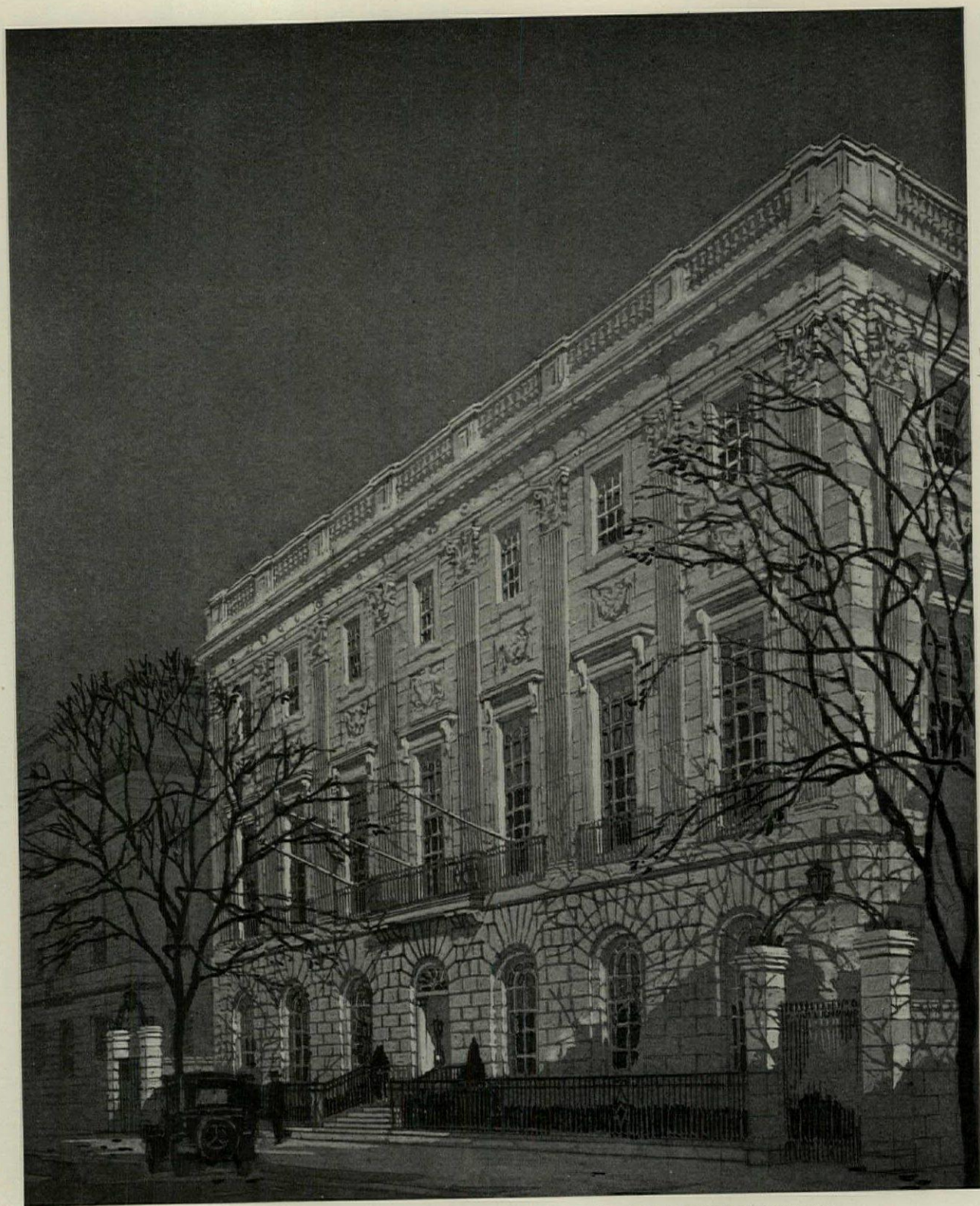
It is our observation that very few architects are intentionally exploiting the public. It is rather our opinion that a vast majority of men practicing architecture are competent, thoroughly conscientious, and inadequately paid for what they do.

*In the 24-page document which follows we have used, as illustrations, drawings which have previously been published in PENCIL POINTS with full credit to the architects from whose offices they were borrowed for reproduction. Naturally, in a document of this kind, intended for circulation among the lay public to advance the cause of architects in general, it would be inadvisable to mention the names of any individual architects. The illustrations are used here simply to indicate to the layman the kind and extent of the drawings an architect prepares during the proper performance of his duties.*



The  
VALUE  
of the  
Architect's  
Services





AN ARCHITECT'S PRELIMINARY PERSPECTIVE STUDY FOR A PUBLIC BUILDING

*During the early stages of the design it is desirable for the architect to show the client, by means of a pictorial drawing something on this order, how the finished building is going to look. Sometimes such drawings are made with pencil, sometimes with pen and ink, sometimes with water color or wash—but, whichever is used, the essential idea is to help the client to visualize the completed structure.*



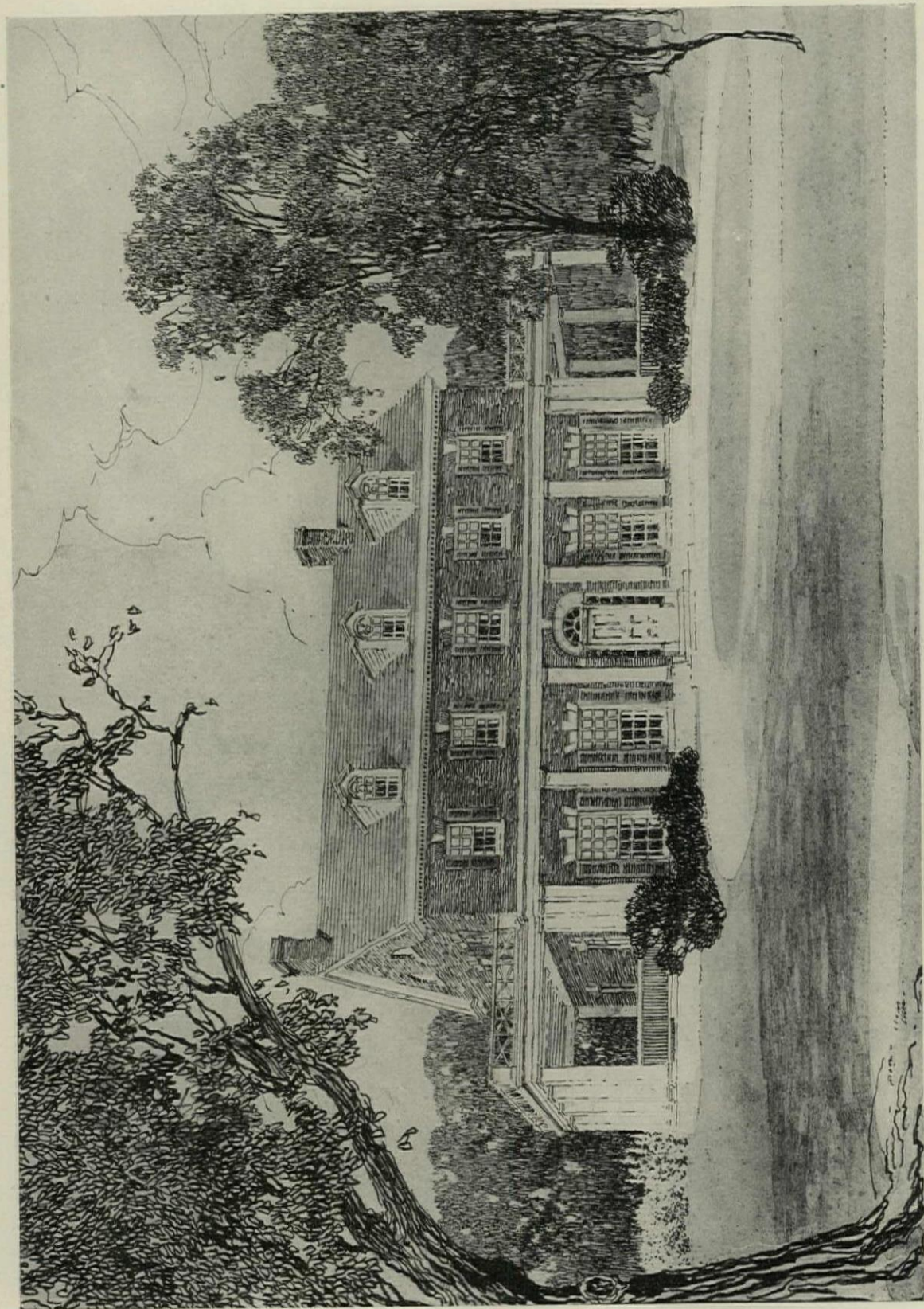
# WHY *Should You Be Interested* *In This Document*

?

YOU ARE contemplating the investment of a considerable amount of money in a building—more money, perhaps, than you will spend in a lump sum very many times in your life. Naturally, in carrying out this project, you want to get the greatest possible value for every dollar you invest. It is our belief that in order to attain this highly desirable end it is extremely advisable for you to consult an architect, whether it is a matter of building a small house or a great cathedral, a store front or a skyscraper office building, a small movie theatre or a sizable school. You may already have a vague idea that this is so, but to insure that you may approach your building program with a full realization of what an architect is and what he, better than anyone else, can do for you, we have prepared this booklet.

WE HOPE that you will read it through carefully to the end. You will then at least be in a position to know what the architect's services comprise and what you will miss if you do not avail yourself of them. If you then decide to proceed without him you will be doing so with your eyes open. We believe that those who stop to investigate fully the scope and value of the architect's services will readily understand that they are essential to the success of any building project. Those who do not look into the matter can only be enlightened through a costly and dissappointing building experience. The value of the architect's service is too pronounced to be lightly forfeited.





AN ARCHITECT'S PRELIMINARY SKETCH FOR A RESIDENCE

By presenting his design in this way, together with sketch plans, the architect is able to show the client the results of his preliminary study before going ahead with working drawings. Such sketches are the outcome of considerable thought and study which has to precede them and should not be regarded as something turned out with little effort. When the architect has got this far he has earned about a fifth of his total fee.



## WHAT *Is An Architect?*

THE ARCHITECT is, like the lawyer or the physician, a professional man. That means that he has nothing to sell you other than disinterested personal service. His knowledge of the art of designing buildings and of supervising their construction—knowledge acquired by years of study and apprenticeship—makes him an expert in his field and makes his assistance of value to you, who may know little or nothing of such matters. His ability to make this knowledge effective in your service is his sole "stock in trade." He is not, as some people erroneously suppose, a dealer in blueprints or in plans and specifications, any more than a physician is a dealer in prescriptions. These things are simply instruments of service. What you pay the architect for is the wisdom of training and experience which enables him to write your correct building prescription in the form of drawings and specifications, and so insure that you get what you want. The building contractor is the pharmacist who carries out his instructions.

The knowledge and skill which the architect must possess includes a well balanced combination of purely practical and purely artistic considerations. He must, of course, have business capacity for he has to assume charge of the administration of the building enterprises which are entrusted to him. Then he must have a thorough acquaintance with all the things which go into the making of a building—the great variety of materials and equipment and the methods by which they are assembled by the various building trades into the completed structure. He must know what each material is good for and where and how it should be used; he must be able to discriminate intelligently between the numerous types and brands of building equipment which are on the market. This knowledge he must accumulate by painstaking investigation and experience. All

this takes time and therefore makes it necessary for the young man who wishes to become a practicing architect to serve a somewhat lengthy apprenticeship as a draftsman working for established architects where he may have the opportunity to observe at first hand the conduct of many and varied building operations.

Before the young man ambitious to be an architect is able to become a draftsman he must get at least a portion of his artistic training by some sort of schooling in which the principles of good design are taught and through which he may learn how the architecture of the past was created, not so that he may copy in his own work what the men of older periods did but so that he may gain a comprehension of the general principles underlying all their designs—principles which he may use as a guide in going on from where they left off. When we say "some sort of schooling" we mean to include not only study in the recognized formal architectural schools but also the less obvious, though often just as effective, education conducted under the personal guidance of an already established and well educated architect. Many a youth, unable to attend one of the collegiate schools of architecture has, by entering as a lowly office boy the establishment of a good architect, gradually advanced and increased in knowledge until he has finally reached the top and become an architect in his own right. In fact some of our greatest architects have developed in this way. That, however, is perhaps aside from the subject. What we are trying to make clear is that to be an architect requires a long and thorough preparation. This implies the final possession of the genuinely specialized knowledge and ability which makes the architect's services of real value to you.

As a professional man, the architect must adhere to a high standard of ethics. His integ-

*-rity must*



## THE VALUE OF THE ARCHITECT'S SERVICES

ity must be beyond reproach, for in order to command your confidence and respect his interests must be identified with yours and his only compensation, either direct or indirect, must be the fee which you, as his client, pay him. He cannot accept commissions or favors of any kind from any contractor, sub-contractor, dealer in materials, or any other interested party, and still remain a professional man.

The architect's interests, during the conduct of your project, are identical with your own. He is your representative. His aim is to see that you get a building which will be at once beautiful, sound, and suited to its purpose, and that you get it for a reasonable price. The extent to which he can be successful in this endeavor depends upon his degree of architectural talent and upon your willingness to take full advantage of his advice. You will have to trust him just as you trust your doctor if you want best results.

It should be clearly understood that the architect is neither a building contractor nor a structural engineer. The building contractor or builder is the man who takes the architect's drawings and specifications, provides the materials and equipment called for therein, and employs and directs the labor necessary to erect the building. He should know how to carry out properly the instructions given him by the architect but is not ordinarily competent to assume the functions of the architect. The construction en-

gineer is a designer of *structures* and works from the standpoint of producing sound and safe construction. He is not particularly interested in the matter of beauty and if he were would not commonly have the art training necessary for its production. His position in the building field is that of a consultant to whom the architect may turn for the economical solution of the more complicated structural problems which arise in the larger undertakings where steel and reinforced concrete are extensively used.

The architect is the one man in the building field who is trained to look at whatever building project he is directing from a broad point of view—weighing the various factors that enter into it and coordinating and combining them so that they will be held in proper equilibrium. Under his direction no element will be given undue importance at the expense of some other equally important consideration as sometimes occurs where an operation is carried on with no general administrative head, even though the different individuals working together are experts in their respective fields. Whereas the usual "expert" is inclined, as he becomes more completely specialized, to think more and more of his own particular specialty, the architect, as master designer, keeps always uppermost in mind the all important question of *the relation between the building and the human beings who are to use it* and for whom it is to be built.

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As all buildings are seen, society has a right to demand that none be ugly; the life of the community requires that none be unsafe or dangerous to health; social economy requires that they be not wasteful of space or ill-suited to the purpose for which they are created. Every building is to some extent a public matter—even a private house. No building should be erected that is not an attractive addition to the landscape. A well-designed building is more valuable property—a better investment. A well-constructed building is a more economical investment. No owner, however gifted in other ways, no contractor, however skilled, can design and build the simplest house equal in beauty, utility and economy to one completed under the guidance of a trained architect.



# WHAT *Qualities Make The Architect Useful To You?*

## [1] HIS ABILITY AS A PLANNER.

In the architect's training great stress is laid on the matter of planning efficiently. By studying the needs of all types of buildings and considering the ways in which they are used by the people occupying them, he gains specialized knowledge on this subject beyond that possessed by any other group of men. The architect knows how best to apportion the available space in a building between its different parts so that each division or room will be adequate in size and convenient in shape. He knows how to arrange the different parts so that they can be used most easily and effectively and so that each occupies the most advantageous part of the entire scheme in relation to the others. The building he designs is easy to get around in and those who use it do so with a minimum of wasted effort. An unskilful planner can very easily make the errors of giving too much space to this portion, too little to that; of placing rooms in wrong relation to the site and to the rest of the plan; of using too much space or too little for circulation; all of which will cause inconvenience or discomfort or both for the users of the building. A good architect can eliminate such faults of planning.

Looking at it from the point of view of economy, this matter of planning is of the utmost importance. In the architect's plan every square foot of floor area is used to greatest advantage. His plan, *prepared to solve your particular problem*, will give you the maximum accommodation in a given total area, or, expressing it in another way, he can provide the required accommodations in a minimum of total floor space. Since every square foot unnecessarily added to a plan costs you money for which you get no return, is it not profit-

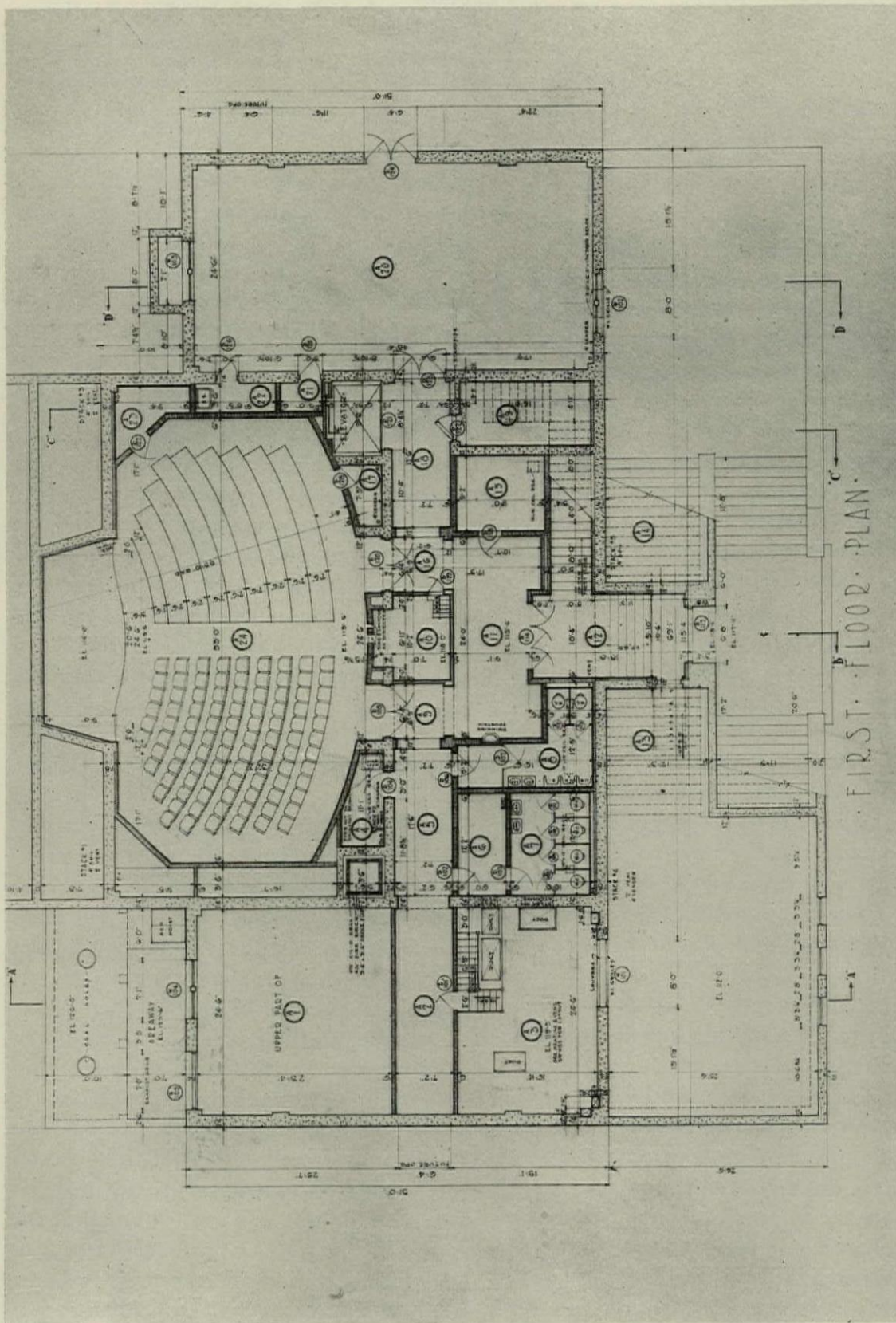
able for you to employ this man who is of all men most likely to know how to eliminate waste space?

## [2] HIS KNOWLEDGE OF THE MATERIALS AND METHODS OF CONSTRUCTION.

The architect is continually keeping himself posted on the comparative merits of materials and equipment that go into buildings and on the best methods of putting them together. This is one of his most important duties and one in which his training begins the moment he enters a drafting room as a beginner. He sees the materials as used in buildings already existing—sees how they look and how well they have lasted. Then as a draftsman he sees how the more experienced men with whom he is working select and specify materials for buildings in process of design. When these buildings are under construction he is sent out on the job where he can observe the best methods of putting the materials in place. As time goes on he has opportunity to check up on the wisdom of employing the materials and methods adopted. The manufacturers keep the architect supplied with data and samples of their products. He talks to their representatives and perhaps visits their plants so that he may have a complete understanding of how brick and terra cotta and lumber and marble and linoleum and so on are produced. He gathers from professional journals, from architectural books, from meetings of architectural societies, the fruits of the group experience of the entire profession. He avails himself of the records of disinterested comparative tests emanating from scientific laboratories such as the United States Bureau of Standards and the lead-

-ing technical





A "PLAN"—ONE OF THE WORKING DRAWINGS FOR AN ART INSTITUTE

By "plan" many laymen understand is meant any architectural drawing. This is incorrect, for the term applies only to those drawings like the above which show what you would see looking down from above if the building were cut through horizontally by a plane and the top part removed. It shows the relationship of the different rooms and the means of circulation throughout the floor. Plans vary in complexity according to the type of building.



## WHAT QUALITIES MAKE THE ARCHITECT USEFUL TO YOU?

ing technical schools. In short he aims to become the best informed purchasing agent for building materials and equipment that is to be found anywhere. When you employ him he becomes, in effect, *your* purchasing agent acting solely in your interests to secure for you the most for your money.

In his specifications for your building the architect calls for materials and equipment which he knows are best for the places where they are to be used and tells the contractor exactly how they are to be put in place to secure the proper results. He follows up his written instructions by supervision on the job either by himself or by one of his most trusted assistants. When he turns the building over, you have the satisfaction of knowing that it will be strong and durable and that your subsequent expense for repairs, upkeep, and so on will be held to a minimum. Your foundations will be solid, your cellars dry, your roofs will be tight, your walls resistant to the passage of heat, cold, and dampness. Your floors will be free from warping and twisting and will resist wear. Your ceilings will be free from cracks and discoloration, your stairs comfortable to walk up and down on and free from squeaks.

All of these things and many others which the architect takes care of will contribute materially to your comfort and security and will relieve you from periodic expensive repairs.

### [3] HIS CONSIDERATION FOR THE ÆSTHETIC ELEMENT IN BUILDINGS AND HIS ABILITY TO INTRODUCE BEAUTY INTO THEIR DESIGN.

The third essential item to consider in producing a work of architecture is that it shall include beauty. We have already explained how the architect, by good planning, makes the building suited to its purpose, and how, through his knowledge of materials and construction, he in-

sure that it shall be sound and lasting. Now we come to what in some respects is the most important part of his work—that of making the completed design good to look upon. The ability of the architect to do this marks him out from all the other individuals connected with the building industry. Good engineers and builders know how to build well; some of them may even develop the ability to plan economically and logically; but none of them ordinarily possesses the instinct of the artist supplemented by training in design which makes the architect a creator of beauty. Not all architects possess this talent in superlative degree but it is safe to say that they all have enough of it to distinguish their work from that of the ordinary constructor. From the time a young man decides to study to become an architect—and his decision is usually founded on a natural talent for design and love for things beautiful—he is continually thinking in terms of proportion, of balance, of symmetry, of rhythm, of color harmony, of light and shade, of texture. During his education he steep himself in an atmosphere of fine art. He cultivates his acquaintance with the fine things of the past in architecture, in painting, in sculpture, even in music, in literature, in the drama—for all the arts are inextricably interwoven and the same fundamental principles of beauty underlie them all. Small wonder that he develops a discriminating sense for what is good and beautiful as opposed to that which is mediocre and ordinary. It is that sense which the full-fledged architect applied to his designs for buildings that makes them, according to his ability, better than those designed by untrained and unskilled men.

We are all sensible, in greater or less degree, to beauty. Between two articles offered to us we naturally choose the one which seems to us the better looking. Our clothing, our furniture, our automobiles—other things being equal—are for the most part chosen on the basis of good looks. No less should we desire to own attrac-

*-tive homes*



## THE VALUE OF THE ARCHITECT'S SERVICES

tive homes, to live in beautiful neighborhoods, to have fine buildings in our communities. The good looks which the architect knows how to provide make your house worth more money, your neighborhood more prosperous, and your rentable properties more productive. If a well designed building comes up for resale it will bring a better price than would a poorly designed one of the same nature on the same site. Bankers are more ready to loan money on a building designed by an architect because they know that he has put more value into it and that if it should ever come back on their hands they would be able to sell it more easily for that reason. Real estate men will tell you that it is easier to rent space in buildings which are architecturally attractive than in those which lack the element of good design, even though they be equally convenient. No, there is no question but that the element of beauty in buildings has a commercial value over and above that of the more tangible so-called practical factors of convenience and structural integrity. And the architect can give you them all, for he possesses, either in his own person or in the persons of his partners and assistants, the requisite varieties of ability to do so.

### [4] HIS KNOWLEDGE OF THE LEGAL REQUIREMENTS, ETC., FOR BUILDINGS.

The man about to build will find that there are many laws and regulations, State and municipal, which touch in some way or other upon the project. It is an important part of the architect's business to know all about these laws and regulations so that his client will be protected from damage and loss from the time the job starts.

To begin with, most States now have laws concerning the licensing or registration of architects, designed to protect the public from incompetent individuals who might otherwise masquerade as architects to the detriment of your

interests. These laws set forth the minimum requirements for the education and training of the architect and provide against anyone calling himself an architect without having the proper qualifications. You may know therefore that your architect, being duly registered, has satisfied the State requirements. The registration laws are usually supplemented by the building code of the cities, towns, or villages requiring that plans for buildings exceeding a certain amount in cost must be filed by a registered architect. In States where no registration law exists, this protection is absent, but these States are rapidly falling into line with the others in this respect and adopting such legislation.

The building codes here alluded to are matters of local ordinance and differ somewhat in different communities. Your proposed building must be designed to conform with the requirements in your particular locality. Zoning laws, too, exist in many communities and may affect your project in one way or another. The State lien laws, insurance laws, and laws of contracts, and the State and local laws for the maintenance of Public Safety and comfort, both during and after the erection of your building, all have to be known to the architect. Even the Federal Patent laws have to be considered, for royalties have to be paid to the patentees of certain elements of certain types of buildings. If you are building a bank, for example, you may wish to use the low screen type of counter. The architect knows that this is patented and that, even though it is not a manufactured article and has to be custom-made to fit your job, you will have to pay a royalty to the inventor. In building a multi-storied garage you may want to use, instead of elevators, a certain type of ramp construction which is also patented. Your architect may make the drawings for it and your builder may construct it but you will have to pay a royalty, even though the man holding the patent has had no direct part in doing the work for you. Your architect knows this and can keep you from blind-

*-ly going*



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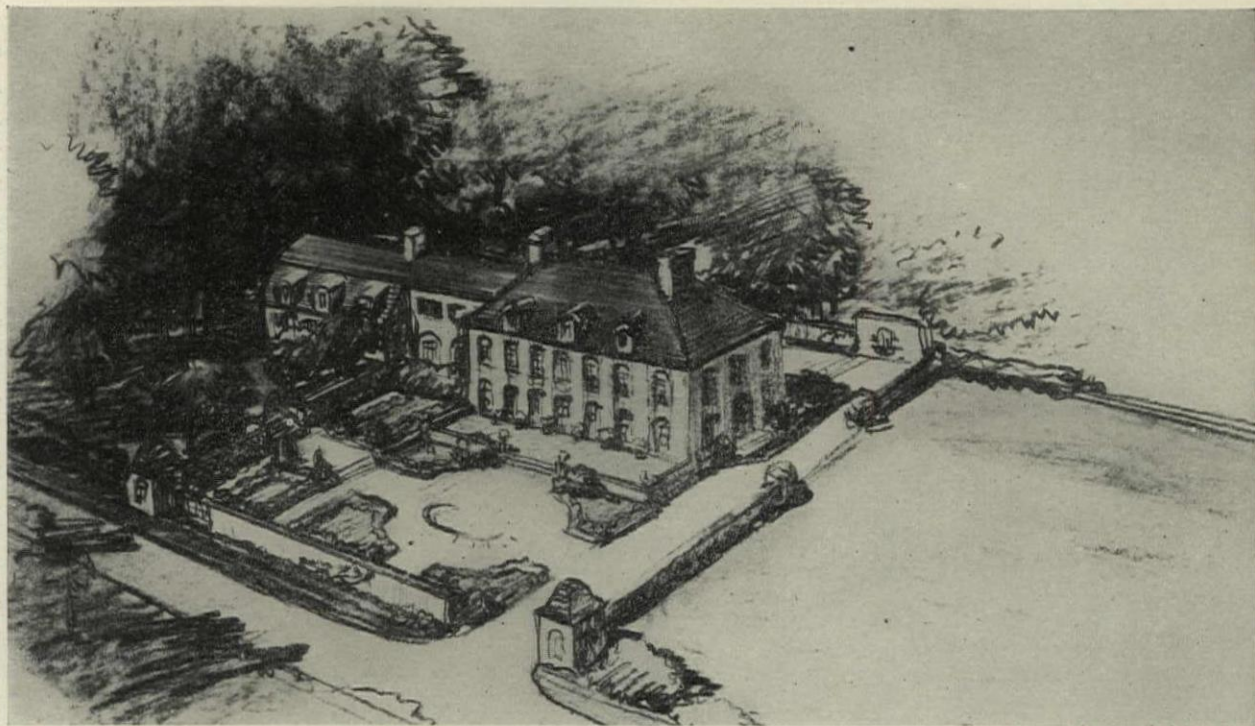
ly going ahead without realizing your liability for royalty payments. It is his business to know of these and a number of other patented systems and elements of construction.

If you employ an architect, then, he will see to it that you do not need to worry because of getting into legal difficulties. Your contracts will be properly drawn and he will conduct the work in such a way as to eliminate the many embarrassing disputes which might otherwise occur.

### [5] HIS KNOWLEDGE OF BUILDING CONTRACTORS.

The architect's knowledge of the good contractors of the locality where you are to build puts him in a position to serve you to advantage in the selection of the men who are to be invited

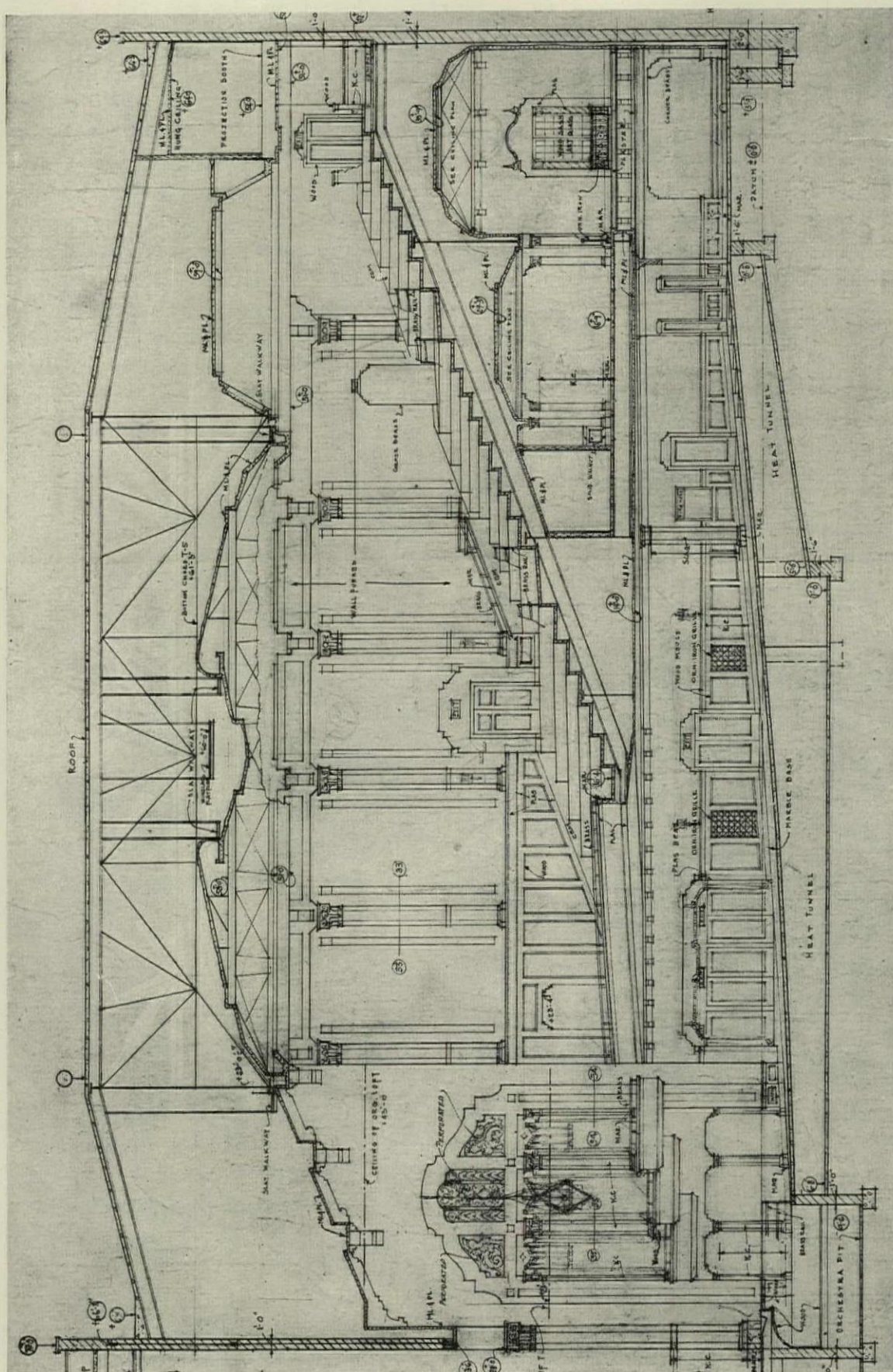
to bid on your job. If you follow the architect's advice in this matter you will avoid getting into difficulties and disputes due to inferior workmanship and shoddy materials which the unscrupulous type of builder might attempt to palm off on you. The architect can recommend to you, through his own experience or that of his brother architects, contractors who can be depended upon to do an honest job and who take pride in maintaining their reputations for first class work. He will get from these men bids upon which you can rely, so that in giving the work to the lowest bidder among them you will not be taking any chances. Incidentally, it happens very often that, in the one act of getting bids from reputable builders, the architect saves the client more than the amount of his fee.



ARCHITECT'S EARLY STUDY FOR A RESIDENCE—BIRD'S-EYE PERSPECTIVE

*Sometimes, as an aid to visualization, the architect makes rapid studies, drawn with a soft pencil or, as in this instance, with charcoal, to show the general massing of the composition and its relationship to the site. Such studies are valuable aids to the client since by this means he can see, in a general way, how his house or whatever it may be is going to look. Detail, at this stage, is only suggested.*





PART OF THE WORKING DRAWINGS FOR A BUILDING—IN THIS CASE A THEATRE—A "SECTION" DRAWN TO SCALE



# WHAT *Does The Architect Do For You?*

LET US follow through an architectural job from the time you decide to consult an architect to the completion of the work. First you go to him and tell him your ideas as to the type of building you want, where it is to be located, what your requirements are in respect to rooms needed, etc., what they are to be used for, how many people are to use the building, what style you prefer, how much money you have available—in short, everything you have on your mind in regard to the project. You talk the whole matter over with him, going into detail about even your most trivial desires—for it is the architect's wish to give you complete satisfaction. If it seems to him, in the light of his experience, that some of the things you call for are inappropriate or undesirable for one reason or another, he will do his best to explain why some other item or treatment would be better. If you are wise you will listen to him and heed his advice just as you heed that of your physician or legal advisor.

He will, no doubt, be able to suggest many things which you may not have thought of but which you will wish to include in your building if you wish it to be a complete and up to date solution of your problems. He will talk over with you the site conditions, the present and future land values, relationship to transportation, adjoining property conditions, public utility facilities including sewers, gas, water, heat, electricity, and so on. If possible he will visit the site with you so that he may see the conditions at first hand. Perhaps several interviews will be necessary before the thing has been completely thrashed out so that the architect can go to work on the preliminary design. Finally the preliminary plan scheme is worked out, together with an exterior design which will be a logical interpretation of the plan—pleasing in aspect, harmonious in color combination, and, as near as can be judged at this stage, within the appropriation.

And here let it be said that no exact estimate of the final cost of the building can be made during the preliminary design. The architect can compute the cubic contents of the building as tentatively laid out and arrive at an approximate figure by applying a cubic foot cost for similar buildings erected in the same locality under similar conditions, but until the final drawings and specifications are completed there is nothing upon which to base any sort of a hard-and-fast figure. When a group of builders, bidding on the same definite and detailed set of documents, cannot arrive at figures which agree within 10 or 20 per cent it is manifestly absurd to expect that better than an approximate figure can be computed during the early stages of the design, when you know that there will probably be a number of modifications and additions affecting the cost before the final satisfactory solution is arrived at. The most the preliminary figure can be expected to do is to give you some idea as to whether you will wish to proceed with the original general scheme as outlined or whether it must be modified to accord with the appropriation.

However, you now have before you the results of the preliminary study in the form of plans and a perspective pencil or water color sketch. These provide something definite for you to look at and visualize the completed building. The architect will point out to you the advantages or disadvantages of this or that feature and you and he will discuss them in detail. Standard forms of agreement between the architect and his client, such as you will probably have signed at one of the early interviews, provide that preliminary studies shall be modified and remodified by the architect until the client's problems have been solved. During this period you may, within reason, change your mind as to a given arrangement as many times as you desire, without involving yourself in extra expense. If these studies

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are conscientiously and thoroughly carried out they will save much grief at later stages in the project. It is best for you to "make haste slowly" during the preliminary study and be sure that everything is as you wish it to be before going ahead with the working drawings and specifications.

Items left out on the working drawings will involve "extras" if called for later. Neither architects nor contractors enjoy having these "extras" come up, for they almost invariably result in annoying disputes. Be sure, therefore, that you consider the preliminary design from every angle.

Let us now assume that you have finally approved the design and that such investigation of the probable cost of the building as has been made indicates that the project will come within the intended cost. The architect now goes ahead with the final set of working drawings and specifications upon which your contract with the builder is going to be based.

These documents are most necessary, for they are the only possible way to give the builder complete instructions as to the materials which are to be assembled and their manner of disposition to produce the building. Incomplete or self-contradictory documents would make it impossible for the builders to arrive at a definite figure and they would add to the bids a greater or less sum to protect them from loss resulting from confusion and misunderstanding. This could only result, in such cases, in wasting the client's money. Complete and well-made working documents, carefully checked by your architect, will practically eliminate disturbing and expensive adjustments.

It is your duty not only to furnish the architect in the beginning with complete and accurate information about your requirements and about the legal and topographical aspects of the site but also to give thorough consideration and study to all sketches, drawings, specifications, proposals, contracts, and other documents

which the architect may see fit to ask you to examine and approve. You may rest assured that he will not bother you unnecessarily with technical matters concerning working documents which you cannot be expected to grasp readily. Those things are for him to work out as a part of the service you engaged him to render. You should bear in mind that drawings and specifications are the language in which the architect expresses himself to the builder and that through them he presents his thoughts in the way that has been found best suited to their exact and complete expression.

Working drawings are neither studies nor sketches nor pictures—they are *working* drawings. A good working drawing is that which gives the builder exactly the information he needs to build from—no less and *no more*. It should be clean and clear and simple. It must be accurately drawn so that scaled measurements will agree with figures. It must present the essentials and nothing superfluous. It must avoid unnecessary repetitions. The set of drawings upon which the contract with the builder will be based commonly includes, at the smallest clearly legible scale, foundation-, floor-, and roof-plans, four elevations, and sufficient sections and details to constitute a complete description of all parts. From them the builder must be able to get, without difficulty, an accurate "bill of quantities" or list of materials he will need. From them he should also be able to make a close estimate of the labor costs which he will have to pay. Thus, as you can appreciate, he will be able to give you a figure, which will be as low as he can make it, including his overhead and his profit (usually 10%). If the drawings are incomplete or hard to read, as is the case when they are prepared by an unqualified person, the builder will have to allow by guesswork for unknown quantities and his bid will be higher. Obviously the drawings and specifications prepared by a competent architect insure a considerable saving to you.

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## WHAT DOES THE ARCHITECT DO FOR YOU?

The specifications are written to include verbal instructions not covered by the drawings and must be extremely exact with no ambiguities. They are prepared while the working drawings are in progress and their terms must interlock and agree with the drawings. They set forth the definite requirements concerning the quality of materials to be used and describe the minimum grade of workmanship which will be acceptable. In writing these specifications the architect or his assistant must review catalogues of materials, inspect and test samples of materials and devices, interview salesmen and compare market prices, determine what is best suited for the job, and act throughout as your purchasing agent.

Working drawings and specifications vary in intricacy and number according to the type of building they describe. The drawings for a hospital, a residence, or a church are more numerous and complicated than those for a storage warehouse or a garage, even though the same amount of expenditure may be involved. This explains why the architect's charges vary with the different types of buildings. It costs him more, per thousand dollars of building cost, to prepare drawings for the more complex types than for the simpler structures. Hence, he is justified in arranging his professional charge accordingly.

We have now reached the stage where the working drawings and specifications for your project are complete and approved by you. It is now time to let the contract. The ordinary method of procedure is for the architect, acting on your behalf, to invite five or more general contractors to prepare bids for the work. The architect usually suggests a number of prospective bidders whom he knows to be reliable and you may want to add to this list one or more contractors who are known to you. Blue print copies of the drawings and specifications are sent to each of the bidders. With these as a basis each one prepares an estimate of what it would cost

him to do the job, including overhead, addsthereto his percentage of profit, and presents his bid in a sealed envelope before the appointed date. These envelopes are all opened at the same time by the architect in your presence to insure fairness. Upon comparing them you will find that, even though the drawings and specifications were completely and adequately drawn up, the figures vary over perhaps a considerable range. The explanation for this is that builders vary in their ways of working and in the amount of labor saving devices and equipment at their command; also in their ability to purchase materials and labor to advantage. Furthermore, the general contractor's figures include bids furnished to him by sub contractors who wish to undertake the special parts of the work—plumbing, electrical, heating and ventilating, roofing, mill-work, cabinet-work, and so on, all of which act to multiply greatly the variation in costs due to natural diversity of individual practice. The general contractor, it should be pointed out, usually undertakes directly himself only the masonry or carpentry part of the work with perhaps the excavations and foundations, but all the sub contractors will be under contractual agreement with him and responsible to him for the carrying out of their parts of the whole.

But let us return to the consideration of the bids which have just been opened. They furnish the basis upon which the contract is to be awarded. Unless the lowest bid is so low as to suggest that the builder presenting it has made an error in his computations, or that he intends to try to substitute materials and workmanship inferior to those of his competitors, it is ordinarily successful in landing the job. (It is your right, of course, reserved for you by your architect when inviting bids, to reject any low bid that seems to you or to him inadvisable to accept.)

It is now time for the architect to draw up a properly worded legal construction contract between you and the builder. One of the architect's duties is to make sure that all the parties

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a clean out door for boiler flue as indicated.

This Contractor shall furnish the necessary angles (one angle to each 4" of wall thickness) for openings in masonry walls, all necessary anchors, straps and plate bolts, and shall set same.

He shall provide and set wrought iron gratings for all window areas where indicated on drawings.

He shall provide and set wrought iron railing for stairs to laundry as shown on drawings.

### FOOTING, FLOOR AND LEADER DRAINS:

Contractor shall provide and lay a 6" terra cotta footing drain, making a circuit of the house. This drain shall empty into a cesspool which this Contractor shall build at the low point of the property. Cesspool shall be 6'0" deep below point of discharge and 6'0" in diameter and shall be constructed of rubble stone laid dry.

He shall provide and lay 4" tile leader drains for all leaders and shall connect same to the footing drain.

He shall also provide, set and connect to the footing drain, cellar and area floor drains, where indicated. These drains shall be complete with backwater traps.

### STEEL SASH:

Contractor shall provide and install Truscon, or equal, steel sash where indicated in foundation walls, of the types and sizes indicated.

### AREAS:

Contractor shall construct areas for cellar windows where and as shown on drawings. Areas shall have brick coping flush with finish grade.

### STONE TRIMMINGS:

Contractor shall provide and set natural Indiana limestone sills, coping, base, steps from terrace to Sun Room ~~xxxxxxx~~ and steps to main entrance, as indicated on drawings.

Trimming shall be in accordance with details of color and texture approved by the Architect.

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### A PAGE FROM AN ARCHITECT'S SET OF SPECIFICATIONS FOR A RESIDENCE

*The "specifications" consist of many pages of written instructions to the builder and his workmen and cover matters which cannot be easily indicated on the working drawings and details. They deal in general with the quality of materials and workmanship which must be provided. They must be written with the greatest care and must be exact, with no ambiguities, if proper results are to be obtained. Writing the specifications is one of the architect's most important services to his client.*



## WHAT DOES THE ARCHITECT DO FOR YOU?

to these contracts, including yourself, understand clearly all their general conditions and details so that there can arise no disputes attributable to ignorance of their terms. It is probable that the architect will recommend at this time that the contractor shall be put under bond. This will cost you a small percentage of the cost of the job but will insure you against possible losses due to unforeseen circumstances such as the failure of the contractor to meet his obligations, and the money will therefore be well spent. You will not, if the contractor is bonded, have to worry about mechanic's or material men's liens.

Now you are all ready to proceed with the work. All necessary arrangements have been made to have it done and the drawings are filed with the building department of your local government against issuance of a building permit. The contractor gets the materials and men on the site and starts in. The architect turns to the preparation of additional drawings of details.

While the contract drawings include everything that is to go into the building, they are ordinarily made at such small scale that it is necessary for supplementary drawings of details to be prepared at larger scale to give the contractor, the sub contractor and their workmen a more exact picture of what is wanted. These enable the craftsman to so provide and shape his material that it may be placed in the building with minimum delay and chances for error. The number and scope of the detail drawings necessary depends on the size and complexity of the job. In a small house, for instance, they would very likely be comparatively few in number, whereas in a large public library there might be hundreds or even thousands of them. In the process of detailing the architect considers the best methods of assembling parts to avoid the evil effects of shrinking and swelling, easy motion of moving parts, water-proof and dust-tight qualities, etc. In these drawings, too, he gives particular attention to carved or modeled ornament, which, when well designed, contributes

to the beauty of the building. Sometimes he prepares, or has prepared, clay models of ornament which can be duplicated by the craftsmen in whatever materials are required.

Correct details not only reduce the cost of construction by answering the workmen's natural questions without delay, but greatly increase the comfort and convenience of the building. For example, such things as stairways, cupboards, bookshelves, and a host of others commonly encountered, may, if carefully worked out as to sizes and location, be so designed that they can be used without discomfort or inconvenience. On the contract drawings they are indicated at small scale, but if this were the only way they were shown the workmen would have to rely on their own judgment for the detailed dimensions and construction, which might or might not produce passable results. When each item is carefully studied in the architect's office, however, nothing is left to chance and you know that all will be of the best proportions for easy use. Also such things as flashing at window openings, cornices, chimneys, and so on have to be correctly detailed to insure permanent weather tightness. Detail drawings are furnished as required during the progress of the work, each one being properly turned out in advance of the time when it will be needed, so that there will be no loss of time and money.

But it is not enough that the builder be simply furnished with working drawings and specifications, including sufficient scale and full-size details. These documents give him the information he needs to have about the job, it is true, but to insure against possible misunderstandings and delays resulting from questions which may come up, and also to make sure that the documents will be properly interpreted, it is necessary for the architect or a competent assistant to visit the work regularly while it is in progress to exercise supervision. On larger jobs it is highly desirable to have continuous superintendence by a clerk-of-the-works representing the architect,

*especially*



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especially when the work is let on the separate contract basis with no general contractor as is sometimes the case. Having a clerk of the works involves payment for his services in addition to the regular architect's fee but should save the owner, by increasing the efficiency of the building operation, several times the supplementary amount. On ordinary small work, however, the general contractor's superintendent, knowing his responsibility, must be trusted to see that everything goes along smoothly as per schedule while the architect or his supervisor, in his visits to the job, will check up on quality of materials and workmanship. On these visits the architect or his deputy will also probably suggest minor adjustment, the desirability of which may become apparent to his trained eye as the work takes shape. These slight changes will not involve extra expense but will bring about improvements that would be omitted were the architect not on the job.

In seeing to it that the materials and workmanship are of the specified quality the architect performs for you a most valuable service. While a reputable contractor will not attempt to cheat or skimp on the work, still his attitude towards you is that of a seller towards a buyer and it would be only human for him to make substitutions or to let things get by which might reduce his costs and thus increase his profits. The architect's position, on the other hand, is the same as your own. He is just as anxious as you are that the building shall be correctly built so that it will reflect credit upon him as its designer rather than develop faults later on when it is put in service, leading to unpleasantness and recriminations. He will, therefore, insist that the work shall be properly performed so far as the contractor's men are able to do it. Of course, supervision is not a certain guarantee against bad work; superintendence is so to a much higher degree; but neither will turn a bad mechanic into a good one. The inexperienced or ignorant client is perfectly willing to award his work to the

lowest bidder among a group of unknown and untried builders, saying to himself, "Let the architect see to it that the contractor gives me a good job." He defeats his purpose by pretending to believe that the architect has some occult power unknown to other men.

It must be quite evident that the architect cannot, consistently with his other duties, be personally present at the work for any large proportion of his time and that he cannot be expected to pay for continuous superintendence. The custom of the profession is that when mere *supervision* will suffice, the architect furnishes it, but that when continuous *superintendence* is needed the client pays the salary of the clerk-of-the-works. Even in the latter case the architect gives supervision—and usually quite as much of it as in the former.

In all but small work the employment of a clerk-of-the-works is extremely advisable. It is the architect's responsibility to impress the wisdom of this course upon you and in doing so he is acting directly in your interests.

During the execution of the work it becomes necessary to pay the contractor, at agreed upon intervals, for the performance of part of his work. It is the architect's duty to issue certificates of payment assuring you that a certain portion of the work has been satisfactorily completed and that payment therefore is consequently justified and due. This he does upon application by the contractor, first satisfying himself that the status of the job is as stated. The certificates of payment are made according to a schedule submitted by the contractor to the architect before the first payment, showing the quantities of materials and the estimated labor costs for the whole job divided so as to facilitate payments to sub contractors. The architect investigates this schedule very thoroughly before approving it and then takes particular care that the amounts claimed as due to the earlier or middle stages of the work are not excessive. It is of some comfort to the client to know that this is being done for him.



# WHAT *Do The Architect's Services Cost You?*

WE HOPE that we have demonstrated that the architect's services are valuable. We are sure that, properly rendered, they will be worth more than they cost. Now, just how much will they cost?

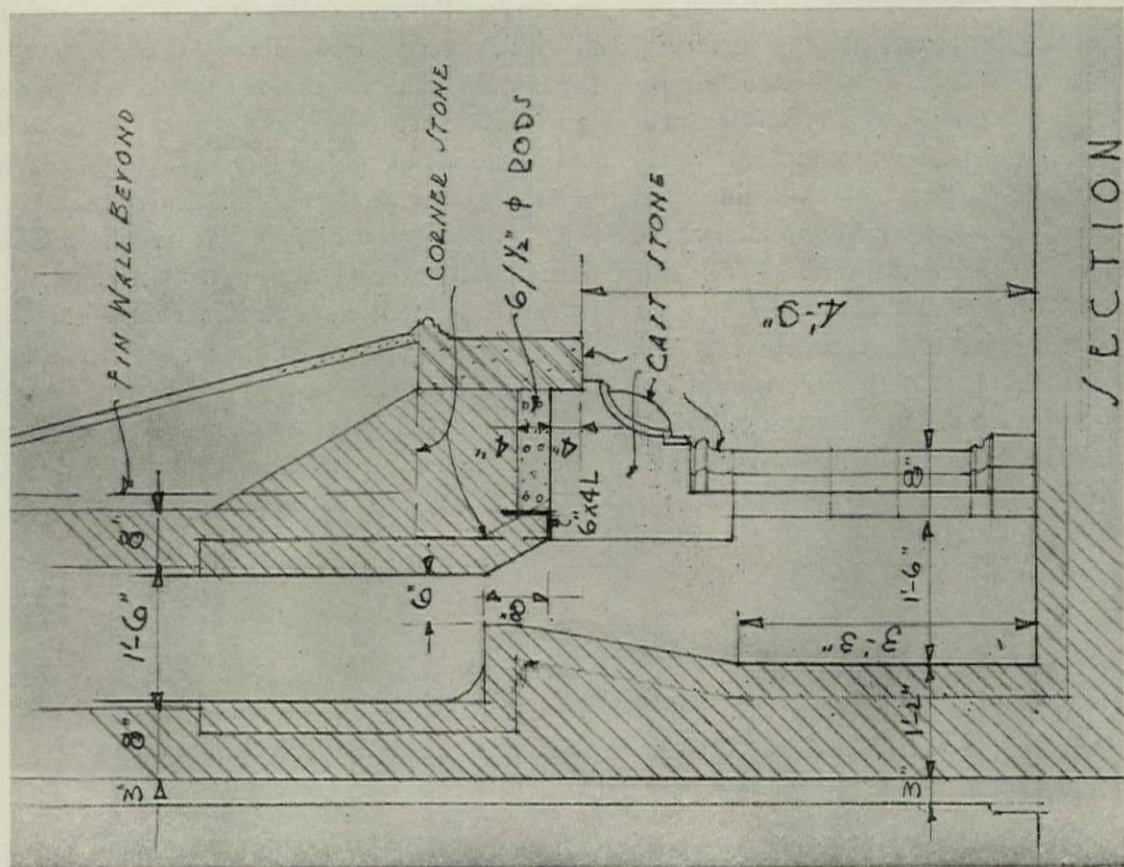
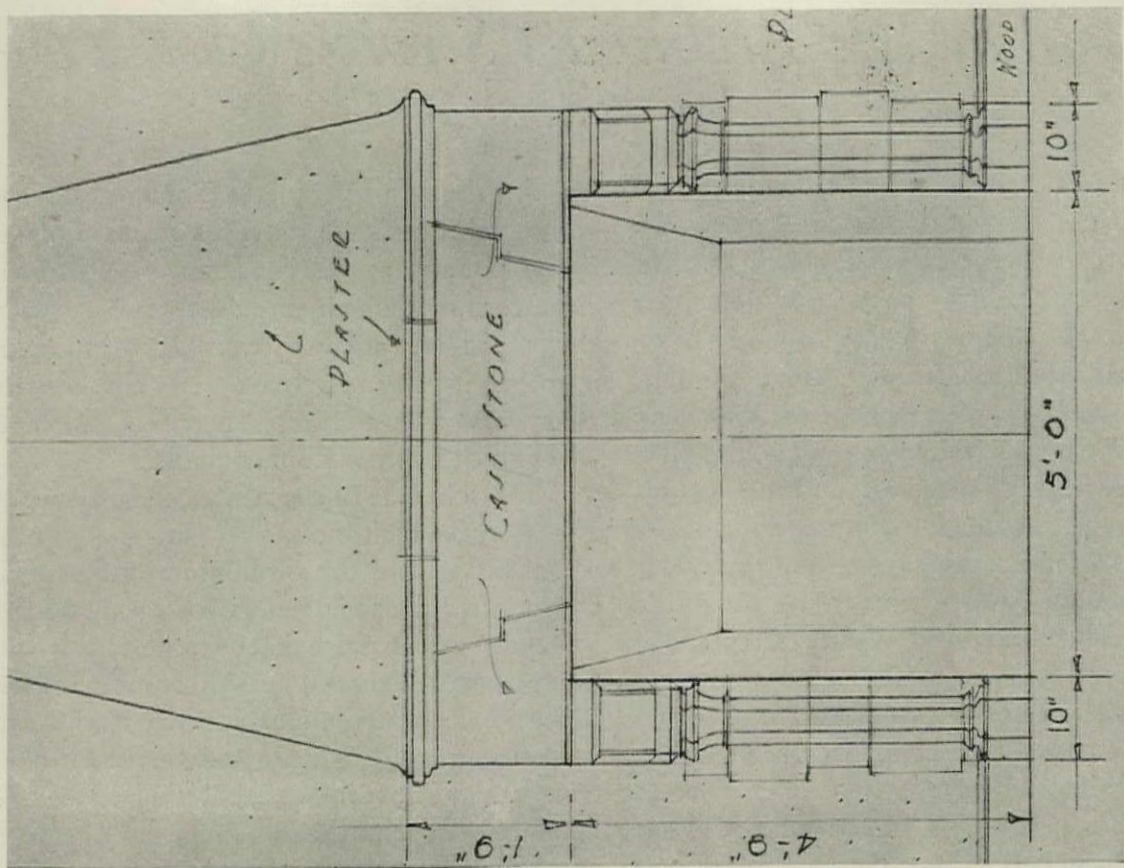
Architectural practitioners vary a good deal in their methods of charging for their services. Some of them undertake work on a cost-plus-percentage basis. In such cases accurate records are kept of the actual costs of preparing drawings and specifications, supervising the work, keeping records, and administering the job in question. The usual business overhead is added and the total is made the basis for computing the profit the architect shall receive. In other cases a fixed sum is agreed upon in the beginning as the architect's compensation to be added to his costs for performing the work. But by far the most general method of charging for professional services is for the architect to fix a percentage of the final actual cost of the building as his total charge, out of which he pays all the expense of doing his part of the job—drafting, supervision, overhead, etc. The schedules of minimum charges recognized by the leading professional bodies call for minimum fees for full service ranging from 5 % to 15 % depending upon the class of work. An honest job done under these conditions nets the architect, if he is lucky, not more than 2 % of the cost of the building—a very moderate profit indeed considering the amount of skill and energy that is demanded of him. When you stop to consider that the contractor, for managing the construction of the

building the architect designs, commonly makes 10 % or more over and above his operating costs it does not appear that the architect, who contributes more than anyone else to the success of the project, is in any way overpaid. In our opinion he is usually underpaid. It is noteworthy that very few architects ever become rich through their professional practice.

The schedule of the American Institute of Architects, which is our only National professional body, calls for a minimum professional charge of six percent in general for complete services and goes on to state that on residential work, alterations to existing buildings, monuments, furniture, decorative and cabinet work, and landscape architecture, it is proper to make a higher charge than above indicated. Residence work is commonly done at the rate of from 8 % to 10 % and alterations at 15 %.

When you go to an architect to engage him it is proper to settle at the outset the amount of his charge. Remember that it must depend upon his skill, experience, and standing, and upon the character and location of the work to be done, as well as upon the kind and cost of the services to be rendered. Complete understanding at the beginning of what the service he is about to perform will cost you or on what basis it will be figured will be of satisfaction to both parties to the agreement. We are certain that whatever you pay the architect will be more than repaid to you in saving on the cost of the building and in the increased convenience, comfort, and the pride of ownership it will give you.





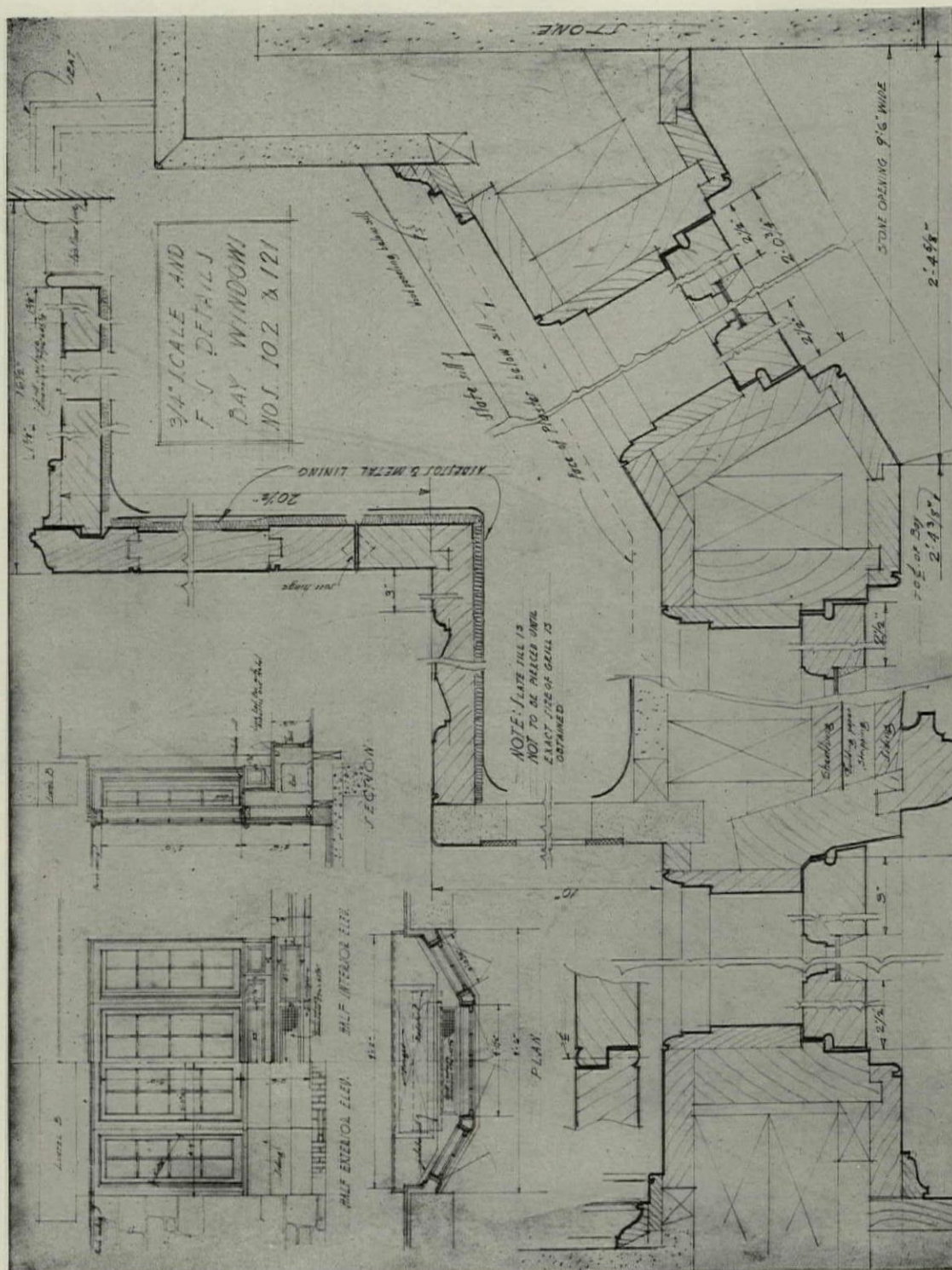
AN EXAMPLE OF A "SCALE DETAIL"—DRAWN SO THAT ONE HALF INCH ON THE DRAWING REPRESENTS ONE FOOT

At the left, the fireplace is shown in "section"; at the right, in "elevation." This drawing was made in pencil on tracing paper so that blueprints could be made from it. It is customary for the original working drawings and details to be made either on tracing paper or on tracing cloth for this purpose. The blueprints made from them are given to the workmen as needed. The originals are carefully preserved by the architect.









A "SCALE AND FULL-SIZE DETAIL" OF A BAY WINDOW SHOWING TRIM AND CONSTRUCTION

Important features of buildings require carefully made drawings such as this to insure that they will be built according to the best practice and that they will look well. The builder who is furnished with such drawings can do a good job with no waste of time or motion.



## How *Will You Select An Architect?*

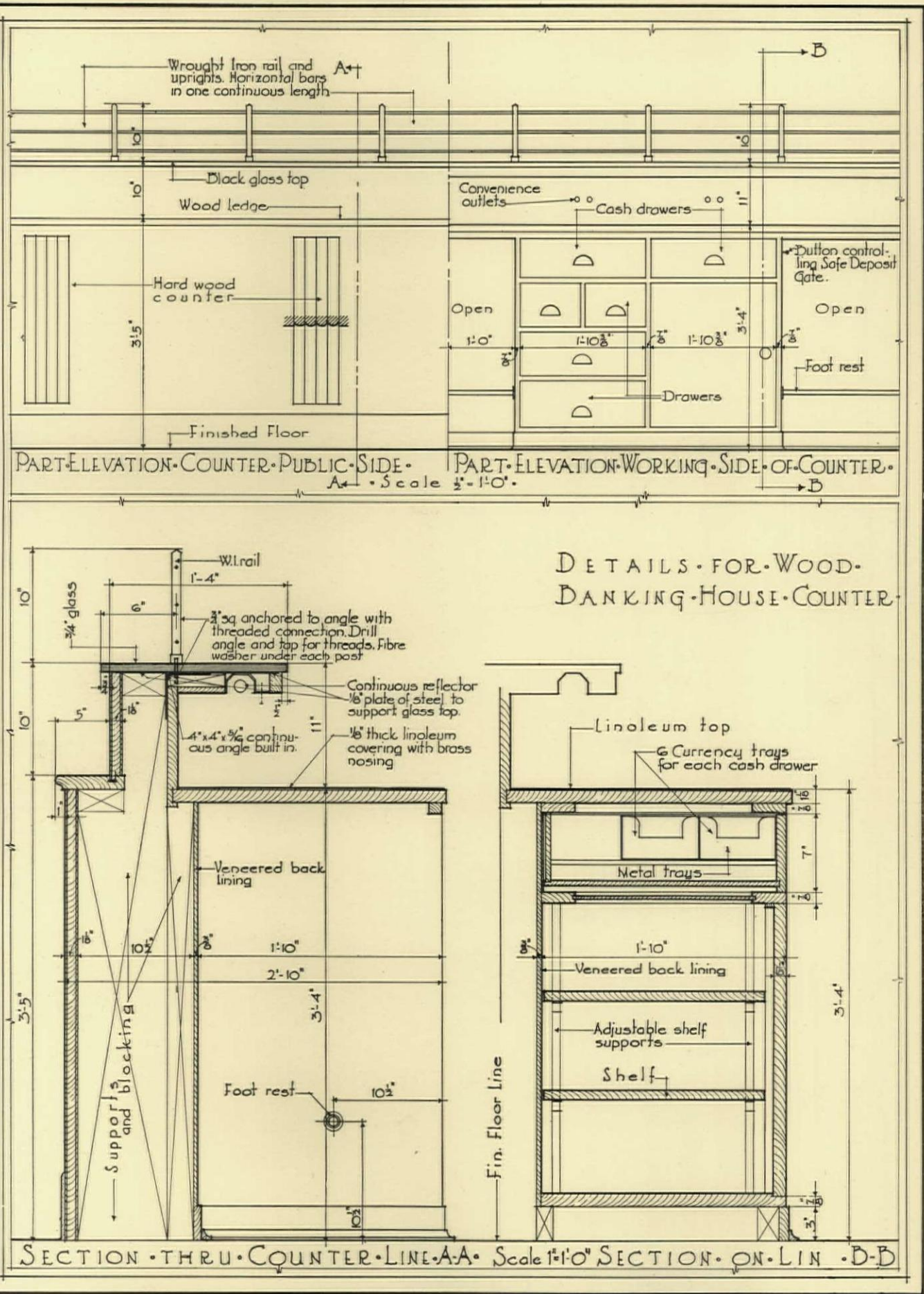
AS A GUIDE in selecting an architect we can give you only a few final bits of sound advice. Use your common sense in this matter just as you do about your other affairs. Remember that in any walk of life there are to be found men of greatly varying degrees of ability and integrity. If one of your household becomes ill and needs medical aid you do not rush out and dash into the first house or office where a physician's shingle is displayed. You make reasonable inquiries concerning the doctors in your vicinity and base your choice on what you find out. If you receive in your morning mail a notice that you are to be sued for something or other you do not turn to the list of lawyers in the telephone book and pick one out at random to defend you. You are careful to get a man whose record you have investigated. Similarly, in picking out an architect it will pay you to exercise equally deliberate judgment. If you do so we are sure that you will live to bless the day when you decided to avail yourself of the architect's services.

In case of appendicitis get a good surgeon; in the event of legal action consult a competent lawyer; in undertaking a building project engage an able architect. *You cannot afford to do otherwise.*



You  
Cannot  
Afford  
To Build  
Without  
The Aid of a  
COMPETENT  
ARCHITECT



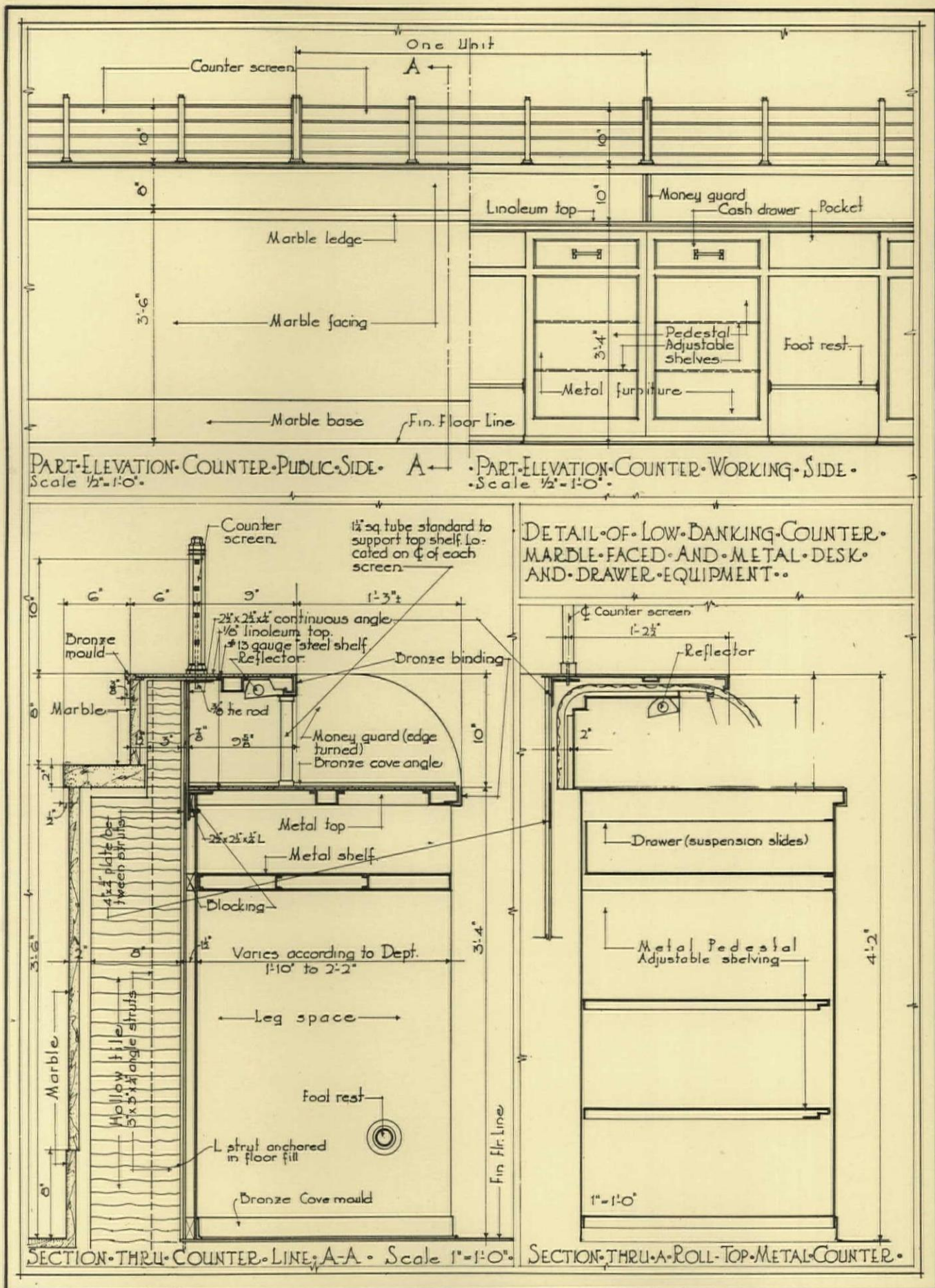


GOOD PRACTICE IN CONSTRUCTION—LOW BANKING HOUSE COUNTER OF WOOD—DRAWN BY PHILIP G. KNOBLOCH









GOOD PRACTICE IN CONSTRUCTION—LOW BANKING COUNTER OF MARBLE AND METAL—DRAWN BY PHILIP G. KNOBLOCH

PENCIL POINTS  
July, 1930









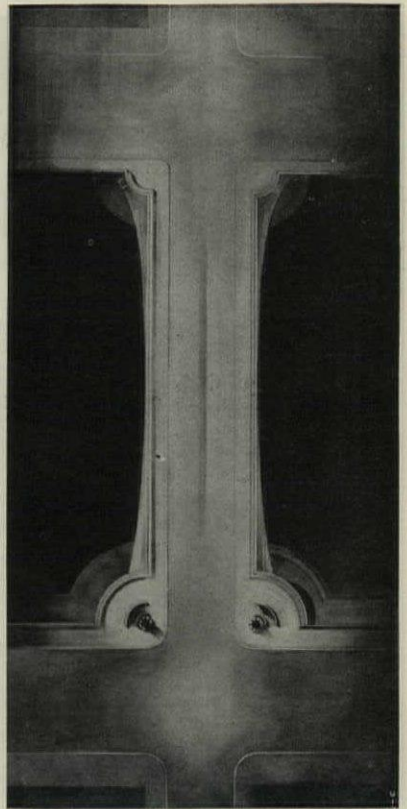
ALEXANDER H. BACCI

CHICAGO ARCHITECTURAL SKETCH CLUB  
SCHOLARSHIP AWARDED

ALEXANDER H. BACCI has been awarded the Chicago Architectural Sketch Club Foreign Travelling Scholarship for 1930, which carries a stipend of \$1200. Mr. Bacci is now employed by Messrs. John M. Howells and Raymond M. Hood, Associated Architects for the Tribune Tower, in their Chicago office. He is a graduate of the Crane Technical High School and holds a B. S. Degree in Architecture from Armour Institute of Technology, and was a co-winner of an annual award given by the

Evanston Art Commission for the best small house erected in that community in 1929. Mr. Bacci was born in Chicago in 1904 and has done some extensive travelling in the Orient since his graduation.

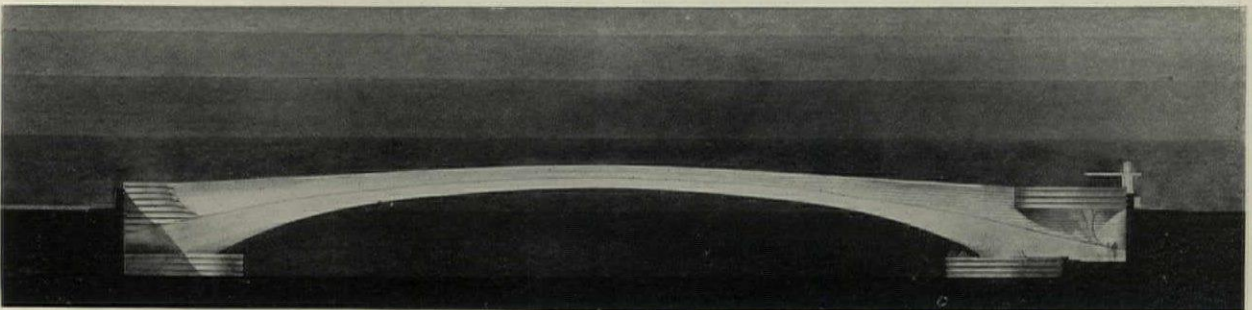
The subject of the competition for the Scholarship was a bridge, suggested as one of a series of fixed bridges between Michigan Avenue and Wells Street, spanning the Chicago River. Bacci's solution is marked by its simplicity and original lines, bespeaking its structural stability.



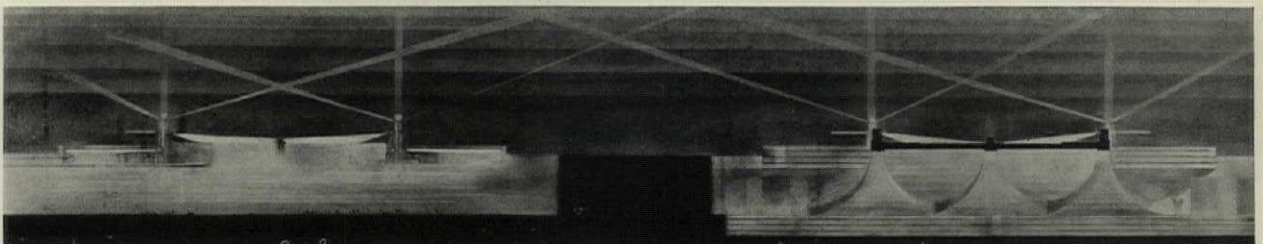
PLAN OF BRIDGE

It was the unanimous choice of the Jury of Award, which was composed of Chester Walcott, Chairman, Philip Maher, and Charles Bohasseck, architects, and L. E. Ritter, structural engineer. The second and third awards went to S. Johnson and A. Crizevsky, respectively, both graduate students of Armour Institute of Technology.

Mr. Bacci wishes to express appreciation to his former patron, Professor Earl H. Reed, Jr.



ELEVATION OF BRIDGE SPAN



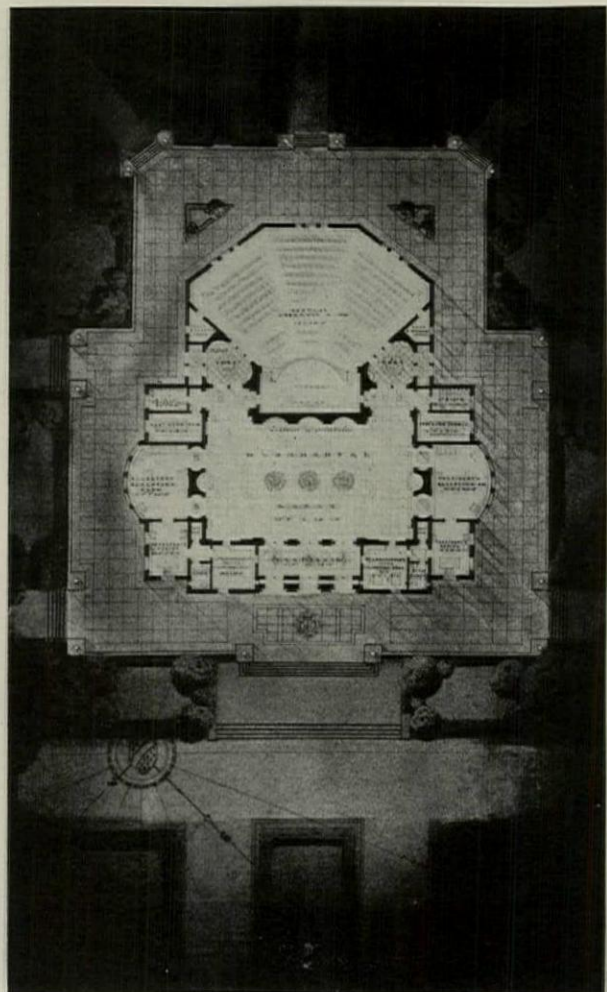
NORTH ELEVATION OF BRIDGE AND CROSS SECTION

"A FIXED BRIDGE OVER THE CHICAGO RIVER," PRIZE WINNING DESIGN BY ALEXANDER H. BACCI  
COMPETITION FOR THE CHICAGO ARCHITECTURAL SKETCH CLUB 30TH ANNUAL FOREIGN TRAVELLING SCHOLARSHIP





ELEVATION



WINNING DESIGN BY JONATHAN A. TAYLOR  
"AN ADMINISTRATION BUILDING OF AN  
EDUCATIONAL INSTITUTION"

#### GEORGE G. BOOTH FELLOWSHIP AWARDED

JONATHAN A. TAYLOR has been awarded the George G. Booth Travelling Fellowship in Architecture. This Fellowship is open to graduates of the College of Architecture of the University of Michigan. There were twenty-four competitors for the prize of \$1200 to be used for architectural study abroad. The problem was the design of *An Administration Building of an Educational Institution*.

The program stated that:

"This building, erected in a commanding place, on the campus of an educational institution, is to shelter the President's Offices, the Secretary's Offices, the Faculty Assembly Room, and a Memorial Hall.

"The site, nearly level, is large enough to permit good light on all sides and an appropriate setting.

"The building is to be one story high, and the floor of the Lobby and Offices a few feet above ground.

"The heating plant of the campus, outside of the premises, is to supply this building.

"The front elevation is not to exceed 140', not including terraces, steps, landscape features, etc."

Only two weeks are allowed for this competition. During one of these weeks the competitors must carry on their regular class work, the other week coming during the spring recess, giving a total of eleven or twelve working days. The drawings form only a part of the basis of judgment for the Fellowship, as the man's entire record is taken into consideration. The award was made by a jury composed of members of the architectural faculty of the University of Michigan and the following Detroit architects: Marcus R. Burrowes of Burrowes and Surich; Walter R. Meier of Donaldson and Meier; Robert W. Hubel of Albert Kahn's Office; and W. E. Knapp of Smith, Hinchman, and Grylls.

#### WALTER COPE MEMORIAL PRIZE AWARDED

AARON COLISH, 5740 North Twelfth Street, Philadelphia, a student in the Department of Architecture of the University of Pennsylvania's School of Fine Arts, has been awarded the first prize of \$100 in the Walter Cope Memorial Prize competition conducted annually by the T-Square Club of Philadelphia.

The second prize of \$50 was awarded to Leon-Graham Greene, of Balboa, Panama Canal Zone, who also is a student in architecture at the University's School of Fine Arts. Fifty-nine students were entered in the competition which was founded by Mrs. Walter T. Cope in memory of her husband, an architect, who died a number of years ago.

The Cope Prize Competition always calls for the design of a project which could be considered a civic improvement for Philadelphia and competitors this year were required to submit plans for the beautification of the west bank of the Schuylkill river at the intersection of Powelton Avenue and the two driveways under construction there.

This point lies opposite the Art Museum Plaza, and it was proposed in the competition to treat its beautification as an architectural decoration forming a vista across the river from the plaza.

Erection of an ornamental wall and broad steps leading from the upper drive to the lower drive along the Schuylkill were visualized by Colish in his prize-winning design. Statuary and an effective use of trees and shrubs add to the attractiveness of the plans.

Colish was graduated from the Northeast High School, Philadelphia, in 1927, and enrolled in the University's Department of Architecture the same year. He was recently elected art director of the University Dramatic Club for 1930-31.

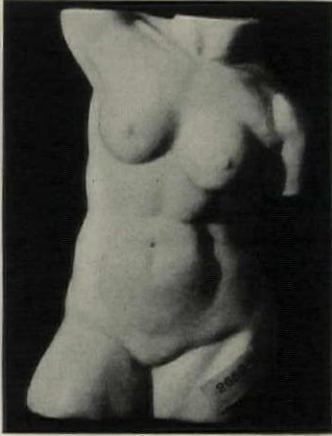
#### THE KNOBLOCH DETAIL SHEETS

THE TWO CONSTRUCTION DETAIL PLATES by Philip G. Knobloch for this month deal with the subject of low banking house counters. They were worked up from data kindly supplied by the office of Hiron and Mellor, Architects, of New York. Comments and discussion are invited.



### SOAP SCULPTURE PRIZES AWARDED

THIRTY-ONE HUNDRED DOLLARS in prizes and an art scholarship of one year's tuition in a selected art school were awarded at the Sixth Annual Exhibition of Small Sculptures in White Soap for the Proctor and Gamble prizes. Peter P. Ott, sculptor, of New York, won first



"TORSO," BY PETER P. OTT

prize of \$500 in the professional group. Edward Anthony, 17-year-old schoolboy of Wyndotte, Michigan, was awarded an art scholarship of one year's tuition in an art school to be selected by him from among twelve of the most representative in the country.

4911 pieces of sculpture in white soap from every state in the Union, from Canada, and from foreign countries were included in the exhibition.

The Jury of Award included George E. Ball, formerly Director of Design, The Gorham Company; C. J. Barnhorn, Sculptor, Cincinnati Art Museum; Alon Bement, Director, Art Center, New York; Gutzon Borglum, Sculptor; Harvey Wiley Corbett, Ex-President, Architectural League of New York; Harriet W. Frishmuth, Sculptor; Charles Dana Gibson, Artist; Leo Lentelli, Sculptor; Agnes M. Rindge, Associate Professor of Art, Vassar College; Dr. Gustave Straubenmuller, Associate Superintendent of Schools, New York City, and Lorado Taft, Sculptor.

First prize, \$300, in the Advanced Amateur group went to Frederick Holschuh of Philadelphia, for his piece "The Beggar." This

was also awarded the Gorham prize, as the single piece from the entire exhibition chosen by The Gorham Company



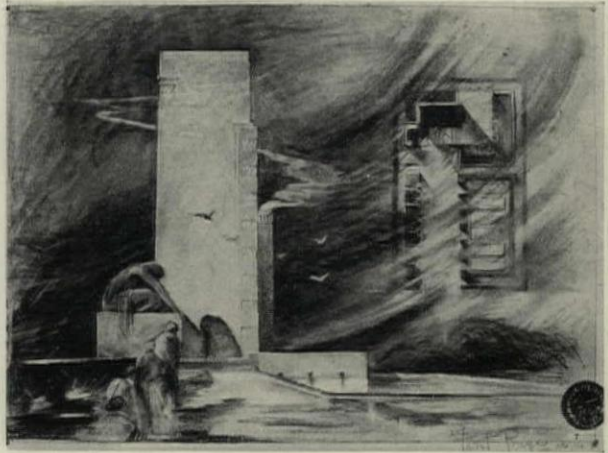
for reproduction in bronze. First prize of \$200 in the Senior group

went to Marie Beder of Brooklyn, aged 20, a student in the New York School of Fine and Applied Art, for her "Study of a Torso." In the Junior group, the first prize of \$50 went to Lucia Emily Doud of Malone, New York, aged 14, for her figure "Rosena."

A feature of this year's competition was a separate International Section. First prize of \$125 in this section was awarded to Eugene Mayer of Vienna, for his "Drei Damen."

### DESIGN IN MODERN ARCHITECTURE

ATTENTION OF OUR READERS is called to the omission from this issue of the usual installment of Mr. Harbeson's series, *Design in Modern Architecture*. Part 7 will appear in the August issue of PENCIL POINTS.



WINNING DESIGN FOR MEMORIAL,  
BY CHARLES H. JUMPER AND EDWIN WEIHE

### PRIZES AWARDED IN COMPETITION FOR MEMORIAL DESIGN

THE MEMORIAL CRAFTS INSTITUTE of New York has announced the following prizes in their recent competition for the design of a private memorial.

First prize of \$200.00 to Charles H. Jumper and Edwin Weihe, students at the George Washington University, Washington, D. C. Their winning design is shown above.

Second prize of \$100.00 to Harry S. Preble of New York, who was also awarded second honorable mention. Third prize of \$75.00 went to John T. Merkaarto of New York. First honorable mention went to T. G. Kronick and G. H. Perkins of Ann Arbor, Michigan. Third honorable mention to Primitivo Castrillo of Chicago, Illinois.

The designs were judged by Edward F. Allodi and William Henry Deacy, Architects, and Oronzio Maldarelli, Sculptor.

The program for the competition was published on page 393 of the May issue of PENCIL POINTS

### AWARDS IN COVER COMPETITION

THE EIGHTH ANNUAL COVER COMPETITION conducted by the *House Beautiful* magazine closed on May 15 with a record number of entries. 1817 designs were submitted, coming from every portion of the United States, Canada and Europe, and the average of excellence was higher than ever before.

The judges, consisting of W. A. Dwiggins, well known artist and author of *Layout in Advertising*, Donald Snyder of the *House Beautiful* staff, and Ethel B. Power, Editor of the *House Beautiful*, were unanimous in their final decisions, awarding the prizes and honorable mentions as follows: First prize: Bernice Stern, New York; Second prize: Elizabeth Lewis, Victorville, California; Student prize: Jean Mansfield, University of California at Los Angeles. Honorable Mention: Vanna Peters, Chouinard School of Art, Los Angeles; Digur Bader, Chouinard School of Art, Los Angeles; Marion Spangenberg, Philadelphia School of Design for Women; Alfred C. Parker, Clayton, Missouri; Mary Louise Ela, Rochester, Wisconsin; Nelson Grofe, Boyertown, Pennsylvania.

The usual cover exhibit, consisting of one hundred picked designs, will start its coast to coast tour of the country next September.



# HERE AND THERE AND THIS AND THAT



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—C. Turzak, of Chicago

Class II—A. C. H., of Oakland, California

Class III—Arthur F. Baer, of Cleveland, Ohio

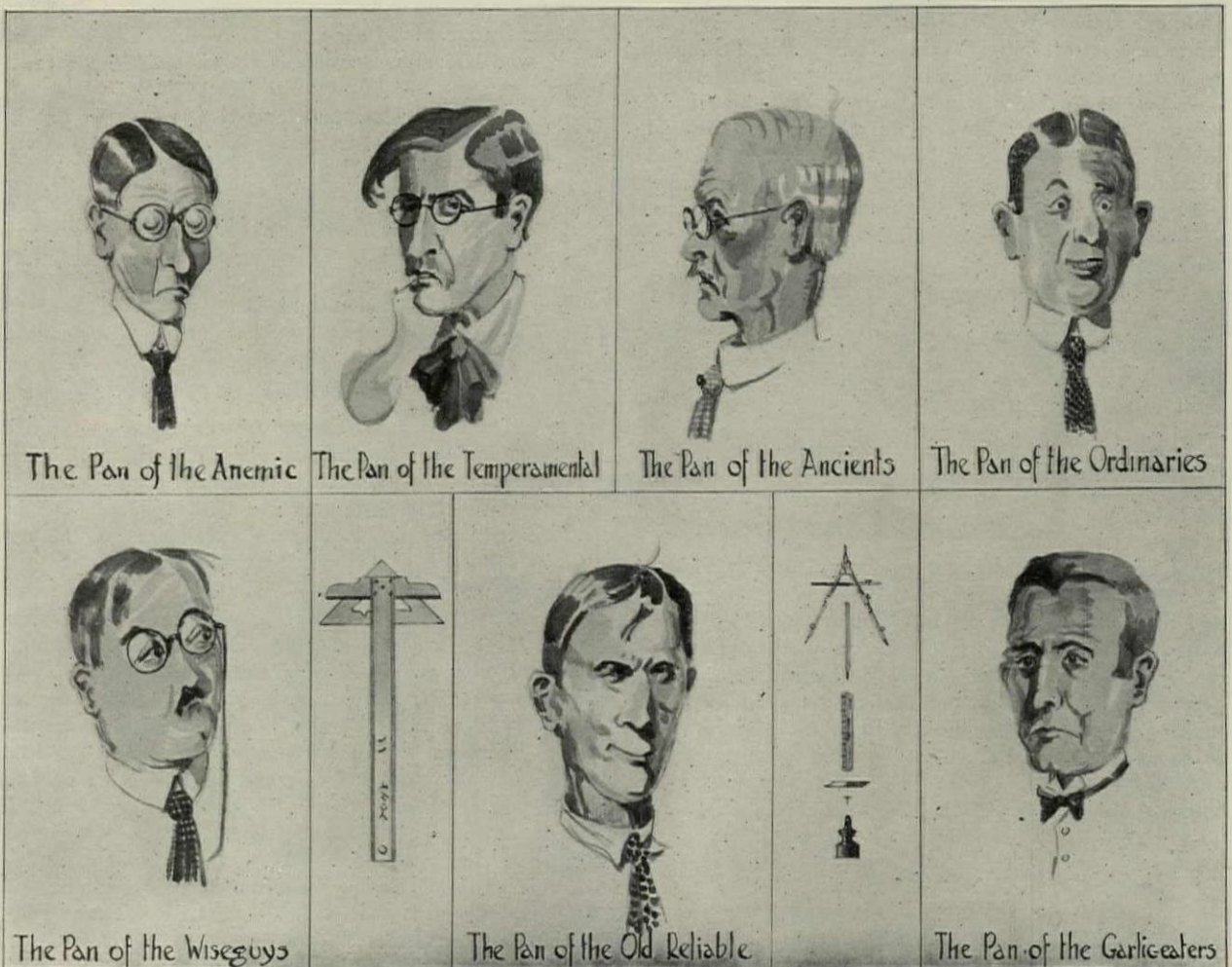
Class IV—Moreland Griffith Smith, Montgomery, Ala.

Last month we told you about Tommy Liang's design for a cover for PENCIL POINTS as it would appear in Chinese, and promised to reproduce it this month. Since that time we have received some more material from him which will make an article of several pages. We're therefore holding the whole thing until we have space to present it.

WE HAVE A couple of Wrinkles that have come in this month and both of them may prove of interest to some of our contributors.

J. Mac Culley, of Los Angeles, sent in this one.

"For making one's own Christmas cards, book-plates and the like, fully as simple and artistic as the block-print is the use of sepia or 'negative' paper. Make a print on this paper from your original drawing, which will be done on tracing paper, and use this print as your negative. The resulting prints will be exactly like the original, brown lines on white ground, and are attractive without color: but this paper is on exceedingly friendly terms with transparent water color, so if you want a gay card, soak the finished



"THE SEVEN PANS OF ARCHITECTURE"—A CARTOON BY ARTHUR F. BAER

(PRIZE—Class Three—June Competition)



## HERE AND THERE AND THIS AND THAT

prints in a basin, dry between blotters, and while still uniformly damp, lay on your colors. Those of us who enjoy putting our own greetings on paper have to begin thinking about it early, so this suggestion is not so untimely as it would appear."

And John E. Hyler, of Peoria, Illinois, sends along this aid to pen and ink rendering.

"No matter how great one's skill may be in the rendering of pen-and-ink drawings, there are always certain mechanical aids which can do much toward the making of a really good drawing. One instance of this is the using of a small tuft of absorbent cotton twisted around the end of a pencil or other handy stick, much after the manner of the physician's swab. The extreme end of the cotton, however, must not be twisted tightly, but left loose to form an odd, irregular brush effect.

"A good sized blot of ink is placed on an extra piece of waste paper, the cotton is dipped lightly into it and then worked over the drawing, after first trying it on a piece of waste paper to see how it is 'coming.' One will be surprised at the different effects he is able to gain with this after a little practice; effects which are altogether unattainable with any regular drawing instrument. Rough, uneven ground in particular can be depicted very closely."

### ONCE MORE

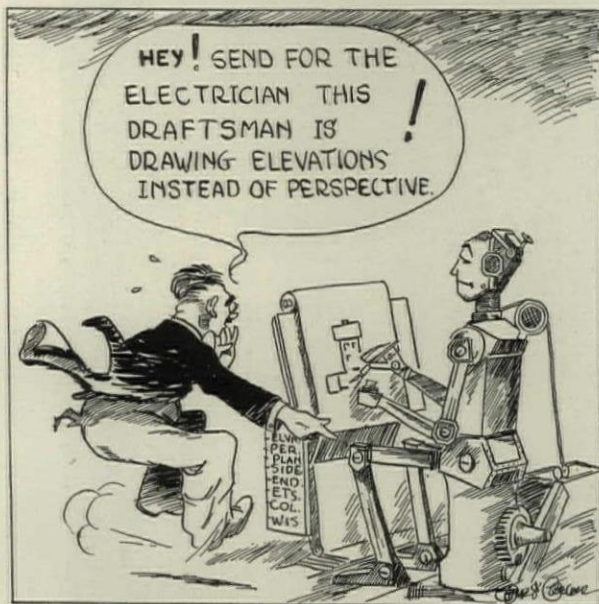
By A. C. H.

(PRIZE—Class Two—June Competition)

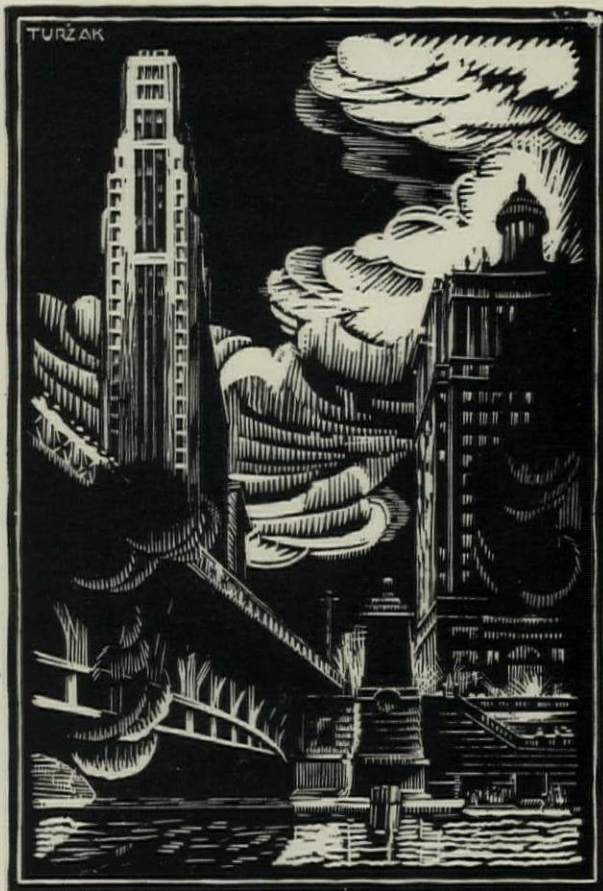
Hang on, impatient Draftsmen,  
And Architects mature;  
Material men and Craftsmen:—  
All leisure days endure.

He who's inclined to dismal moot,—  
Hang crepe upon his place,  
While experts now on dut—  
'y revive the normal pace.

All members of the Drawing Room:  
Give high Commission praise,—  
We're going to have a building boom  
In *another* sixty days.



"IN DAYS TO COME," BY JAMES NOECKER,  
OF CHAMPAIGN, ILL.



"NORTH MICHIGAN AVENUE, CHICAGO"  
LINOLEUM BLOCK BY C. TURZAK

(PRIZE—Class One—June Competition)

THE FOLLOWING LETTER was sent to us by Moreland Griffith Smith, of Montgomery, Alabama, and is the prize winner in Class IV.

Dougherty & Gardner,

Cotton States Bldg., Nashville, Tenn.

Dear Sir:—

I am written to ask you what opportunity your business can offer to a man 38 years of age with average ability, an open mind and a real capacity for hard work.

I have had a number years experience designing sketching in ink, water color, detail work and out side work of architectural.

I also can do furniture designing, detail work, every thing in this line.

You may be too busy to interview applicants indiscriminately, therefore I am taking the opportunity of bringing before you certain facts concerning myself which may help you to determine whether my qualifactorily the work you wish done.

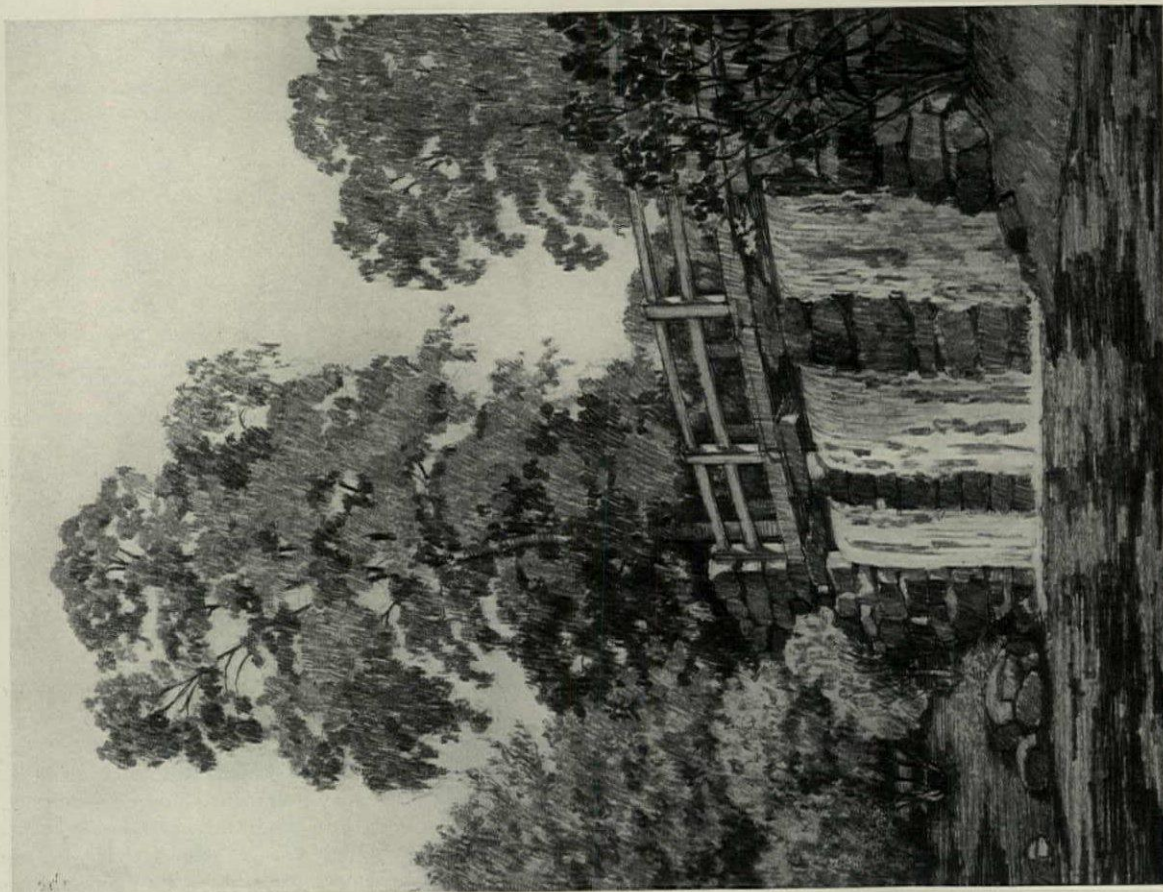
After you have read this application in full, may I ask to hear from you by return mail.

Yours truly, H. D. McEACHRON

Ass'n Commerce Bldg., Grand Rapids, Mich.

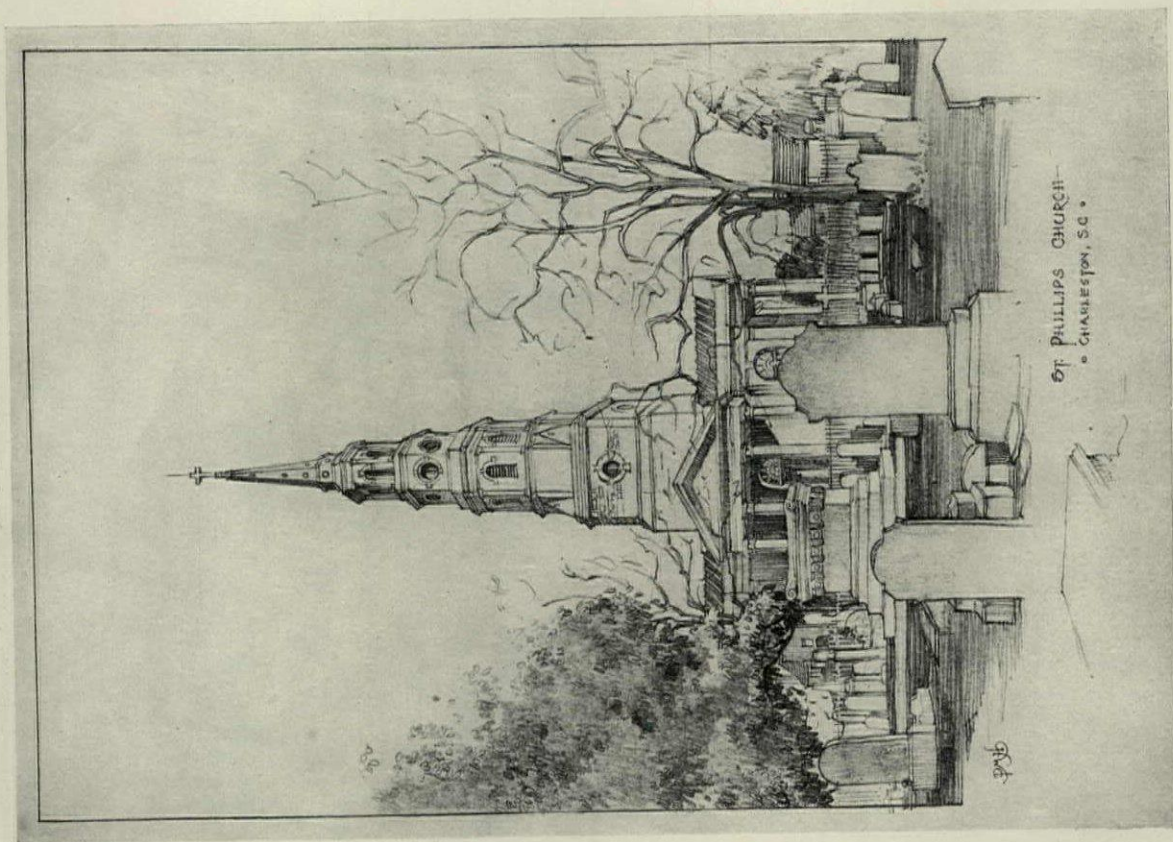
MR. FREDERICK C. KLAWITER of St. Paul, Minnesota, wrote us a letter recently in which he told us about how he improved his free-hand drawing. While listening in on the radio program he found that he was able to practice exercises in pencil sketching. He says that he could practice and listen in without detracting from the program in any marked degree, and feels that his work has been immensely improved. Let's give it a try!





BY SANFORD C. HILL, LANDSCAPE ARCHITECT

PENCIL SKETCHES ON CAMEO PAPER BY THE WINNERS OF THE CONDE NAST TRAVELLING FELLOWSHIPS FOR STUDY IN THE UNITED STATES



ST. PHILLIPS CHURCH  
- CHARLESTON, S.C.

BY PAUL M. HEFFERNAN, ARCHITECT





# THE SPECIFICATION DESK

*A Department for the Specification Writer*

## WATERPROOFING, DAMPPROOFING, AND FLOOR HARDENERS

*By David B. Emerson*

IN DISCUSSING WATERPROOFING, dampproofing and floor-hardeners, I shall write from the standpoint of a specification writer, and not from that of a chemist, as I am not a chemist, in fact my knowledge of that subject is very limited, therefore I shall treat more of the practical side of the question than of the technical side. Now let me say right here for the benefit of all concerned that this article is not written in the interest of any particular form of waterproofing or dampproofing or of any company manufacturing materials for these purposes, nor is it my intention to try to prove any one method superior to another, but to discuss all methods as fairly and justly as possible. Some misapprehension seems to exist among the younger members of the profession as to what constitutes waterproofing and what constitutes dampproofing, which frequently results in waterproofing being specified as dampproofing and vice versa.

Waterproofing consists of any of the various treatments of walls and floors to exclude water under pressure, whereas dampproofing is any one of the various treatments usually applied to the inside of walls above grade to exclude moisture caused by seepage during stormy or damp weather.

There are three general methods of waterproofing: the integral, the membrane or exterior coating, and the interior coatings.

Integral waterproofing is accomplished by adding various substances—usually colloidal in their nature—to the concrete to fill the pores, thereby keeping out all water. These waterproofing materials are either in the form of powders, pastes, or liquids, and are either mixed with the cement before dumping it into the hopper of the mixer or with the gauging water when it is in the powder form; they are always mixed with the gauging water when in the form of pastes and liquids. All integral waterproofings so far as I have any knowledge are patented products, and their composition is kept secret by the manufacturers. A very simple and also a very efficacious method of integral waterproofing, which can be used in localities where it is not easy to obtain the patented waterproofings, is the mixing of hydrated lime with the concrete. This method closes all the minute voids and pores in the concrete, which is all that is required to render it absolutely waterproof.

In specifying the waterproofing of concrete by the addition of hydrated lime the maximum amount of lime should be eight pounds to each sack of cement for a one-two-four mixture, and ten pounds to each sack of cement for a one-two-and-a-half-five mixture. The rule is twice the amount of the coarse aggregate for the number of pounds of hydrated lime. If very coarse sand is used the maximum amount of lime should be used, but with finer sand a smaller amount may be used, with a one-two-four

mixture as little as five pounds of lime to a sack of cement has been known to give perfectly satisfactory results.

The Portland Cement Association does not recommend the use of integral waterproofings in concrete, claiming that properly proportioned, properly mixed concrete is waterproof without the addition of any waterproofing materials. This may be correct in theory, but in practice it does not seem to work out so well, as I never remember in my experience ever seeing any concrete which had not been treated by some waterproofing method which was waterproof or anywhere near waterproof. I have never seen it so stated, but it may be possible that the addition of integral waterproofing materials may reduce the strength of concrete slightly, but surely there should be a large enough factor of safety to render that negligible.

The only fault which integral waterproofing has so far as I have ever learned is that in case of settlement cracks in the concrete leaks are liable to occur and integral waterproofing does not remedy them.

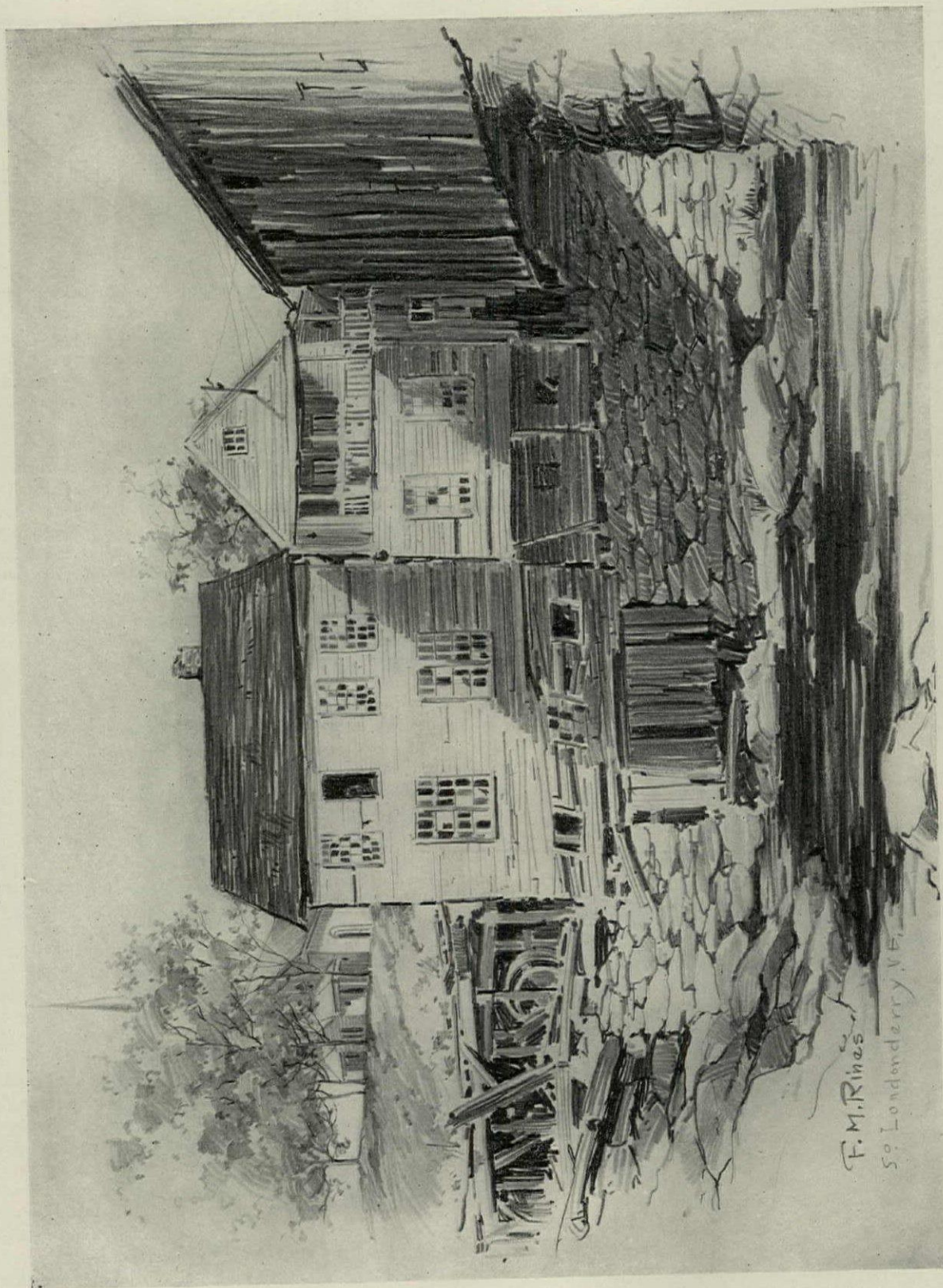
Integral waterproofing pastes, powders, and liquids, if mixed with cement mortar, which is used for the laying up of brickwork, will render the mortar waterproof, which will prevent seepage through the walls. This has been done in quite a number of large buildings in New York City in recent years.

Membrane waterproofing is the oldest form of waterproofing in use and has one great advantage in that it can be used equally well on concrete, brick, or rubble stone walls. The principle of membrane waterproofing is the forming of an unbroken envelope about the entire substructure of the building. This is accomplished by coating the outside of the foundation walls and under the basement or cellar floor with layers of coal tar or asphalt-saturated felt, bedded in and well mopped with hot coal tar pitch or hot asphalt, thoroughly lapping all joints both horizontal and vertical. It is very essential that the membrane shall run continuously under the walls, down the sides and along the bottom of all pits and trenches and under all column grillages. The number of layers or plies of felt depends entirely upon the water conditions. Where only a moderate amount of surface water exists, three plies are generally sufficient, but if a strong hydrostatic head is encountered at least five plies should be used.

Another very important item which must not be neglected in the specifying of membrane waterproofing is the forming of a key under all walls, over which the membrane should be carried. This can be done either by forming the key in the concrete or by laying a course of bricks directly on top of the footings. This is done to prevent the walls from sliding on the membrane, something which has been known to happen.

Membrane waterproofing is also used on top of the floor slabs under bathrooms, toilet rooms, kitchens and other





FROM A PENCIL DRAWING BY FRANK M. RINES  
"SOUTH LONDONDERRY, VERMONT"



places where a large amount of water is liable to be used, and also over sidewalk vaults. In waterproofing floors, the waterproofing should always be carried up at least four inches on all walls and around all pipes which run through the floor slabs.

The question of whether to use coal tar pitch or asphalt as a plying material is a mooted one, and so far as I know has never been satisfactorily settled. After the representatives of both interests have called and have told all the advantages of their material and the disadvantages of the other material, a poor bewildered and befuddled specification writer feels very much like saying with Mercutio: "A plague on both your houses."

One particular advantage which asphalt has is that it has a higher melting point than coal tar pitch, so when there is to be any exposure to high temperatures I would advise specifying asphalt rather than coal tar pitch. A recent development in membrane waterproofing is the introduction of saturated woven cotton fabrics as a substitute for rag felt. These fabrics are much stronger and consequently less liable to tear than the rag felt. The manufacturers of these fabrics claim that by their use two plies of fabric are sufficient under ordinary conditions, and three plies are sufficient for any condition.

The only fault I have ever discovered in membrane waterproofing is the possibility of a puncture and the practical impossibility of getting at the membrane to make any repairs. Having once had the job of locating leaks in membrane waterproofing, I can say that the traditional needle in the haystack was not much more difficult. For one use at least, I believe membrane waterproofing has no equal; that is for the waterproofing of floor slabs it seems to stand alone and to have no rivals.

The interior coating methods of waterproofing are the waterproofed cement, frequently called the "Hydrolithic method," although that title is somewhat misleading as "Hydrolithic" is a trade name and refers to one of the several types of the same method, and not to the method itself; and the iron dust or iron oxide method, frequently called the "Ironite" method, which again is also one of the several types of the same method.

The waterproofed cement method of waterproofing was developed by E. J. Winslow, about thirty years ago, and consists of a specially prepared cement mortar containing a waterproofing element, which is applied to the inside surface of the walls and over the basement or cellar floor. There are one or two companies making waterproofed cements to be used for this purpose; also waterproofing compounds are sold which when mixed with cement mortar render it waterproof. The coating on the walls is usually applied in two coats, finishing  $\frac{5}{8}$  inch thick, and that on the floors is usually one inch thick and serves the double purpose of a waterproofing agent and a wearing surface. This method is specially suited for the waterproofing of deep foundations under excessive water conditions, like the Vesey Street building of the New York Telephone Company, the foundations for which are carried down something like eighty feet, practically in the North River, and which has several basement stories below the water level which are perfectly dry.

The iron dust or iron oxide method, as it is sometimes called, consists of a finely powdered iron dust mixed with chemicals (generally sal-ammoniac) which when mixed with water causes the iron to oxidize rapidly and to expand to many times its normal size with a strong cementitious action, and a natural water resistant property. This compound is mixed to the consistency of paint and is brushed on in very thin coatings, four or five applications

generally being sufficient. It is necessary to cover the waterproofing on floors with a protective coat of cement mortar at least one inch thick. This type of waterproofing takes plaster perfectly, if it is desired to finish any rooms or spaces in the basement of the building.

A combination of the two foregoing methods of waterproofing has been used recently with very good results. The walls were waterproofed by the iron dust method and the basement floor was waterproofed by the waterproofed cement method. This saved the waterproofing of the floors and then having to put on the protective coat of cement mortar, one operation sufficing. In specifying waterproofing to be done by this method it is good practice to specify that the wall waterproofing should be carried out on the floor at least six inches, and that the floor waterproofing should be carried up on the walls at least three inches. This will insure a thoroughly watertight joint at the junction between the two types of waterproofing.

Before either the waterproofed cement method of waterproofing or the iron dust method are applied the concrete walls and floor should be thoroughly roughed and cleaned to form a good bond for the coating. One great advantage in the use of either of these methods of waterproofing is that if a leak occurs in the coating it is perfectly visible and the waterproofing can be hacked out and a new coating installed.

In all forms of waterproofing it is very important that where pipes or conduits go through the walls and puncture the waterproofing, the space around the pipe shall be made absolutely watertight by caulking and filling with asphalt or coal tar pitch. In specifying waterproofing it is well to remember that the application is worth quite as much if not more than the materials used, so it is good practice to specify that the work must be done by men thoroughly skilled in this kind of work, and by a company which has already done successful work of this character.

It is very important in writing the specifications for a building which is to have the basement floor and walls waterproofed, to call for certain work to be done by other trades to accommodate the work of the waterproofing contractor. If membrane waterproofing is to be used, abrasion walls either of brick or hollow tile should be specified under mason work. These walls should be four inches thick laid up against the sides of the excavation to receive the membrane before the walls are built. A cinder concrete mat four inches thick should be specified to receive the membrane under the floor and a protective screed coat of cement mortar one half inch thick should be specified to be laid over all membrane waterproofing of floors as soon as it is laid.

If the waterproofed cement or the iron dust method are to be used, a depression should be called for in the slab under the boiler, two feet at each side and at end of boiler and six feet at front of boiler, and six inches deep to allow for the installation of a sand cushion and a fire brick insulation under and around the boiler to protect the waterproofing. Also, specify that wherever doors occur in the partitions in the basement or cellar that slots shall be formed in the floor, to be three inches deep, one foot longer than the door openings and one foot wider than the partitions to accommodate the saddles and the door bucks.

Dampproofing, although it has only been in general use a little over thirty years, was known and used centuries ago. Cennino Cennini, a celebrated Italian painter writing sometime about the end of the fourteenth or the

(Continued on page 74, Advertising Section)





# THE DRAFTSMAN'S LIBRARY



CATHEDRAL OF KIEV, RUSSIA  
From "Russland—Europa—Amerika"

*Russland-Europa-Amerika, Ein Architektonischer Querschnitt*, by Erich Mendelsohn; 215 pages, 9" x 13"; price \$6.00; published by Contemporaria, Inc., New York, distributed by the Architectural Publishing Company, New York.

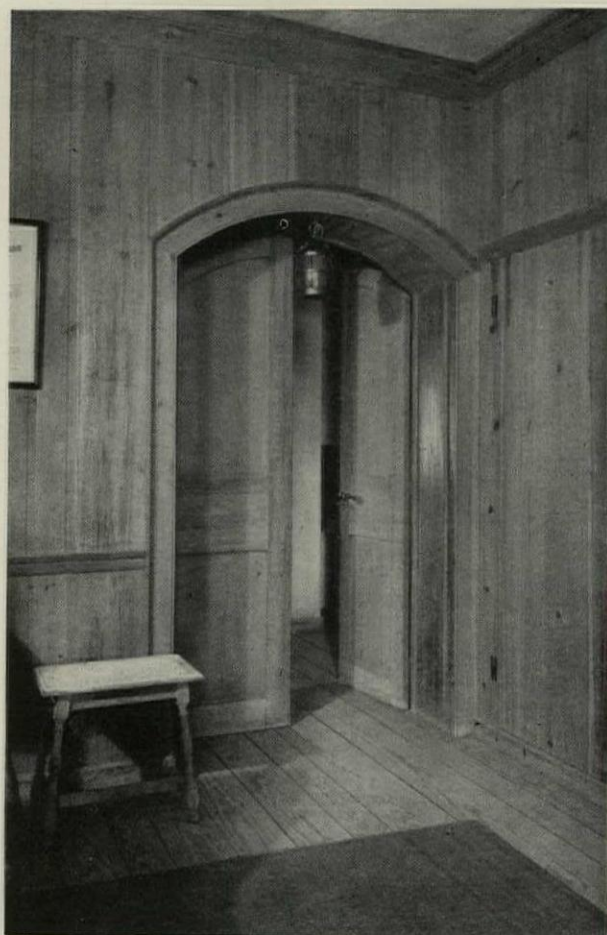
The collection of photographs contained in this work gives one, as implied by the title, an architectural cross section of Russia, Europe, and America as it looks today. It was prepared by the distinguished leader of the German modernist school, Erich Mendelsohn, and so is of definite interest as indicating what he considers significant in the contemporary picture. It is not a book to crib from but rather a bit of food for the architectural philosopher who wishes to look the field over rapidly and draw whatever conclusions may be drawn from what it shows. Each plate is accompanied by a brief note by the author pointing out what is of particular interest to him but unless you read German you will have to guess at the meaning.

*Colonial Interiors, Second Series*, by Edith Tunis Sale; 159 plates, 9 1/4" x 13"; price \$15.00; published by William Helburn, Inc., New York.

This volume supplements and is uniform in size with the previously published "Colonial Interiors" by Leigh French, Jr. It presents in convenient form a record of many full interiors, entrance halls, staircases, mantels, and other details of the colonial houses of Virginia. A few photographs of interiors in New Bern, N. C., and of Homewood, Baltimore County, Md., are included as being closely related to the Virginia work. Most of the 159 plates are photographs, but 15 of them are line drawings. They are arranged in groups according to subject so that if the reader is looking for chimney breasts, doorways, or what not he will not have to search through the entire volume.

*Old Houses in England*, by Rowland C. Hunter; 114 plates, 10 1/2" x 13 1/2"; price \$8.50; published by John Wiley & Sons, New York.

This book includes a fine collection of well taken photographs with a few sheets of miscellaneous details showing the less pretentious old houses which are scattered through the eastern and southern counties of England, principally in the smaller towns and their adjoining countryside. The plates are large and clear, giving a very good idea of the material, texture, and detail of the subjects as well as showing how well they fit into their natural settings. There is a definite charm to this old work and the designer can without incongruity make use today of the many suggestions that can come to him through familiarity with these buildings of another age. Half timber, brick, stone, wood, slate, and tile are capable of being used in the American architecture of today just as effectively as they were used in England several centuries ago and this book may help to inspire many an architect and designer to get the right feeling for this type of work.



INTERIOR, DIGGES HOUSE, YORKTOWN, VIRGINIA  
From "Colonial Interiors, Second Series"





COTTAGE NEAR GOUDHURST  
From "Old Houses in England"

*The Elements of Domestic Design*, by Arthur J. Penty; 102 pages, 9" x 12"; price 15s; published by The Architectural Press, London.

Mr. Penty is so well known through his writings as a mediævalist that we look with interest at what he has to say about domestic design. This book is based on a study of the primitive in design where the elemental things in architecture are to be found—hence the choice of a title. The author's thorough knowledge of architectural history gives him a sound point of view whence he gains a broad perspective of the field of domestic building. He takes up and discusses in turn each part of a house, considering it from the angle of good craftsmanship and honest use of materials. The wealth of practical information included concerning materials and craftsmanship, though written for British practice, may be of immense value to the American architect, designer, or draftsman and give him increased understanding of why things are done the way they are. The illustrations are drawings by the author, excellently presented and full of data relating to all sorts of details found in English residence work. Altogether it is an extremely useful volume for anyone interested in residence design.

*The Skyscraper*, by W. C. Clark and J. L. Kingston; 159 pages, 6" x 9"; price \$2.00; published by the American Institute of Steel Construction, Inc., New York.

After two years of study and investigation the American Institute of Steel Construction has published the findings of its committee in this slim but intensely informative volume which should be of great interest to every architect who is designing, or hopes to design, skyscraper buildings. The economic considerations which govern skyscraper heights should be known before designs are prepared and if the architect is in possession of this knowledge he is much better fitted to advise his client. Too often the architect, through ignorance of the economics of the situation, is relegated to a minor position during the promotion and execution of such a building project and this situation, we feel, is not to the best interests of the client. If the architect were in possession of complete knowledge as to what factors entered into the question of comparative financial return on a twenty, thirty, or forty story building on a given site he would be in a better position to dominate the project. This book will help him.

*The Design of Masonry Structures and Foundations*, by Clement C. Williams; 583 pages, 6" x 9"; price \$5.00, published by the McGraw-Hill Book Company, New York.

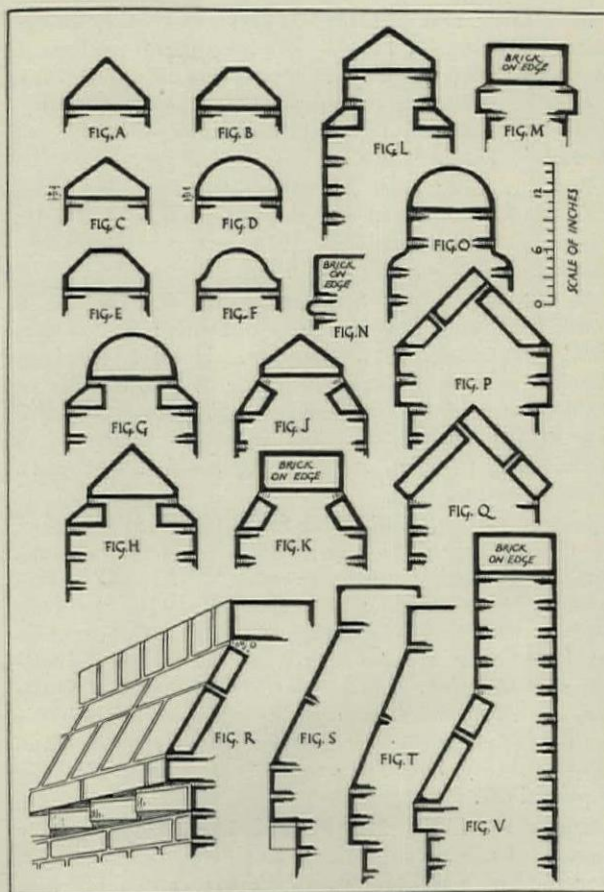
This volume is an extremely competently written engineering textbook on masonry structures and foundations which might be valuable to an architect who was confronted with the necessity for figuring his own structures. It was written primarily for classroom use. The author is Dean of the College of Engineering at the University of Iowa.

*Pictorial Drafting*, by John H. Hills; 152 pages, 5½" x 8"; price \$1.50; published by the McGraw-Hill Book Company, New York.

A textbook for high school use, written by a teacher of long experience, this volume covers the various phases of isometric and perspective drawing that might be met with in the drafting rooms of engineering and architectural offices and shops.

*Architectural Shadow Projection*, by John M. Holmes; 58 pages, 9½" x 12¾"; price 10/6d; published by The Architectural Press, London.

This is a clearly written and illustrated exposition of the method for casting the conventional architectural shadows and covers all the essential forms. Study of its pages will equip the student-draftsman with sufficient knowledge to lay out correctly any shadows he is likely to meet in making formal architectural renderings. The author's experience as a lecturer at the Architectural Association School of Architecture in London has enabled him to appreciate the student's difficulties and show how they may be overcome.



WALL COPINGS

From "The Elements of Domestic Design"





# 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

O. L. Norman, 11 W. Brady Street, Tulsa, Oklahoma, has for sale all copies of **PENCIL POINTS** from November, 1926, to the present date. Will accept a reasonable offer for all or part.

Mrs. Gilbert E. Tucker, 2211-11th Avenue, North, Seattle, Washington, has the following copies of **PENCIL POINTS** for sale: January, February, March, April, May, and June, 1920; all except January of 1921; January, February, March, April, July, September, October, and December, 1922; March, and April, 1923.

Paul H. Till, 3146 Pennsylvania Avenue, St. Louis, Mo., would like to sell the following copies of **PENCIL POINTS**: 1924, complete; 1925, complete; January, March, April, May, and June, 1926.

Mrs. Philip Sellers, Swarthmore, Pa., has for sale as follows: **PENCIL POINTS**—July to December, inclusive, 1924; 1925 and 1926 complete; January, February, March, June, and September, 1927; also back issues of the *Architectural Record* (some bound), *House Beautiful* and *Architecture*; a case of drawing instruments, 4 T-squares, 3 triangles, and drawing board, 2 and 3 ft. vanishing points.

John A. Galvin, 1745 Irving Street N. W., Washington, D. C., has the following **PENCIL POINTS** for sale: October, November, and December, 1920; all except October, November, and December, of 1921; the years 1923 to 1929 inclusive, complete except for the February, 1924 issue. He also has for sale the following books: *Raguenet-Materiaux et Documents d'Architecture et Sculpture*; *Les Medailles Concours d'Architecture*; *Grand Prix de Rome* (four portfolios) *d'Architecture Ecole de Materiale des Beaux Arts*; *Documents d'Architecture Moderne* (3 portfolios).

Sidney W. Little, 202 Burbank Drive, Snyder, New York, has for sale the January, and February, 1925, and June, 1929, issues of **PENCIL POINTS**; also some back numbers of other architectural magazines.

For Rent—Desirable office, 12th Floor, 101 Park Avenue, New York. 638 sq. ft., \$170.00 monthly. Apply Room No. 1230, North Wing.

Albert H. Dow, 192 Boylston Street, Boston, Mass., has for sale copies of **PENCIL POINTS** dating back to 1920.

E. G. Kingston, 65 Kenwood Avenue, Worcester, Mass., has for sale a library of architectural and engineering books, including monographs, A-1 condition, mostly in latest editions; file of indexed magazine plates from domestic architectural issues of past eight years; also files (almost unbroken) of practically all architectural periodicals for the past few years, except recent issues.

C. R. Dennison, 33 Scott Street, Youngstown, Ohio, has all copies of **PENCIL POINTS** from the first issue for sale at a reasonable price for the lot, purchaser to pay carriage charges.

Allen W. Baker, Jr., State Bank Bldg., Coloma, Michigan, would like to obtain a copy of the December, 1928, issue of **PENCIL POINTS**.

## PERSONALS

LEVI A. GENIESSE, ARCHITECT, has recently opened an office at 510 Minahan Building, Green Bay, Wisconsin. VAN WART AND WEIN, ARCHITECTS, have moved their office to larger quarters in the same building, 347 Madison Avenue, New York.

THE OFFICE OF W. STANWOOD PHILLIPS, ARCHITECTS, INC., of 521 Fifth Avenue, New York, wish to announce that Mr. LOUIS KURTZ is no longer connected in any way with the organization.

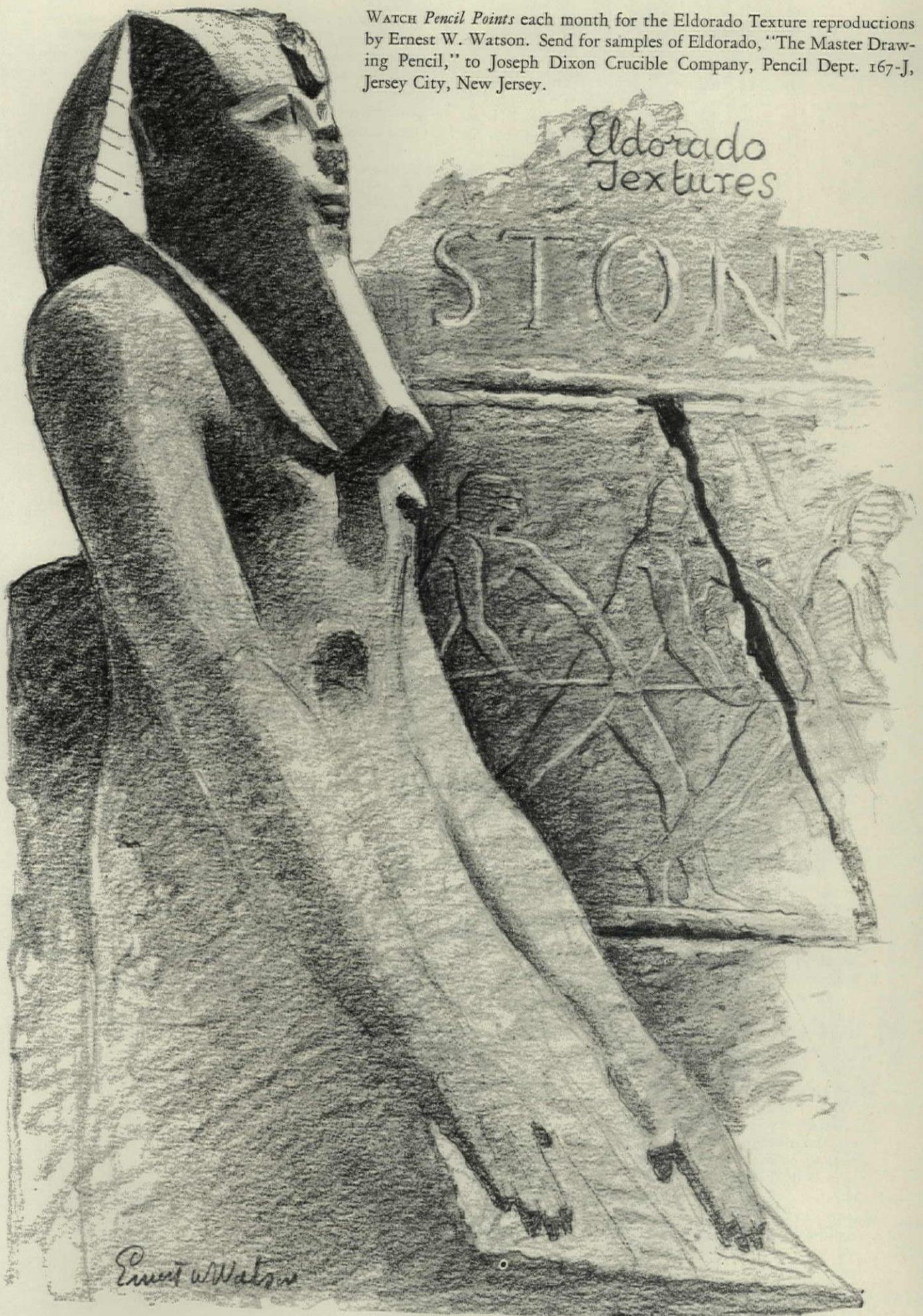
FREDERICK C. KLAWITER, ARCHITECT, has resigned from the firm of Martin Tullgren & Sons Company, Architects, of Milwaukee, Wisc., to enter private practice at 2077 Fairmount Avenue, St. Paul, Minnesota.

JOSEPH HALSTEAD ROBERTS, ARCHITECT, formerly at the Marine Bank Building has moved into his new quarters at 501 Termino Avenue, Long Beach, Calif. As Secretary of the Architectural Club of Long Beach, Mr. Roberts requests all communications to be sent to the new address.

FREE EMPLOYMENT SERVICE ITEMS WILL BE FOUND ON PAGE 78, 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 Company, Pencil Dept. 167-J, Jersey City, New Jersey.





## WATERPROOFING, DAMPPROOFING, AND FLOOR HARDENERS

(Continued from page 601, Editorial Section)

beginning of the fifteenth century, and giving instructions for the remedying of a damp wall before painting on it, recommends several methods, one of which is as follows: "First take boiling ship's pitch and rub it well into the wall. When you have done this, take the same pitch (*pegola o pece*, i. e. coarse natural turpentine resin) and take dry new bricks pounded, in the same way pound them and incorporate them with the said *pegola*; put same all over the wall, that is wherever there is any damp and beyond. This is a perfect cement (*smalto*)."

Not such a far cry to our present-day dampproofing, and the powdered brick made a pretty fair plaster bond. So far as I have any knowledge the foundation of all dampproofings is bitumens, usually asphalt, and as practically all of them are patented products, their exact composition is kept secret by the manufacturers. There are a number of different types of dampproofings on the market suited for different conditions and different uses, the principal ones being the mastics which are so heavy that they are applied with a trowel, the semi-mastics which are soft enough to be applied with a heavy roofing brush and the damp resisting paints which are applied with an ordinary brush. The majority of the mastics and semi-mastics contain asbestos fibre, which prevents the material from running in the summer and the asphalt prevents cracking in the winter.

A comparatively new preparation for use in dampproofing is the asphalt emulsion which is produced by dispersing pure asphalt in the form of minute particles in a water vehicle, with a small percentage of a colloidal mineral. This emulsion is of a heavy creamy consistency, in perfect suspension. When the emulsion is applied to the surface of a wall or elsewhere the water vehicle evaporates and the particles of asphalt coalesce, resulting in a firm coating of pure asphalt.

A new method of dampproofing has recently been perfected which is done in two operations. The first operation consists of coating the wall surface with a cement filler composed of cement, lime, asphalt emulsion and water; the second operation consists of the spraying on of an asphalt emulsion.

In specifying dampproofing, always call for the materials to be applied in strict accordance with the manufacturer's instructions, and without thinners or adulterants. Also, specify that the dampproofing shall be carried up into all window jambs and chases, and out at least one foot on the under side of all floor slabs. Dampproofing, either mastic or semi-mastic, is frequently used on the outside of walls below grade where there are no serious water conditions to contend with but merely to prevent the moisture from the earth from penetrating the walls. This method of dampproofing is quite inexpensive and it practically always insures a dry basement.

Colorless or transparent dampproofing—called "colorless waterproofing" by some manufacturers—is made in two forms, liquid dampproofing and dampproofing powder. The liquids are usually a combination of stearates and mineral waxes cut with volatile liquid thinners. They are applied either by brush or by spray, and penetrate stone or brick thoroughly closing all cracks and pores, the volatile thinners evaporate leaving only the water resisting materials. The dampproofing powders are specially prepared, and are dissolved in clear water on the job and are applied by brush or by spray. Colorless dampproofings are used on the outside of exterior walls either brick,

stone, stucco or concrete, where as a result of improper construction or faulty materials water or dampness find their way through the walls, and they are also specified to be applied to walls which are to be built and there is a possibility that they may not be dampproof, and also to prevent efflorescence.

One of the latest, if not the latest, developments in the field of waterproofing and dampproofing is spandrel dampproofing or spandrel waterproofing or spandrel flashing, as it is variously called. This form of dampproofing has been developed to overcome what is probably the greatest defect found in the skeleton type of construction, whether built with steel or concrete frames, which is the leakage above and below the spandrel beams. These places are undoubtedly the most vulnerable spots in the whole building; where the curtain wall rests on the framing the moisture passes through the wall at the top of the spandrel beam due to the comparative smoothness of the concrete, and at the lower surface of the beam the wall pulls away from the concrete just a sufficient amount to cause a slight crevice through which moisture readily enters. Spandrel dampproofing is done with either asphalt saturated felt or saturated fabric, and is carried down the face of webs of the beams or on the face of the beam filling where steel framing is used and down the face of the beams where a concrete frame is used, and out on the lintel or a joint, and the top of the felt or fabric is turned up on the back of the wall at the floor level. The felt or fabric is given two trowel coats of asphalt mastic and all joints in the felt or fabric are cemented with mastic.

Another method of spandrel dampproofing is done by using a heavy cotton fabric impregnated and coated on both sides with asphalt which does not require coating with mastic, but simply has the joints cemented with it.

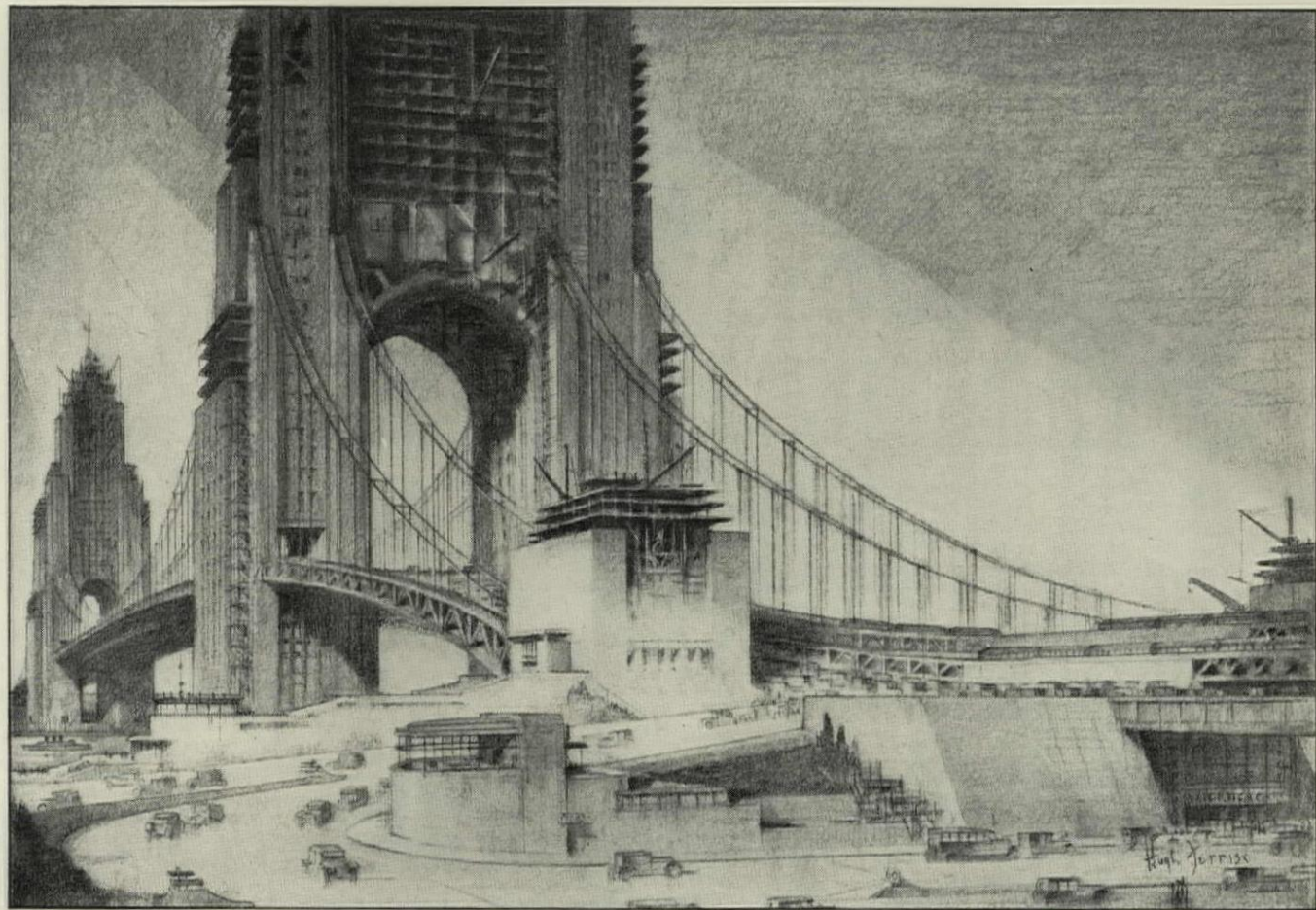
In addition to the general line of waterproofing and dampproofing compounds, some very good side lines have been developed, one of the most useful of which are the various caulking compounds. These compounds are made from permanently elastic materials and should be non-staining. The original use for which most of the caulking compounds were intended was the caulking around window frames, but of late years they have also been specified for pointing up the top joints of stone and terra cotta copings, cornices, and pediments. The caulking around window frames is very essential, as the leakage of air and the penetration of moisture around the frames is a serious matter, and with the shrinkage of wood frames and disintegration of the mortar around steel frames it becomes much worse in a very few years, all of which is averted by properly caulking around the frames. Seepage through the joints in copings has been a leading cause of dampness in walls for centuries, in fact Cennini mentions it in his book and recommends re-coping the walls to cure dampness. Much of this trouble is caused by the expansion and contraction of the stone, due to variations in the temperature which loosens the mortar and leaves an open joint. The elasticity of the caulking compound prevents this and helps materially in keeping dampness out of the parapet walls.

Floor hardening is a comparatively new development brought about by the great increase in the use of cement flooring, which commenced about the beginning of the present century. Previous to that time cement floors were used principally in cellars or basements and in buildings of the roughest type, but when they began to be used in wholesale mercantile establishments and offices it was dis-

(Continued on page 81, Advertising Section)



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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.*

**Seeger Residence Refrigeration Cabinets.**—A.I.A. File No. 32-c and c-3. Catalog No. 50 illustrates and describes numerous models of this line of residence cabinets for ice, electric or machine refrigeration. 28 pp.  $8\frac{1}{2}$  x 11. Seeger Refrigerator Co., St. Paul, Minn.

*Published by the same firm, "New Commercial Cabinets by Seeger." A.I.A. File No. 32-c-2 and c-3. Catalog No. 49 is devoted to this new line of cabinets for ice, electrical and, mechanical refrigeration suitable for use in hotels, restaurants, clubs, hospitals, schools and colleges. Descriptive data, illustrations, sizes, etc. 48 pp.  $8\frac{1}{2}$  x 11.*

**Felco In-A-Wal Laundry Hamper.**—New publication illustrated in colors covers this modern, convenient, and sanitary built-in receptacle for soiled clothes and linens for use in residences, apartments, hospitals, apartment hotels, sanitariums, institutions, etc. Complete descriptive data, roughing-in measurements, and installation details. Standard filing size. Felco Manufacturing Co., Inc., 30 Orange Street, Bloomfield, N. J.

**Sedgwick Dumb Waiters and Elevators.**—A.I.A. File No. 33. New standard filing size folder with useful reference chart for architects contains condensed details and suggestions covering application and use of hand power dumb waiters and elevators for all types of buildings. Sedgwick Machine Works, 150 West 15th St., New York, N. Y.

**Preventing Cracks in Terrazzo Floors.**—A.I.A. File No. 22-e. Sample sheet of Sisalkraft, a reinforced waterproof building paper, with detail drawings, descriptive and specification data covering its use in terrazzo floor construction. Standard filing size. The Sisalkraft Co., 205 W. Wacker Drive, Chicago, Ill.

**Improved Webster Type R System.**—New document supplementing Bulletin B-600A introduces and describes in detail this improved system of steam heating. Specifications, typical layouts. 8 pp. Standard filing size. Warren Webster & Co., Camden, N. J.

**How to Paint Concrete and Masonry Surfaces.**—A.I.A. File No. 25-c-2. New publication on the subject of Medusa portland cement paint shows how masonry and concrete surfaces, whether exterior or interior, damp or dry, can be painted in white or colors. Complete directions and specifications are included. 20 pp.  $8\frac{1}{2}$  x 11. Medusa Portland Cement Co., 1002 Engineers Bldg., Cleveland, O.

**Practical Planning for Hospital Food Service.**—A.I.A. File No. 35-c. Fifth and last of a special series of books for architects covering food service problems in various fields, deals with all phases of the planning of proper facilities for the preparation and serving of food in hospitals and institutions. Different types of service, practical kitchen layout, diet kitchens, nurses' cafeterias, and other vital factors are all covered fully. 64 pp.  $8\frac{1}{2}$  x 11. The John Van Range Co., Oakley, Cincinnati, O.

**Wilson Sectionfold and Rolling Partitions.**—A.I.A. File No. 19-e-61. Catalog No. 38, just issued, illustrates and fully describes these types of partitions suitable for use in schools, churches, Y. M. C. A. buildings, clubs, hotels, offices, apartments, etc. Specifications, construction data, detail drawings, etc. 32 pp. Standard filing size. The J. G. Wilson Corporation, 11 E. 38th St., New York, N. Y.

**Higgin All Metal Screens.**—Attractive new brochure illustrates and describes a full line of window, door and porch screens for residences, clubs, apartments, hotels, hospitals, etc. Construction details covering metal frame and rolling screens. 18 pp.  $8\frac{1}{2}$  x 11. The Higgin Manufacturing Co., Newport, Ky.

**Color and Charm in Home Interiors.**—A.I.A. File No. 23-j. Special architectural edition of this new book on home decoration, printed in full colors, contains practical suggestions for decorating the main rooms of the house, featuring the complete color scheme, furniture and floors done in the modern spirit. Includes specifications, pattern selection charts, and technical information on weights, colors, advantages, installation and maintenance of Sealex linoleum. 34 pp. 9 x  $11\frac{1}{8}$ . Congoleum-Nairn, Inc., Kearny, N. J.

**Architectural Shapes in Alcoa Aluminum.**—A.I.A. File No. 15. Catalog 31, just issued, shows a comprehensive series of aluminum sections of all types for architectural and decorative work, including handrails, moldings, astragals, casements, store-front sash, etc. Specifications, technical data, detail drawings. 18 pp. Standard filing size. J. G. Braun Co., 537 W. 35th St., New York, N. Y.

**American Air Filter Catalog.**—A.I.A. File No. 30-d-3. New illustrated looseleaf catalog covers this full line of Midwest, National and Reed air filters. Specifications, technical data, capacity tables, blue print details, tests, etc. 64 pp.  $8\frac{1}{2}$  x 11. American Air Filter Co., Inc., First and Central Aves., Louisville, Ky.

**Segal Locksets and Builders Hardware.**—A.I.A. File No. 27-b. New catalog with complete information covering the construction and operation of this line of jimmy-proof door hardware. A wide selection of cast bronze ornamental door trim is also shown. 8 pp.  $8\frac{1}{2}$  x 11. Segal Lock & Hardware Co., Inc., 12 Warren St., New York, N. Y.

**3-Way Sidewalk Lights.**—A.I.A. File No. 11-j. Illustrated folder with brief descriptive data and specifications covering the installation of 3-Way armored sidewalk lights in floors and balconies for banks, industrial plants, public utility plants, stores, etc. 4 pp.  $8\frac{1}{2}$  x 11. American 3-Way Luxfer Prism Co., 1315 South 55th Court, Cicero, Ill.

*Published by the same firm, "Magnalite—Obscuring-Diffusing Glass." A.I.A. File No. 26-a-5 and 6. Descriptive and specification data bulletin covering this kind of glass suitable for partitions, doors, windows, ceiling lights, skylights, court lights, elevator enclosures, etc.  $8\frac{1}{2}$  x 11.*

**The New Architectural Medium Concrete.**—Reprint of an illustrated article by Frederick A. Hanson in booklet form discussing the use of concrete as a new architectural medium, and showing the application of this material to the present trend in architecture. 12 pp.  $8\frac{1}{2}$  x 11. Portland Cement Association, 33 West Grand Ave., Chicago, Ill.

**Thermoflex Heating Specialties.**—A.I.A. File No. 30-c-2. New looseleaf book contains detailed design and specification information concerning this line of traps, valves and related accessories. List prices, capacities, dimensions. 38 pp. Standard filing size. Grinnell Company, Inc., Providence, R. I.

*Published by the same firm, "Thermoflex Radiator Traps." A.I.A. File No. 30-c-2. Illustrated folder announcing a new line of heating appliances. Descriptive and specification data covering radiator traps for low pressure and vacuum systems.  $8\frac{1}{2}$  x 11.*

**Laundry Machinery.**—A.I.A. File No. 35-d. Attractive looseleaf publication presents helpful information on the subject of laundry equipment for hotels, hospitals, schools, clubs, office buildings, department stores, etc. Illustrations show numerous installations and various types of equipment. Blue print floor plans. 20 pp. Standard filing size. The American Laundry Machinery Co., Norwood Station, Cincinnati, O.

**New Ideas in Home Decoration.**—New brochure with beautiful color plates showing modern interiors and a wide range of patterns of Armstrong linoleums, including new designs. Much useful information of the subject of floor treatments. 40 pp. Armstrong Cork Co., Floor Division, Lancaster, Pa.

**National Heating Guide.**—A comprehensive and valuable reference book for architects and specification writers covering the full line of National boilers, radiation and heating accessories. Descriptive and technical data, capacity tables, dimensions, etc. 396 pp. National Radiator Corporation, 55 W. 42nd St., New York, N. Y.

**Wright Rubber Tile.**—Architects' filing folder with series of descriptive bulletins devoted to this line of rubber tile for floors, bases, wainscots, etc., also rubber integral-nosing and one-piece stair treads. Color plates, specifications, technical data. Set of samples in various designs accompany folder.  $8\frac{1}{2}$  x 11. Wright Rubber Products Co., Racine, Wis.

**Elevator Signals.**—A.I.A. File No. 33-h. Catalog No. A-57, just issued, covers various forms of Richards-Wilcox elevator signal systems including mechanical reset annunciator, mechanical dial and flash light systems. 24 pp. Standard filing size. Richards-Wilcox Mfg. Co., Aurora, Ill.

**Facts and Figures About Steel Construction.**—Second edition. A valuable reference book for architects and engineers on the subject of steel construction. 126 pp. American Institute of Steel Construction, Inc., 200 Madison Ave., New York, N. Y.

**Your Windows Through a Decorator's Eye.**—New publication contains useful suggestions for architects and interior decorators on the subject of decorative treatments of residence interiors with special reference to the adaptability of Lupton casements to these decorative schemes. Color chart and plates and descriptive data on metal screens, storm windows, shade and drapery fixtures. 22 pp. David Lupton's Sons Co., Allegheny Ave. and Tulip St., Philadelphia, Pa.

**Gorton Single Pipe Vapor Heating System Specifications.**—A.I.A. File No. 34-a. New specification document covering the installation of this type of heating system. Gorton Heating Corp., 96 Liberty St., New York, N. Y.

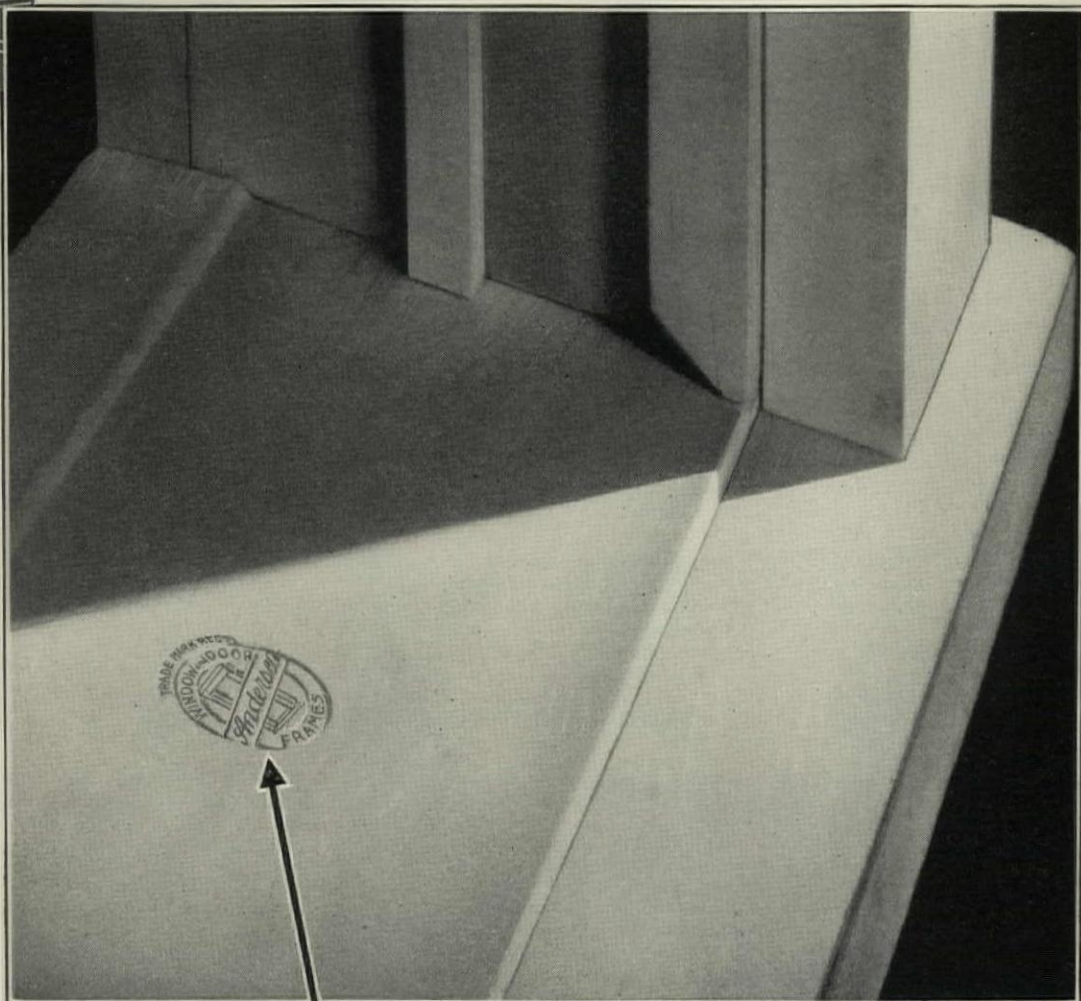
**Ebco Kitchen Sink.**—Standard filing size folder illustrates in color numerous models of kitchen sinks suitable for modern homes and apartments. The D. A. Ebinger Sanitary Mfg. Co., Columbus, Ohio.





**Architects welcome this new frame  
with locked sill-joint, which adds  
to the value of a home . . . .**

The new Andersen Master Frame (solid sill) showing diecut circle trade-mark, guarantee of quality. This frame also made in sub-sill type.



**ARCHITECTS** who once specified custom made window and door frames, now write "Andersen Master" on their specification sheets.

They appreciate fine quality — the genuine white pine, the new locked sill-joint, the steep sill slope, the wide blind stop feature---home comfort insurance.

Andersen Master Frames truly give a building added value — at an actual cost saving when labor time is considered. You, too, should specify "Andersen." Send for your copy of our catalog, No. 500.

Andersen Frame Corporation, Bayport, Minnesota, represented by 3,500 leading jobbers and dealers.

## *Andersen* MASTER Frames

OF GENUINE  
WHITE PINE



FOR WINDOWS  
AND DOORS

BAYPORT

MINNESOTA

FOR WEATHERTIGHT INSTALLATIONS — USE ANDERSEN SPECIFICATIONS



# A Free Employment Service for Readers of Pencil Points

*Replies to box numbers should be addressed care of PENCIL POINTS, 419 Fourth Avenue, New York, N. Y.*

**Position Wanted:** Residential Work. Architectural draftsman, six years' experience, wishes position in small architect's office. Excellent draftsman and letterer. Fully capable computing steel and wood members. Leonard L. Burd, 127 Ramblewood Ave., Great Kills, S. I., N. Y., Phone, Honeywood, 141.

**Position Wanted:** Registered architect, twelve years in private practice and as office manager in New York City and west, wishes to make connection with reputable architectural office as office manager or in executive capacity. University graduate and very extensively traveled in Europe and the United States. A.I.A. and past president of one of its Chapters. Broad general experience and thoroughly versed in all phases of architectural practice. Man of culture and social standing. Box No. 700, care of PENCIL POINTS.

**Position Wanted:** Viennese architect and interior decorator. Age 30. Seven years' experience on high class domestic buildings and interior decoration. Also bank, private offices and high class restaurants. Very familiar with all kinds of craftsman's work and materials. Samples of work furnished. Box No. 701, care of PENCIL POINTS.

**Position Wanted:** Expert architectural draftsman-designer of wide experience, specializing in constructive and decorative scale and full size detail on high class work and in perspective and rendering in all mediums. Rapid, accurate and artistic executant. Capable of large, efficient production. Any location. Box No. 702, care of PENCIL POINTS.

**Position Wanted:** Young man, single, age 27, desires position in architect's office. Over six years' training in architectural drafting and designing. Location does not matter. John R. Heichel 116 S. Spring St., Loudonville, Ohio.

**Position Wanted:** Architectural draftsman, 11 years' experience on large work. Charge of small office three years. One and a half years on last job. Will locate anywhere. Box No. 704, care of PENCIL POINTS.

**Position Wanted:** Architectural draftsman, 24 years of age, graduate of Mechanics Institute, seeks position. Four years' drafting experience in architect's office on residences, apartment houses, stores, garages and industrial buildings and two years in the construction field. Prefer Westchester or Connecticut territory. Salary \$45.00. Box No. 705, care of PENCIL POINTS.

**Position Wanted:** Designer-draftsman, ten years' New York experience plans, elevations, details, can render pencil, ink, color. Interior and exterior design, knowledge of period furniture and furnishings. Box No. 706, care of PENCIL POINTS.

**Registered Architect and Assistant:** Just released office of important builder open to engagement singly or together. Thoroughly familiar building laws, layouts, development of working drawings including details, steel and shops. Box No. 707, care of PENCIL POINTS.

**Position Wanted:** Middle-aged woman, several years' experience in architect's office now retired, would assist with secretarial and drafting work in a Philadelphia office. Box No. 708, care of PENCIL POINTS.

**Position Wanted:** Draftsman with 18 years of practical all-round experience wishes position. Can handle all types of buildings as designer, detailer and in working up drawings. Can take charge of office in working up plans from beginning to completion. Location optional. Box No. 710, care of PENCIL POINTS.

**Position Wanted:** Thoroughly experienced architectural designer. Competent to handle work from start including presentation drawings and through finished details. Box No. 711, care of PENCIL POINTS.

**Position Wanted:** Registered architect specializing in design thoroughly familiar with modern architecture wishes connection. Will go anywhere. Box No. 712, care of PENCIL POINTS.

**Position Wanted:** Experienced architectural designer, Gothic and all-round—perspectives, quick sketches, details. Settled man. Out of town preferred. Box No. 713, care of PENCIL POINTS.

**Wanted:** Architects and draftsmen, otherwise employed are wanted to act as local representatives and correspondents. Those located in Eastern and Central states are especially desired. This is a spare time proposition. Mutual Reports, Diehl Building, Mount Clemens, Michigan. (Adv.)

**Position Wanted:** Secretary-Stenographer. Young lady, 27 years old. Christian, ten years' experience in the advertising department of one of the largest manufacturers of building materials. Familiar with the vocabulary. Has handled a specialty selling department. Highest recommendations from present employer. Box No. 717, care of PENCIL POINTS.

**Position Wanted:** In builder's or general contractor's office. Experience as follows: Six years as carpenter and builder, technical training in architecture with two years' experience in architect's office. Also a year and a half in construction engineer's office as estimator and draftsman. Box No. 714, care of PENCIL POINTS.

**Position Wanted:** Young man, 18, graduate of Stuyvesant High School, desires position in architect's office as a beginner. Neat letterer and tracer. James J. Sabino, 145 West 100th Street, New York, N. Y.

**Position Wanted:** Architectural draftsman wishes position in any locality. Has had experience at plan layout, elevations, details, landscaping, supervision of construction and perspectives. Also a knowledge of rendering in water-color and pencil. Will gladly furnish further information. Theodore R. Eisenburg, 2292 Gravesend Ave., Brooklyn, N. Y. Telephone, Dewey, 2012.

**Position Wanted:** Graduate of Columbia, three and a half years' experience on residential work in all its phases, plans, elevations, perspectives, etc. Metropolitan area. Box No. 715, care of PENCIL POINTS.

**Position Wanted:** Architectural draftsman desires position. Experienced in residential, commercial, industrial, apartment and public buildings. Planning, detailing, designing and supervision. Box No. 716, care of PENCIL POINTS.

**Wanted:** An architectural draftsman. Please give full particulars in first letter. Geo. Issenhuth, 226 Dakota St., Huron, S. D.

**Position Wanted:** As architect or draftsman by technical trained man of 16 years' experience with license to practice in New York State. Thoroughly familiar with planning and building both from an architect's and contractor's standpoint. Eastern location preferred. References gladly furnished. Harry E. Bolton, 15 Iowa Street, Worcester, Mass.

**Position Wanted:** Architectural draftsman desires permanent connection with reliable architect or architectural firm in New York City or Chicago. Technical college student, three and a half years' experience in varied types and classes of work. 25 years old. Box No. 718, care of PENCIL POINTS.

**Position Wanted:** Young man of Polish nationality, 24 years of age. Graduate in architectural engineering of Notre Dame. Would like position with architect or engineering firm to represent them in foreign countries. Thomas Listwan, 2 Willow St., Proctor, Vt.

**Position Wanted:** Young man, 17 years of age, studying architecture, would like position in good architectural office where he can get experience and learn the rudiments of architectural practice. Salary no consideration. This young man is bright, ambitious and very anxious to learn. Box No. 719, care of PENCIL POINTS.

**Position Wanted:** Young man, graduate of Cooper Union, evening student at N. Y. U., three years' experience in building materials office, desires position as junior draftsman in architectural office. Box No. 720, care of PENCIL POINTS.

**Position Wanted:** Architectural draftsman, college graduate, ten years' experience on churches, schools and high class residential work. Good references from well known architects of Boston and New York City. Willing to go anywhere in U. S. or South America. Box No. 721, care of PENCIL POINTS.

**Position Wanted:** Junior draftsman, 20 years of age, two years' experience, four years' architectural training, wishes position in architect's office. Good letterer, tracer, etc., neat and competent. Arthur N. Jacobs, 3543 89th Street, Jackson Heights, L. I.

**Position Wanted:** Designer and draftsman familiar with modern and any style. College graduate, single, ten years' experience, designing, detailing, working drawings, also experienced to supervise work. Church, residence, school, office, commercial and theatre buildings. Capable of making sketches, renderings on general work. Will locate anywhere. Box No. 723, care of PENCIL POINTS.

(Other items on pages 80 and 81, Advertising Section)





● Spanish tradition was closely followed by Architects Atlee B. and Robert M. Ayres in designing the residence of Dr. and Mrs. D. T. Atkinson at San Antonio, Texas. And IMPERIAL Mission Roofing Tiles played an important part in making it true to type. Above is a glimpse of the sunny patio, where the colorful roof contrasts picturesquely with tropical planting.

**LUDOWICI - CELADON COMPANY**  
*Makers of IMPERIAL Roofing Tiles*

NEW YORK: 565 FIFTH AVENUE

104 S. MICHIGAN AVENUE, CHICAGO

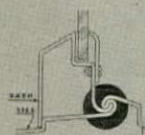
WASHINGTON: 738 FIFTEENTH ST., N. W.



# WINDOWS



IN-SWINGING TYPE  
SEALAIR WINDOW



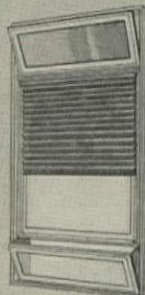
Continuous  
Water-proof hinge.  
Patents applied for.

## VENTILATION

In-swinging Sashes permit controlled ventilation, without unpleasant drafts.

## CLEANING

May be washed entirely from the inside.



Application of  
shade. Translucent  
glass in transom.

## INSULATION

When closed, insulation between sash and frame protects against weather.

## SAFETY

Difficult for anyone to fall or leap out.

## NOISELESS

Sealair Windows will not rattle—operate easily, silently and independently.

Furnished in Bronze, Aluminum Alloy or Steel. All joints strongly welded.

# Kawneer

SEALAIR  
WINDOWS

THE KAWNEER COMPANY, NILES, MICHIGAN  
KAWNEER MFG. CO., BERKELEY, CALIF. (SUBSIDIARY)  
*Manufacturers of*  
RUSTLESS METAL STORE FRONTS, WINDOWS AND DOORS

## A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other items on pages 78 and 81, Advertising Section)

**Position Wanted:** Young man, 21 years old, three years' engineering at Polytechnic Institute and two years' building construction at City College, desires position with architect or builder. Two years' drafting experience. Box No. 724, care of PENCIL POINTS.

**Position Wanted:** Registered architect of New York (1923) with seventeen years' experience desires position. Can handle a project from its conception to final completion. Age 35. Married. Box No. 725, care of PENCIL POINTS.

**Representatives Wanted:** Men of architectural training and experience outside of New York and Boston to represent one of the oldest specialized construction companies in the U. S. A. Must have close personal contact with architects in their districts. Box No. 726, 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. 727, care of PENCIL POINTS.

**Position Wanted:** Draftsman-copyist, student at Mechanics Institute Evening School, desires position. Telephone, Beachview 7423. S. Travagh, 1923-72nd Street, Brooklyn, N. Y.

**Position Wanted:** Architectural designer and draftsman, thirteen years' all-round experience, available for architect's office, contractor shop-drawings, manufacturer's representative or store fixtures. Box No. 729, care of PENCIL POINTS.

**Position Wanted:** In architect's office by young man, graduate of George Washington High School at New York, and second-year student at Manhattan College studying architecture. Experienced in scaling, enlarging and water color wash of small drawings. Age 18. Charles Murray, 42 Quincy Road, Yonkers, N. Y.

**Position Wanted:** Graduate of Washington Institute, two-year course in architectural construction, one year office experience, one year's experience as estimator for general contractor. 22 years of age, willing to work, salary to be agreed upon at later date. Box No. 730, care of PENCIL POINTS.

**Position Wanted:** In New York or Brooklyn in small, progressive, pleasant and congenial office, income depending upon volume of business by architect. Forty years of age, executive ability, neat appearance. Box No. 731, care of PENCIL POINTS.

**Position Wanted:** Architect, designer and draftsman, capable of taking complete charge of work is desirous of making connections with a firm of architects. A-1 references. Box No. 732, care of PENCIL POINTS.

**Position Wanted:** Secretary to architect or builder. Young lady, educated, pleasing personality, has knowledge and experience of estimating, bookkeeping and stenography, desires to make a change to White Plains or New York City. Goodwin, 3400 Wayne Ave., New York, N. Y.

**New York Architects Attention:** A young draftsman, desiring to study at night at New York University and who has had three years of experience in well known out of town architect's office, wants place in a New York architect's office, where hard-working and ambitious men are appreciated. Place must be permanent as applicant is at present satisfactorily employed. Work is neat and accurate. Can give best references including New York references if desired. Salary \$30.00 per week. Box No. 733, care of PENCIL POINTS.

**Architectural Drafting:** For architects, builders and allied trade. Work includes sketch plans, working drawings, small and large scale and full size details. Neatness and accuracy combined with quick service and minimum cost. S. J. Spanier, 485 Madison Avenue, New York, N. Y. Telephone Wickersham 3388.

**Position Wanted:** Young man, 28, graduate of Columbia University School of Architecture, five years' experience in apartment houses, offices, hotels and residential work, would consider position on Western Coast, preferably California. Box No. 734, care of PENCIL POINTS.

**Position Wanted:** By architect 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. 735, care of PENCIL POINTS.



## WATERPROOFING, DAMPPROOFING, AND FLOOR HARDENERS

(Continued from page 74, Advertising Section)

covered that the dusting and crumbling of the cement topping was a very serious matter. Some of the early attempts at floor hardening were quite unique, and for business reasons were surrounded with an air of mystery. Today there are no secrets of any consequence, and we have two recognized methods of floor hardening, the liquid and the metallic.

The liquid method of floor hardening is accomplished by mixing a combination of crystal fluosilicates of zinc and magnesium with clear water and flushing it on the finished cement floor, two applications generally being sufficient. This solution of fluosilicates combines with the free lime in the cement finish, and forms calcium fluoride, which is very similar to the fluor spar which is found in various building stones. One great advantage of this method is that it can be applied to old floors, and to any spots in the floor which show wear or have to be patched for any cause whatsoever.

Metallic hardening is accomplished by mixing a specially prepared ground iron with the cement and sand used in mixing the cement topping. When combined with the cement topping the iron particles interlock, binding together with the Portland cement. When set the topping becomes extremely dense and flint hard. In localities where it is not easy to obtain metallic hardeners and where strict economy is absolutely necessary, very fair results may be had in hardening cement floors by using commercial iron filings, care being taken to see that they are free from oil, grease, and non-ferrous metals, mixing thirty pounds of iron filings with thirty pounds of cement for every one hundred square feet of floor surface to be hardened. Now I am not an advocate of the use of cheap materials or methods in building construction, but we must all recognize the fact that, as much as we would like to, we can not all build Cathedrals of St. John the Divine. In specifying floor hardening it is very important to specify that the work shall be done in strict accordance with the manufacturer's instructions.

In addition to these well known forms of floor hardeners, there are also a number of special hardeners on the market, among which are liquid integral hardeners and several colored hardeners which not only harden the cement floors, but also color the cement topping, giving it a handsome finish which will not wear off. These are all patented products and are manufactured by several reputable companies, some of whom just sell the materials, while others install their product.

The foregoing information covers the bulk of the waterproofing, dampproofing, and floor hardening methods in general use, and in closing I will offer one small piece of advice to specification writers, young architects, and others. Whenever you happen to have a serious problem in waterproofing, dampproofing, or floor hardening, call in the representative of one of the really good companies who do that work and get set right in the beginning—which is much better than taking any chances.

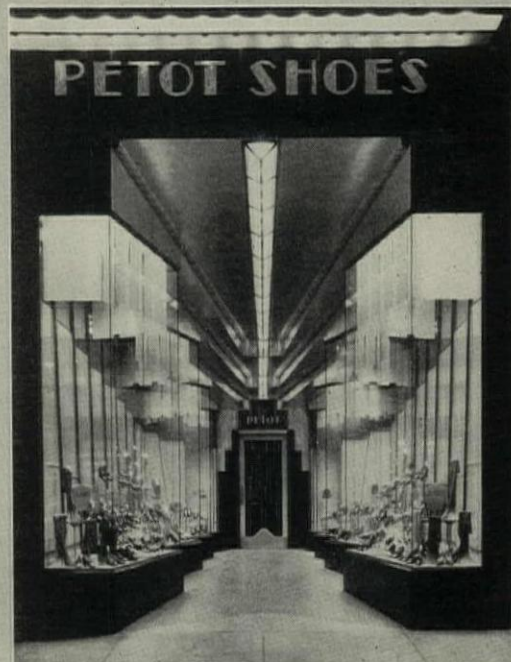
### A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other items opposite and page 78, Advertising Section)

**Position Wanted:** Architectural specification writer and superintendent, college graduate fifteen years' all-round experience on all types of buildings, no extras on specifications, no trouble on superintendence; industrious, alert, pleasing personality. Reasonable salary. Box No. 736, care of PENCIL POINTS.

**Partner Wanted:** Architect and engineer (R.A. in New York State) looks for partner or associate who could help solicit business. One good in elevations preferred. Box No. 737, care of PENCIL POINTS.

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Through years of experience, Kawneer craftsmen have acquired the art of rendering in metal (cast, drawn and extruded) distinctive and efficient store fronts of any size or design. Write for book of outstanding installations.

**Kawneer**  
BRONZE  
STORE FRONTS

THE KAWNEER COMPANY, NILES, MICHIGAN  
KAWNEER MFG. CO., BERKELEY, CALIF. (SUBSIDIARY)

Manufacturers of  
RUSTLESS METAL STORE FRONTS, WINDOWS and DOORS



# A CENTURY OLD

## *but still this cypress house is young*



*"Shadows-on-the-Teche" near New Iberia, Louisiana, is a proud old southern land mark. Although built early in the 1800's, its Tidewater Red Cypress construction is still in good condition.*



*Colonel Richard C. Stokes of Covington, Virginia, employed the same rugged lumber in his new home, "Edgehill". Bates and Howe, New York City, were the architects.*

LIKE hundreds of century-old southern mansions built of Tidewater Red Cypress (coast type), "Shadows-on-the-Teche" seems to have gleaned only a mellow trace of charm from sun and rain and age.

Still in sound condition, it tells an amazing story of this lumber's tireless ability to fight off rot—and hence, repair bills.

Architects throughout America have long favored Tidewater Red Cypress for construction at all weather points. Every year more home-owners are recognizing the economies of its easy workability, its tight coherence with paint, and great durability.

And so today the demand for Tidewater Red Cypress has grown to far exceed that of any other period in its century-old history.

### *An exquisite wood for interiors*

Many prominent architects have attained interiors of unusual beauty with Tidewater Red Cypress. "A Book of Interiors," which contains photographs of their work, has been prepared to show you different interesting ways in which this charming wood has been employed.

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

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 Association Mills here listed, who published this advertisement:

Big Salkehatchie Cypress Co., Varnville, S. C.  
Burton-Swartz Cypress Co., Perry, Fla.  
Cummer Cypress Co., Jacksonville, Fla.  
Everglade Cypress Co., Loughman, Fla.  
Reynolds Bros. Lumber Co., Albany, Ga.  
Wilson Cypress Co., Palatka, Fla.

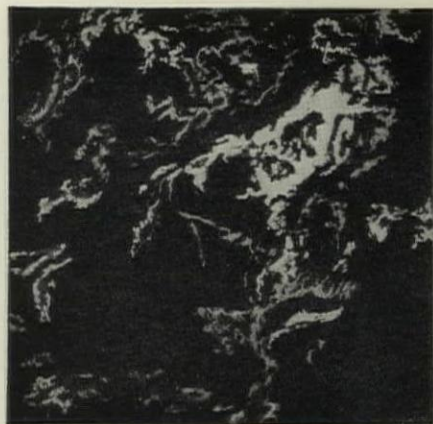
SPECIFY

# TIDEWATER RED CYPRESS

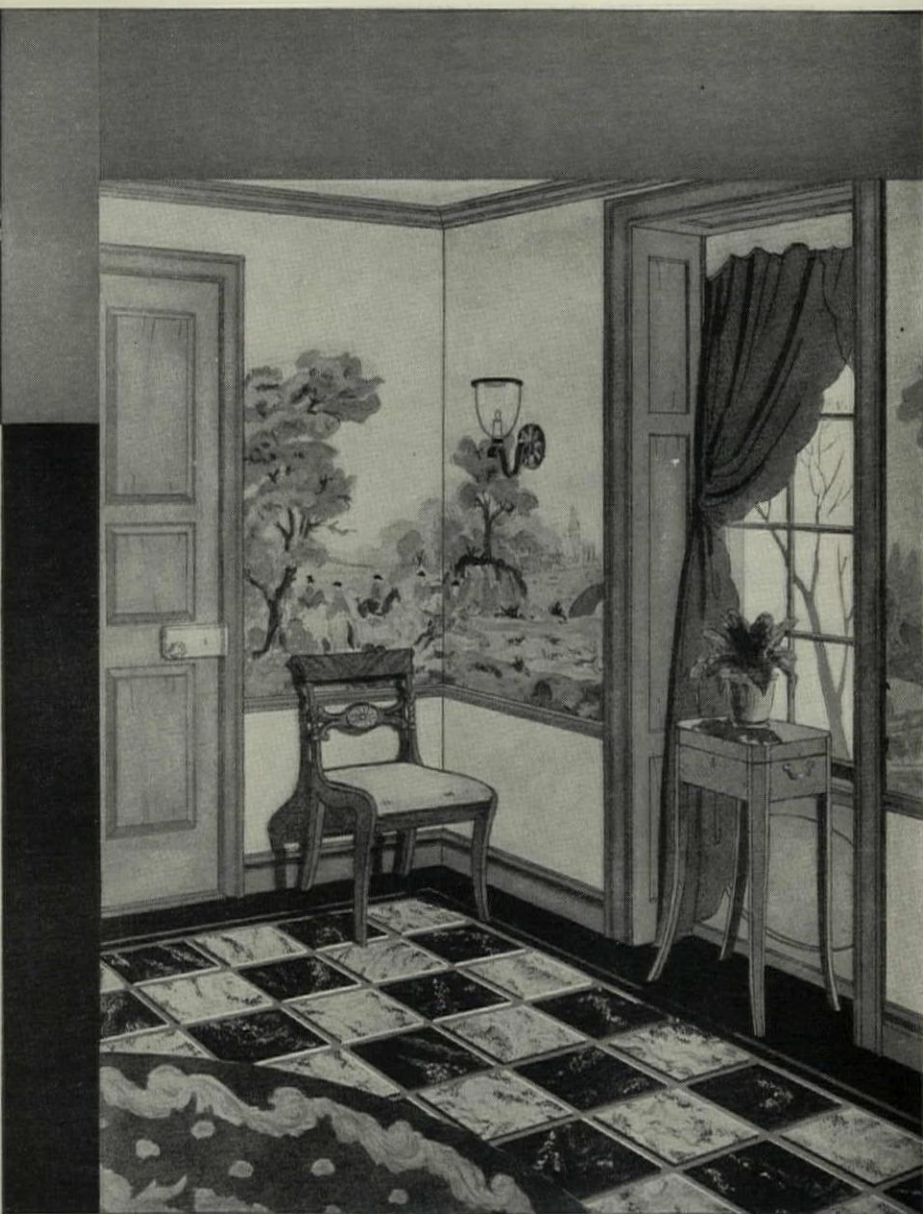
(COAST TYPE)

THE WOOD ETERNAL





*SINCE most halls are not large enough for elaborate furniture groupings, decorative interest centers on walls and floor. Wall paper in hunting scenes, red taffeta curtains, and embossed linoleum in black and cream marbled squares, make a striking background.*



**W**E should like to send you an "idea book" on the use of linoleum in modern interior decoration. It contains a wealth of suggestions beautifully visualized, in full color. The illustration reproduced above is one of many covering the more important rooms of the home.

You will also find carefully made color plates of 52 smart linoleum patterns—beautiful examples of the progress that has been made in modern linoleum design.

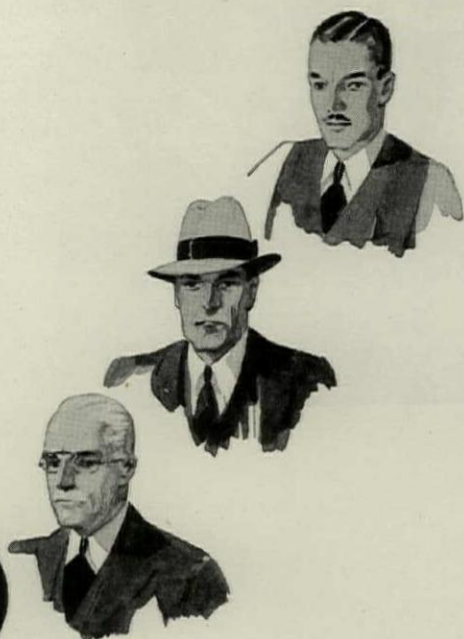
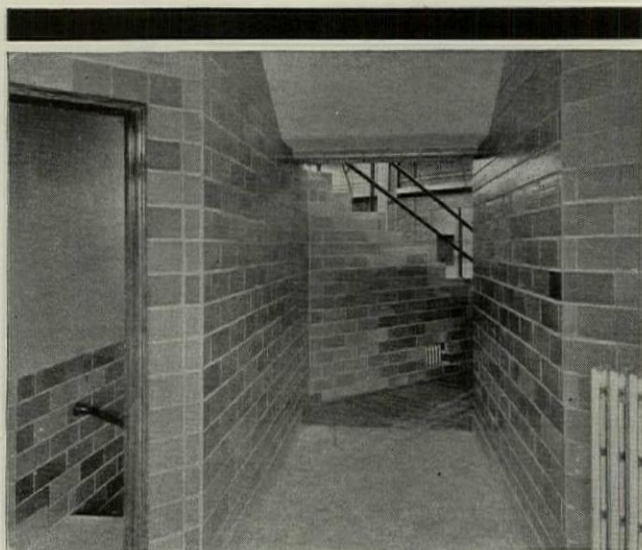
We'll gladly send a copy to any architect or decorator. Ask for the Architect's Edition of *Color and Charm in Home Interiors* and address Architectural Service Department, Congoleum-Nairn Inc., Kearny, N. J.

## BONDED FLOORS

BONDED FLOORS are floors of Sealex Linoleum and Sealex Treadlite Tile, backed by a Guaranty Bond issued by the U. S. Fidelity and Guaranty Company. Authorized Contractors of Bonded Floors are located in principal cities.

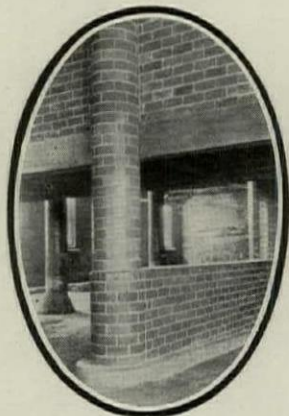






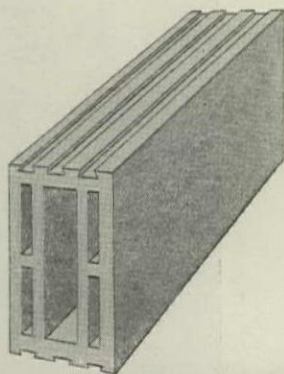
# VITRITILE serves 3 MASTERS

ARCHITECT  
BUILDER  
OWNER



*In Oval—*  
NORTH OFFICE BLDG.  
HARRISBURG, PA  
ROSS and GEHRON, Architects

*At Top—*  
GYMNASIUM  
OTTERBEIN COLLEGE  
WESTERVILLE, OHIO  
ERNEST WATKINS, Architect



NATCO Vitritile appeals to *architects*—for it is available in natural and mottled shade ranges; in black; and in white. It affords ample field for color design. Its comprehensive assortment of shapes permits great latitude in structural design.

Natco Vitritile appeals to *builders* . . . for its high quality, ease and speed of laying, prompt and sure delivery, make construction easy.

Natco Vitritile appeals to *owners*; for the finish goes up with the wall itself. No plastering, painting or other maintenance is required.

Natco Vitritile—as would be expected of a member of the Complete Natco Line of Structural Clay Tile—serves honestly and well.

## TURN TO SWEET'S



### NATCO

THE COMPLETE LINE of  
STRUCTURAL CLAY TILE

## NATIONAL FIREPROOFING CORPORATION

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GENERAL OFFICES: FULTON BUILDING, PITTSBURGH, PA. BRANCHES: NEW YORK, CHANIN BUILDING; CHICAGO, BUILDERS BUILDING; PHILADELPHIA, AND TITLE BUILDING; BOSTON, TEXTILE BUILDING — NATIONAL FIRE PROOFING COMPANY OF CANADA, LTD., TORONTO, ONTARIO



# OXWELDING

## A New Era In Piping




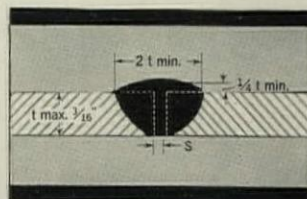
**E**CONOMY in the transmission and use of liquids and gases in most cases requires high working pressures and these have been ever on the increase during late years. High working pressures have brought about an entirely new conception of practical pipe joints and fittings. OXwelding has become the standard means of pipe jointing, as a result of this new era, for high pressure piping as well as for piping operated under normal pressure.

An oxwelded joint is stronger than any other type of construction. In strength it is equal to, and if the weld is built up above the surface, greater than the strength of the pipe itself. It is also permanently tight and after testing may be forgotten. It has the same resistance to corrosion as the pipe wall.

Under Procedure Control, 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  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.

#### WELDED LINE JOINTS

##### Open Square Butt Weld

##### Explanation of Design:

The Open Square Butt Weld illustrated is used mainly for thin-walled pipe, with which sufficient weld depth penetration can be obtained without beveling, due to the melting of the steel with the blowpipe flame.

##### Uses:

The Open Square Butt Weld is recommended for standard pipe up to 2 1/2 in., extra heavy up to 1 1/2 in., and for all pipe having a wall thickness of 3-16 in. or less, for all services.

##### Specification:

When the Open Square Butt Weld is specified the following features should be included in the specifications:

1. For the smaller sizes of pipe, spacing between ends shall be as indicated in Table 1, page 11, "Design Standards for Oxwelded Piping." For sizes larger than 4 in. spacing shall be 3-16 to 1/4 in.
2. Welds shall be thoroughly fused to the depth indicated in the drawing.
3. Welds shall have a minimum width of twice the pipe wall thickness and shall be symmetrical with the center line of the joint.
4. Welds shall be built up to present a gradual increase in thickness from edge to center.
5. Weld reinforcement shall be at least the minimum shown in the drawing.
6. The weld shall be of sound metal free from laps, gas pockets, slag inclusions or other defects.

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," which also explains procedure control for pipe welding.

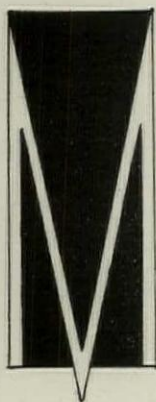
Name . . . . .

Company . . . . . Position . . . . .

Street Address . . . . .

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





# Modern

## FIRE-PROOF, ROT-PROOF PROTECTION

*For buildings large and small*

The safety and durability of Nailcrete have been welcomed in many of the country's finest buildings—in hospitals, in State and National Capitol buildings, in colleges, clubs and in private residences as well.

Nailcrete, the original Nailing Concrete is unaffected by heat, cold or moisture. It never swells or shrinks, and it saves money, time and weight in construction.

Be sure that every bag of Nailing Concrete you buy is stamped with the registered trade mark, "Nailcrete", as shown opposite.

### NEW NAILCRETE BLOCKS

The New Nailcrete Nailable Cinder Concrete Building Blocks offer many great advantages in the construction of load bearing walls and partitions. Write to us for detailed information.



# NAILCRETE

Write to us for our new booklet, "Nailcrete".

**THE NAILCRETE CORPORATION**  
105 West 40th Street, New York



Capitol City Country Club, Atlanta, Georgia, in which Nailcrete was used as a nailing base for the slate roof.

# DETAILS

**K**ERNERATORS are not just a combination of masonry and cast iron, but scientifically designed systems built — by the pioneers of flue-fed incineration — to do a specific job.

Seventeen years of intensive study of incineration, of consistent improvement of the details of construction, have earned for Kernerators a place of leadership.

And a trained, nation-wide service organization that assists in planning Kernerator installations, that supervises their construction and personally instructs owners, insures maximum convenience in Kernerator use.

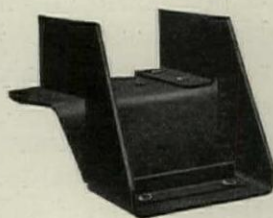
This attention to details—before, during and after installation—is a typical Kerner service that is valuable to both architect and owner . . . It assures a lifetime effectiveness of the Kerner Guarantee.

**KERNER INCINERATOR COMPANY**  
1233 NORTH WATER ST. MILWAUKEE, WIS.

## KERNERATOR

INCINERATION

## Where Permanence is a Factor Specify DUPLEX Wall Hangers



**DUPLEX Wall Hangers**  
Made of open-hearth steel

have no equal in carrying timber clear of wall and distributing load over bearing surfaces

**O**FTEN "Mill Construction" is decided upon because the structure is more or less temporary, and timber, with sufficient strength, offers a much less expensive material.

In buildings, however, which are constructed to withstand time, DUPLEX Timber Fittings offer the logical solution to framing problems. This is obvious from the great number of prominent DUPLEX installations where permanence was and is a factor.



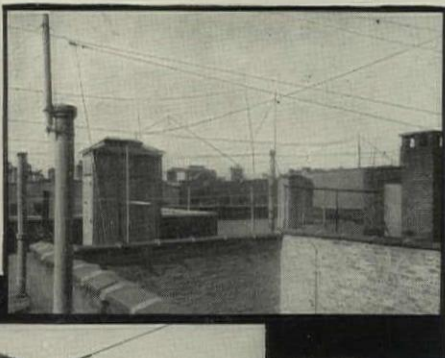
"A Reference Book of Mill Building Construction," Edition No. 27-P, is ready for immediate distribution. Send for yours today.





## No more unsightly aerials . . . far better radio reception

A maze of loose haphazard wires...unsightly supports...every condition operating against good reception...the finest receiver working under a handicap.



A neat, inconspicuous antenna serving all apartments...purposely designed and installed...efficient, modern and incomparable in results.

## • RCA • CENTRALIZED RADIO for high-class apartments

*Provides antenna and ground outlets in all suites*

Regardless of the size of the building, or the number of apartments (or individual radio outlets) they can all be connected with the RCA Centralized Radio System.

Both tenants and owners welcome this new way of banishing unsightly antennae...A single wire aerial on the roof will amply serve every apartment. In this way, each tenant enjoys much better radio reception and may quickly and easily tune his own radio quite as independently as though he had his own antenna.

The National Board of Fire Underwriters has approved all RCA Centralized Radio equipment. Each and every item has been especially designed by RCA engineers and constructed for Centralized Radio use.

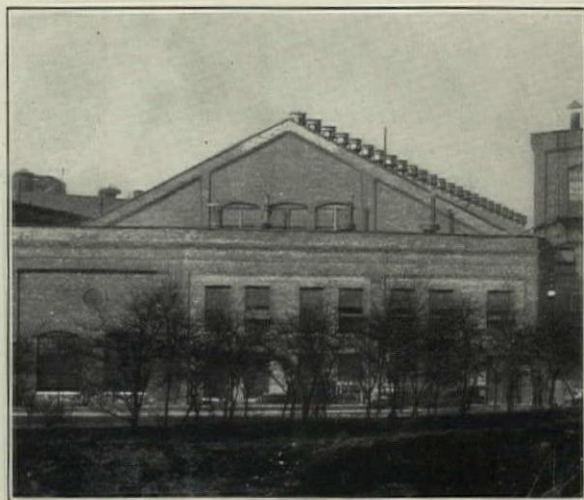
### *For Hotels, Hospitals, Schools . . .*

RCA Centralized Radio equipment is also designed for hotels, hospitals, sanitariums, schools, passenger ships, etc., where transient occupants of rooms may enjoy radio programs or phonograph record entertainment from loudspeakers or headsets, all operated from a central control.

The Engineering Products Division, RCA Victor Company, Inc., will answer inquiries and prepare plans and estimates for installations of any size.

ENGINEERING PRODUCTS DIVISION, SECTION B  
RCA VICTOR COMPANY, INC.

233 Broadway, New York, N. Y.  
Representatives in Principal Cities



ÆOLUS ventilators on a foundry.

## Replacing a Monitor

This foundry of an internationally known corporation formerly had a monitor.

It was taken off and twenty-six 24" ÆOLUS Ventilators installed in its place.

They are handling this difficult job of foundry ventilation quietly and well—as usual.

Specify {“ÆOLUS IMPROVED  
DOUBLE SYPHON”

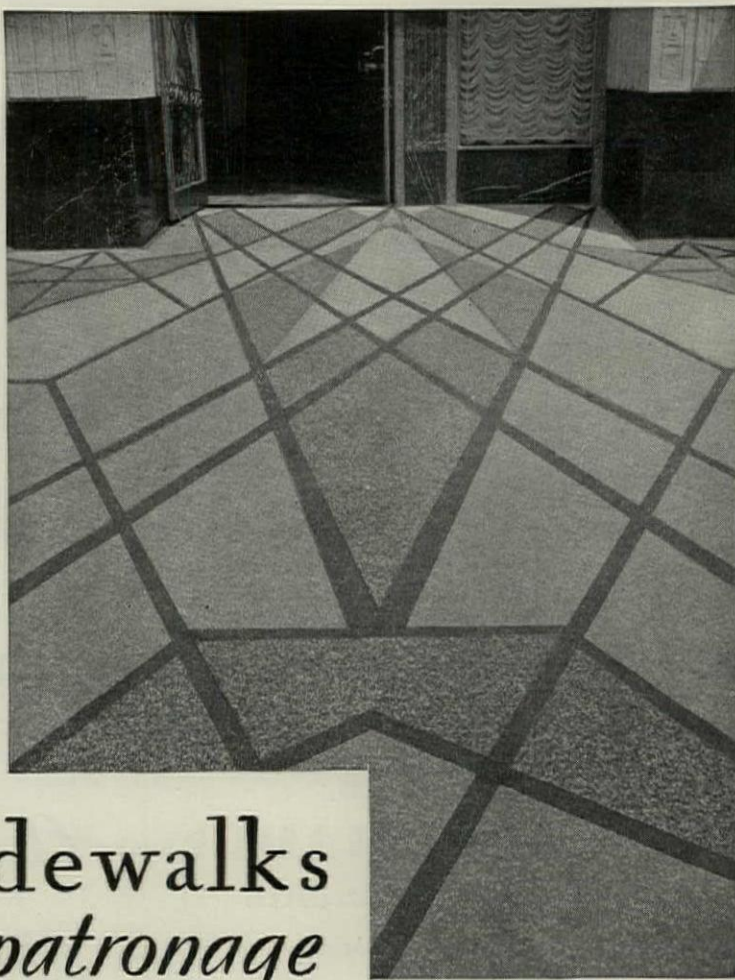
ÆOLUS DICKINSON  
3360 South Artesian Ave., Chicago

Builders of Ventilators since 1888

# ÆOLUS IMPROVED VENTILATORS



*Portland cement concrete sidewalks  
surrounding the Wilshire Profes-  
sional Building, Los Angeles.  
Arthur E. Harvey, Los Angeles,  
Architect.*



## Sidewalks *which invite patronage*

Sidewalks are playing a new role. They are helping business set the stage for sales, by providing an attractive approach to the shops they border. The patterns illustrated on this page were carried out in terrazzo, one of the specially finished forms of portland cement concrete. The result is really an extension of the lobby floors to the pedestrian area outside — an invitation to enter the building and its shops.

Each day concrete assumes new importance in the realm of business. Its fire-safety affords protection alike to lives and property. It contributes a substantial and enduring beauty to the architecture of smart shop and towering department store. It helps create favorable comment. In building and surroundings, concrete sets a magnificent stage for sales!



*Sidewalk patterns—new and different—may be produced at somewhat less expense than the fine terrazzo here pictured, by mixing suitable mineral colors in the concrete.*

**PORTLAND CEMENT Association**  
*Concrete for Permanence and Firesafety*

33 WEST GRAND AVENUE  
CHICAGO



No. 4 illustrating: "Thoughtful touches . . . to help in turning the client's mind to the architect's favor."



Vahan Hagopian, architect, employs Armstrong's Jaspé and Plain Linoleum in the store of A. S. Beck & Co., New York.

## Business takes a tip from the THEATRE

and up-to-the-minute architects inaugurate new decorative idea

STAGING, modern business men have learned, is just as important in modern business life as it is in the theatre. Settings *do* help sales, and Mr. and Mrs. Consumer will walk extra blocks to do their buying in an up-to-the-minute shop. No wonder these "Belascos of Business" are enthusiastic in their search for new and better decorative ideas. And no wonder that the architect who can give them valuable decorative ideas is getting good jobs in the business section.

Whether your client's product is sold over a counter or across a desk, whether he sells groceries, or professional advice, proper decoration will increase his sales. And no matter what type of decoration you choose, it can be based most successfully upon an Armstrong's Linoleum Floor. Compare the smart Armstrong Floors in these shops along New York's Fifth Avenue with the old-type floors in vogue a few years ago! Look at the floors in the better stores of your own city. You'll find Armstrong Floors in well-decorated business interiors all over the country.

You'll find a lot of valuable floor

information in our new file-size specification book. This book, together with colorplates and samples of modern Armstrong's Linoleum, will be sent upon

request. Look for our pages in the current Sweet's Catalog, too. For samples or advice, write to Armstrong Cork Company, Floor Division, Lancaster, Pa.



## Armstrong's Linoleum Floors

for every room in the house

Since 1839 Crouch and Fitzgerald has been a leading name in leather goods in Manhattan. Here is their smart Fifth Avenue shop with its Armstrong Floor—Handmade Marble Inlaid No. 62.

PLAIN .. INLAID .. EMBOSSED .. JASPE .. PRINTED .. LINOTILE .. and ARMSTRONG'S CORK TILE

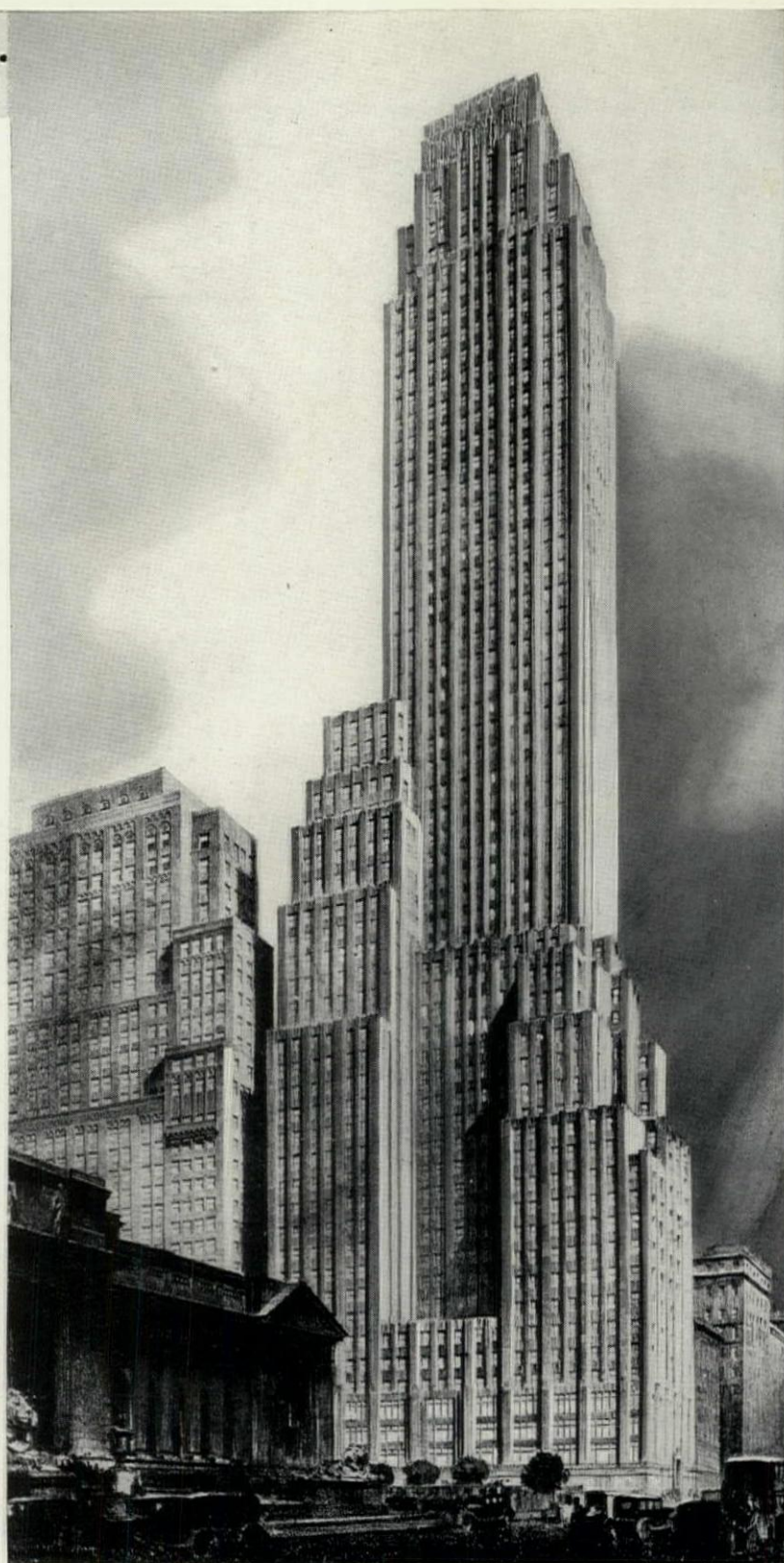


# 500 FIFTH AVE.

NEW YORK CITY

THE new 58-story Tower, now under construction for Walter J. Salmon by Charles T. Wills, Inc., on the northwest corner of Fifth Avenue and Forty-Second Street. Here, as in the adjoining Salmon Tower, Eleven West Forty-Second Street, all of the interior doors, trim and elevator entrances will be supplied by the

DAHLSTROM METALLIC DOOR COMPANY  
Established 1904 - 455 Buffalo Street, JAMESTOWN, N.Y.  
NEW YORK CHICAGO  
LOS ANGELES DETROIT DALLAS

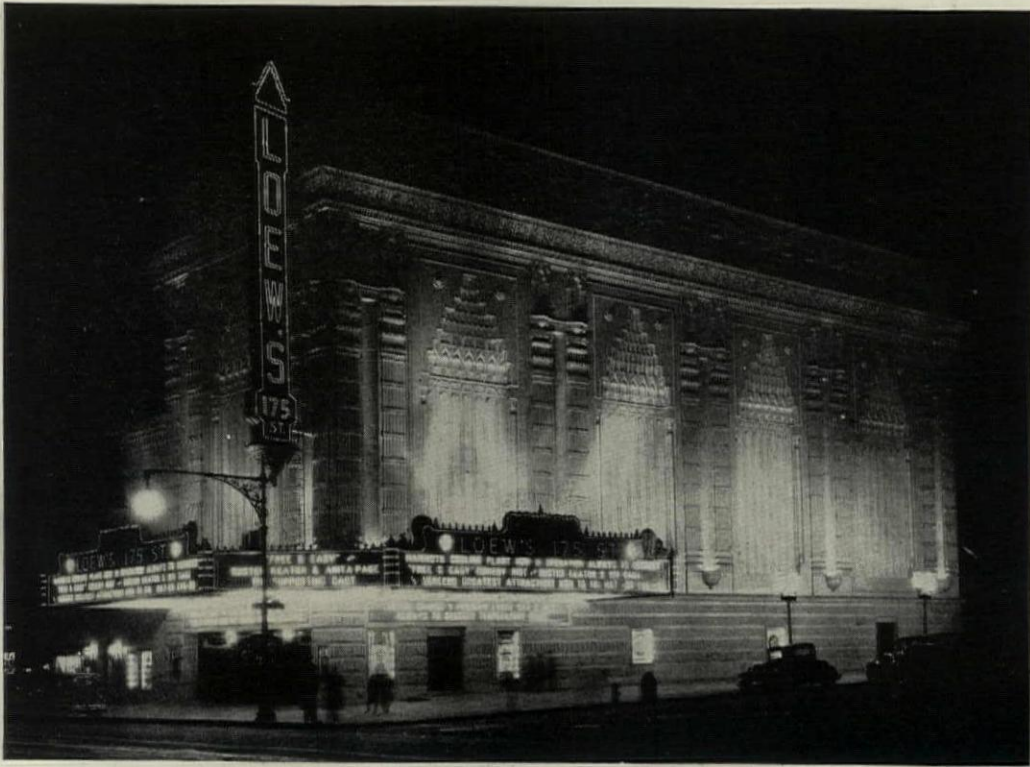


ARCHITECTS: SHREVE, LAMB & HARMON

*Elevator Entrances by*  
**DAHLSTROM**



## FEDERAL SEABOARD TERRA COTTA



*Loew's 175th St. Theatre,  
N. Y. C. Thos. W. Lamb, Inc.,  
Architect. Aronberg-Fried  
Co., Inc., Contractors.*

*Williamsburgh Savings  
Bank, Brooklyn. Halsey,  
McCormack & Helmer, Archi-  
tects. Wm. Kennedy Con-  
struction Co., Contractors.*

**T**ERRA COTTA is illuminated at less cost and is more effectively floodlighted than any other comparable material. Tests conducted by the General Electric laboratories have shown the finishes of Terra Cotta that are best adapted for indirect lighting and the superiority of the material in general.

Booklets will be sent on request.



## FEDERAL SEABOARD TERRA COTTA CORPORATION

ARCHITECTURAL  
TERRA COTTA  
MANUFACTURERS



OFFICES  
10 EAST 40th STREET  
NEW YORK CITY  
TELEPHONE ASHLAND 1220

FACTORIES: PERTH AMBOY, N. J. • WOODBRIDGE, N. J. • SOUTH AMBOY, N. J.





The new Johns-Manville Asbestos Shingles are designed as to texture and color to provide materials from which you may choose a roof suitable to virtually every type of house. In the accompanying illustration we show a closeup of Johns-Manville Asbestos Shingles in place on a roof. Ample thickness provides interesting shadow lines, while the texture of the shingles themselves is also attractive. We believe that by using Johns-Manville Asbestos Shingles you can obtain not only a safe, permanent roof but also the effect you desire.

**Johns-Manville**  
RIGID  
ASBESTOS SHINGLES





## Harmonious colors in Asbestos Shingles

An outstanding Johns-Manville achievement

**T**O say that Johns-Manville Asbestos Shingles are available "in a full line of colors" would be to employ a commercial phrase suggesting the usual assortment of harsh, glaring tints of red and green commonly found in manufactured roofing.

We do offer "a full line" but all colors show the restraint of well informed aesthetic taste. These colors and blends have been developed with a view to harmonious results when used in various combinations, also when seen in relation to other materials.

Thought has likewise been given to the needs both of traditional and so called "modern" design.

For example, there are the Salem grays. In these shingles we have permanently caught the interesting grays of the old weathered New England farmhouse roofs. In other types, harmonious blends adaptable to Tudor and early English tradition, both in color and texture, are obtainable. In still others, the modern flair for more colorful enrichment, without bizarre effect.

The coloring of J-M Asbestos Shingles is but one of their merits. They also have the thoroughly practical advantage of being fireproof and resistant to weather exposure. Properly laid, they may be considered entirely immune to damage for the life of the building which they cover. Repair and maintenance cost may be dismissed as an entirely negligible item.

### Made with a Definite Aim

One thing particularly we wish to stress. J-M Asbestos Shingles are manufactured to do a definite job, to combine features not found in natural materials. They are thoroughly intelligent examples of the age of fabricated materials.

Our Architectural Representatives are equipped to serve you with expert advice with reference to matters of proper application to obtain the particular effects desired. Whether it be Rigid Asbestos Shingles, or any of the many Johns-Manville products which enter into building, our men are available for intelligent cooperation.

### PRODUCTS FOR THE BUILDING INDUSTRY

Acoustical Materials  
Home Insulation

Asbestocel Pipe Insulations  
Insulating Board

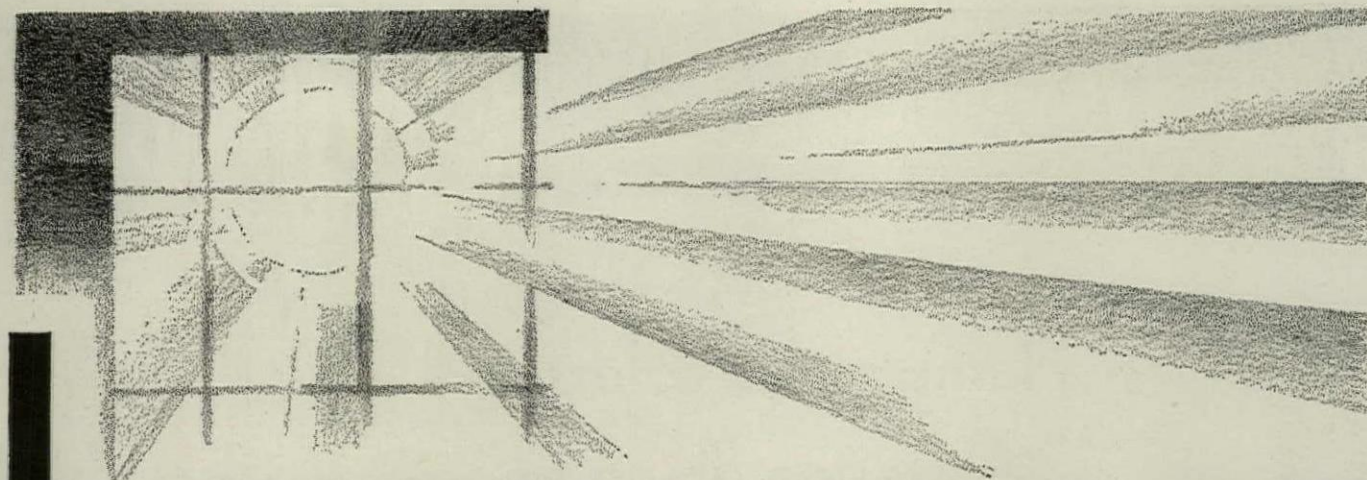
Asbestos and Asphalt Shingles  
Transite  
Tile Flooring

Built-up Roofs  
Floridene Stone

## Johns-Manville

New York Chicago Cleveland  
San Francisco Toronto





# LUSTRAGLASS

## FLAT-DRAWN



A flatter, clearer, more lustrous glass . . . LUSTRAGLASS is a superior product in every respect, yet it costs no more than any other good window glass.

*"Whatever rays you induce to flow through LUSTRAGLASS, the results are unquestionably conclusive" . . . writes the man who made the test described at the right . . . "My unrestricted congratulations."*

LUSTRAGLASS transmits a substantial amount of the shorter ultra-violet rays of sunlight of a wave length of 313 mu.\* . . . If twenty-nine days' exposure to these rays as transmitted by LUSTRAGLASS will benefit the health of plants to the extent illustrated in the chart, then it requires no imagination to see why LUSTRAGLASS should be specified for every window in homes, schools, factories and offices . . . Buildings in which growing children and workers spend at least ninety per cent of their lives.

LUSTRAGLASS is the highest quality window glass that research, skill and improved manufacturing processes have ever produced. It is the "whitest" of all glass made for windows, that greenish cast characteristic of window glass has been almost entirely eliminated . . . Remember always "Specify LUSTRAGLASS instead of window glass."

\*Write for LUSTRAGLASS BOOKLET A-430 and see complete table of transmission.

# AMERICAN • WINDOW

1600 Farmers Bank Building

Lustraglass Flat Drawn, Clear Sheet Window Glass, Armor-Lite Scatter-proof and Bullet-proof Glass, 16 oz. Picture Glass, Photographic Dry Plate Glass, 3/16"



# A NEW AND BETTER GLASS FOR WINDOWS TRANSMITS ULTRA-VIOLET SUN RAYS *Costs no more than any good window glass . . .*

THE plants shown on this chart are exact tracings of the actual shoots grown by a disinterested party for experimental purposes. Conditions under all four frames of glass were identical as regards fertilization, watering, location of frames, amount of available sunlight and time allotted to test. All seeds were planted at noon on March 19, 1930 and pulled up at noon April 17, 1930. The shoots selected for illustration represent a true and accurate average in height, spread and root development. The value of LUSTRAGLASS would have been even more pronounced had there been more time allotted to the test.



Look for this label on every light of genuine Lustraglass

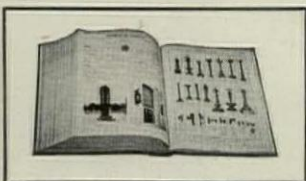
LUSTRAGLASS	GLASS No.2	GLASS No.3	GLASS No.4	This evidence proves it
				TOMATO
				ROMAINE LETTUCE
				ICEBERG LETTUCE

# GLASS • COMPANY

and  $\frac{1}{8}$ " Crystal Sheet, Ground and Chipped Glass, Improved Quartz-Lite and Bulb Edge Glass in single and double strength as well as  $\frac{3}{8}$ " and  $\frac{1}{2}$ " Crystal Sheet.

Pittsburgh, Pennsylvania





Sweet's Catalogue shows  
two hundred styles of  
**EXTERIOR LIGHTING  
FIXTURES**  
by  
**SMYSER-ROYER**



**SMYSER-ROYER** places 90 years of experience in metal working craftsmanship at the disposal of the architect and builder. ∴ ∴ A variety of two hundred Smyser-Royer designs for exterior lighting fixtures to fit almost any specifications is shown in Section D of Sweet's Catalogue, pages 5334 to 5344. Each illustration displays the high standard of craftsmanship maintained by Smyser-Royer. ∴ ∴ Or, if an original design is desired, Smyser-Royer craftsmen will faithfully interpret your specifications. Every detail of the original drawing will be carefully reproduced in metal as enduring as the building itself. ∴ ∴ We will gladly send you our catalogue showing Smyser-Royer lamps, lanterns and brackets for every period and purpose.

**SMYSER-ROYER CO.**  
Main Office and Works, York, Pa.  
Philadelphia Office, 1700 WALNUT STREET

## THE CUTLER MAIL CHUTE

Combines in the perfected Model F the result of long experience in meeting the exacting requirements of public use under Post Office Regulations—and the latest architectural development.

Simple and substantial in construction, durable in finish; with an interesting series of stock and semi-stock Mail Boxes of marked individuality from which to select.

Also intelligent and appreciative execution of special designs in any metal desired.

Correspondence invited.

**THE CUTLER MAIL CHUTE CO.**  
GENERAL OFFICES AND FACTORY  
ROCHESTER, N. Y.

GOOD TASTE

+ STRENGTH

"BEAUTY WITHOUT INTERRUPTION"

**C**OMpletely invisible when the door is closed. Flush doors - clean lines - no undesirable projections.

Manufactured with scientific precision as befits a quality product - yet surprisingly low in cost.

There is a Soss Invisible Hinge for every purpose. See our line in Sweet's Catalogue or write direct to us for our own complete catalogue "B"

Suggestions for Uses:

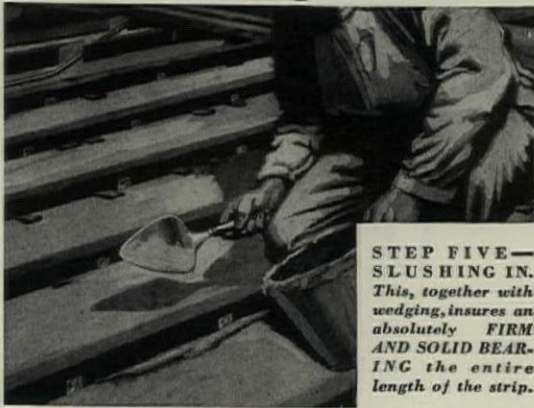
House Doors	Folding Partitions
Secret Panels	Radiator Covers
	Folding Tables
	Music Cabinets

Established 1908  
**SOSS MANUFACTURING CO., Inc.**  
Roselle, New Jersey  
DETROIT OFFICE:  
1051 Book Building  
Washington Blvd.

## SOSS INVISIBLE HINGES



## No Buckling, Squeaking or Doming, When You Use the Bull Dog Method



**STEP FIVE—SLUSHING IN.**  
This, together with wedging, insures an absolutely **FIRM AND SOLID BEARING** the entire length of the strip.

**T**HE Bull Dog Method and process of anchoring wood floors over concrete prevents buckling, squeaking and doming. Once properly wedged and slushed, the sleepers hold the floors rigidly, permanently.

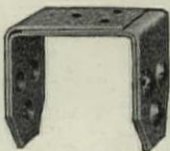
Other advantages are: *elimination of dry rot*, doubling floor life; saving of construction time, for there is no fill to dry, no beveling or shimming, sleepers and finished floor are laid at one time; reduction of dead load 18,000 lbs. to 1,000 square feet of slab area. The Junior Clip ( $\frac{5}{8}$ " wide) may be used with or without a fill (dependent on the service duty of the floor.) When a fill between the sleepers is desired, any cheap, inexpensive mix such as sand, cinders or cinder concrete can be used.

Millions of **BULL DOG FLOOR CLIPS** on over 8,000 jobs carry testimony of satisfaction. Made for 2, 3 and 4 inch sleepers. Regular and Junior Styles. Friction tight nailing facilities (nails gratis.) Write for catalog and samples.

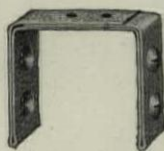
**THE BULL DOG FLOOR CLIP CO:**  
108 N. First Ave., Winterset, Ia.  
135 Representatives—15 Warehouse Stocks

## BULL DOG

### Floor Clips



**REGULAR CLIP—**  
3 sizes, 2, 3 and 4 in. 20 gauge galvanized iron.



**JUNIOR CLIP—3**  
sizes, 2, 3 and 4 in. 18 gauge galvanized iron.

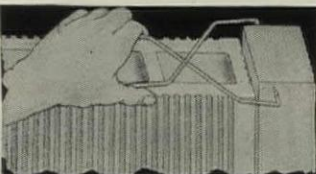
Original Patent  
granted June 14, 1921

Reissue Patent  
granted June 29, 1924

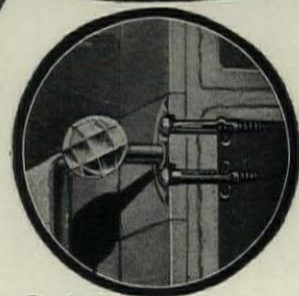
Process Patent  
granted May 19, 1925

## The Bull Dog Buck Anchor

**T**HE Bull Dog Buck Anchor forms a rigid truss in the mortar joint which prevents the movement of the buck in any direction. It eliminates the use of nails, screws, bolts, tie-wires, strips of metal lath and iron, and all pounding against the back sides of the buck. Made in three widths of No. 10 Galvanized Steel Wire: 3 in., 4 in., 6 in. Ten per cent of anchors in packing cases are shorts to take care of spaces too short for the regular size anchor.



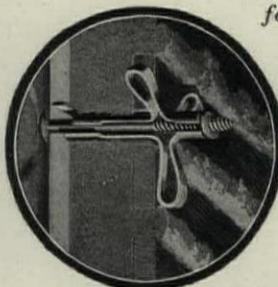
## for these Four Reasons



Towel rod in hollow tile

- 1 Because it saves your time and "plan cost." You don't have to detail locations of fixtures with reference to studding or wall construction, nor plan for headers.
- 2 Because Ankyras provide a sure fastening for fixtures, trim, grounds, wall radiators, etc., etc.—a fastening as strong as the wall itself and one that will not work loose.
- 3 Because Ankyras save time and material. No need to put in headers, hunt or respace studding and can be applied faster and cost less, and finally
- 4 Because they hold in any wall, hollow or solid. There are many places where nothing else will really work.

Send for special descriptive folder and samples



In lath and plaster

## ANKYRA<sup>TM</sup> F.G. CO

Wayne Junction

Philadelphia



WHERE NOTHING ELSE

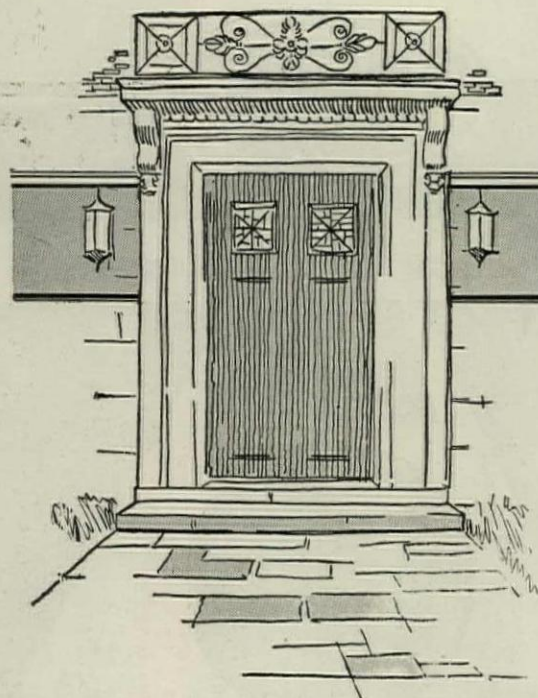


WILL REALLY WORK

Ankor

Bolts





# *The Endowment*

## MOORE LAB

### *Wisely Pro*

The Moore Foundation for the establishment of the Laboratory of Chemistry at Amherst College carried the stipulation that quality should prevail throughout. This alone would insure the permanency that has been the keynote of Amherst teachings for over a century.



McKim, Mead & White, Architects



# Which Created the

---

## ATORY OF CHEMISTRY

---

### vided for Leak-proof Drains

One of the laboratories, showing Duriron drain piping hung from the ceiling.



SO it was only natural that the architect's specification for the laboratory waste drain piping called for DURIRON. Not only will the pipe resist all corrosive deterioration indefinitely, but the calked joints, too, are structurally rigid and permanently leak-proof—the latter a definite DURIRON advantage.

The choice of DURIRON is paid-up insurance against building damage due to the leakage of corrosive liquid wastes. It is an ultimate economy. For 17 years a product of The Duriron Co., Inc., Dayton, Ohio.



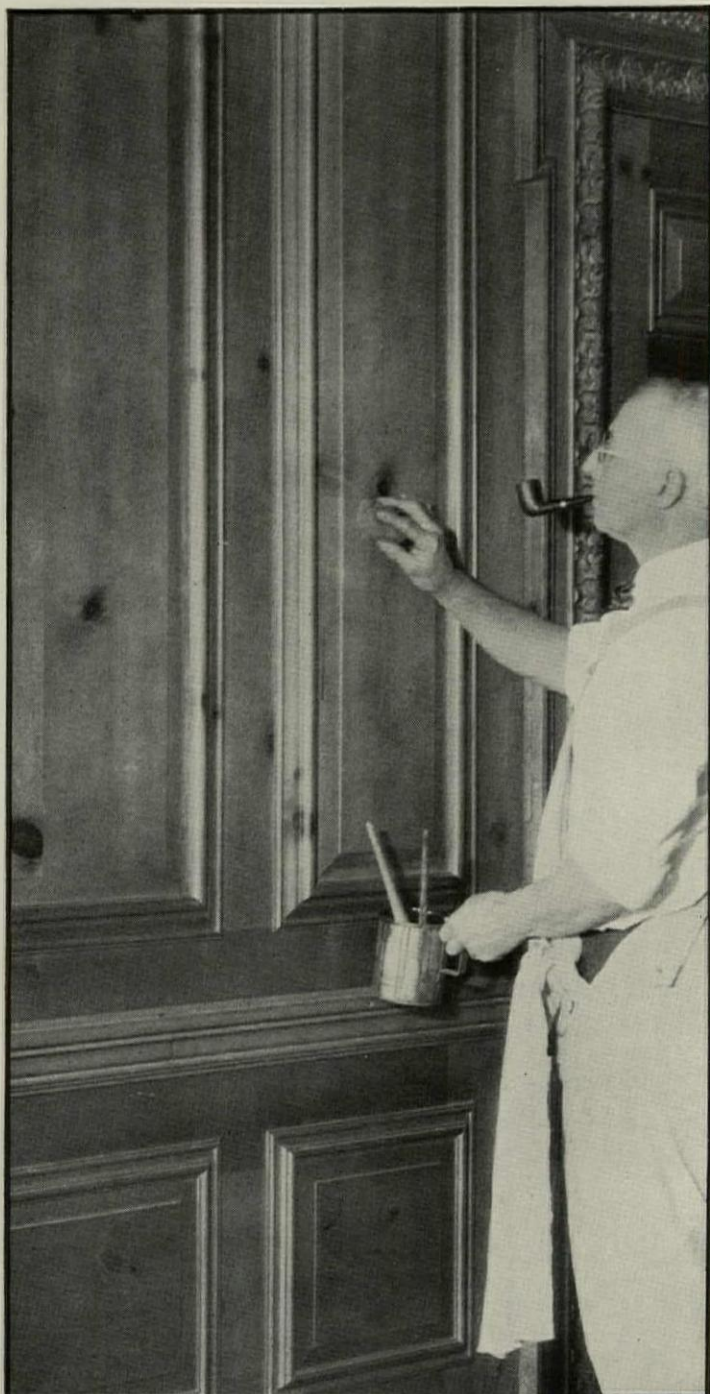
# DURIRON ACID PROOF DRAIN-PIPE

Tenney & Ohmes, Engineers.



# THE WARM, RICH NOTES OF PANELED PINE

## MAKE A HOMELIKE, LIVABLE ROOM



*"I once heard of a fellow who said you could do anything with children if you play with 'em. Pondosa Pine's like that. Sort of show it what you want an' it gets into the game with you—sawin', it cuts true an' easy; planin', it comes smooth an' even; paintin', it pretties up like a girl goin' to a party."*

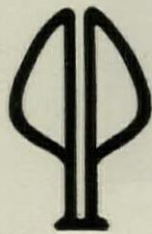
—From the philosophy of the boss-carpenter.

THE mellow beauty of knotty pine paneling reflects sunlight and firelight in cheerful tones and glowing shadows. Under the influence of this simple and unaffected wood, a room . . . perhaps the living-room, looking out on a fragrant garden . . . a man's den, with books . . . the dining-room . . . becomes more livable, more friendly.

Combining, as it does, structural, insulating and decorative values all in one, Pondosa Pine is especially desirable for knotty pine paneling. The grain is rich and delicately figured, with an infinite variety of knot arrangement. Many beautiful color effects are possible. Pine paneling is easy to keep clean too. Up-keep charges are negligible.

And whatever the architectural type, pine paneling of Pondosa lends authenticity and charm. In a Georgian or Colonial home, where at least one room should be faithful to the period. . . . In the library of a town house . . . the game room . . . a boy's bedroom. And in places other than houses . . . restaurants, hotel lobbies and entrances, studios of professional men, smart specialty shops, public buildings, theaters, foyers of music halls, show windows. Wherever it is used, pine paneling is in perfect taste.

The familiar pine tree trade-mark, imprinted on Pondosa Pine, is your assurance that each board has been manufactured according to highest standards. Specify Pondosa by name. Western Pine Manufacturers Association, Portland, Oregon.



## Pondosa Pine

THE PICK O' THE PINES



Q U I E T . . . please . . .



**M**ODERN hospitals need acoustical treatment to deaden the sound of voices and footsteps in corridors. To absorb the noise of slamming doors and rattling dishes. To quiet the disturbing sounds from out of doors. Acoustex does this, and in doing so promotes rest and recovery.

Acoustex eliminates the depressing monotony and glare commonly associated with walls and ceilings of hospital rooms and corridors because it comes finished in cheerful colors to your own specifications. The texture of Acoustex is restful to the eye. It can be cleaned or re-finished without appreciable effect on its acoustic qualities. Acoustex is incombustible. Its use involves no fire hazard. Tested by years of successful installations.

BOSTON ACOUSTICAL ENGINEERING DIVISION  
of HOUSING COMPANY  
40 CENTRAL STREET, BOSTON, MASS.

Acoustex erectors are located in principal cities . . . Ask for specifications and details on the use and application of Acoustex . . . or write us direct.

# ACOUSTEX

The *Decorative* Sound Absorbent

## ACOUSTEX offers you . . .

An acoustic material which is a finish beautiful in itself . . . tinted to your specifications . . . unusually high coefficient of sound absorption . . . easily vacuum cleaned and redecorated . . . made of incombustible wood fibre . . . tested through years of successful installations . . . furnished in tiles from 6' x 12' to 12' x 24' and large sheets two feet wide and up to ten feet in length . . . three thicknesses available to meet all absorption requirements:



### ACOUSTEX 60—1 inch thick

\*Absorbs more than 60% of the incident sound

### ACOUSTEX 70—1½ inches thick

\*Absorbs more than 70% of the incident sound

### ACOUSTEX 80—2 inches thick

\*Absorbs more than 80% of the incident sound

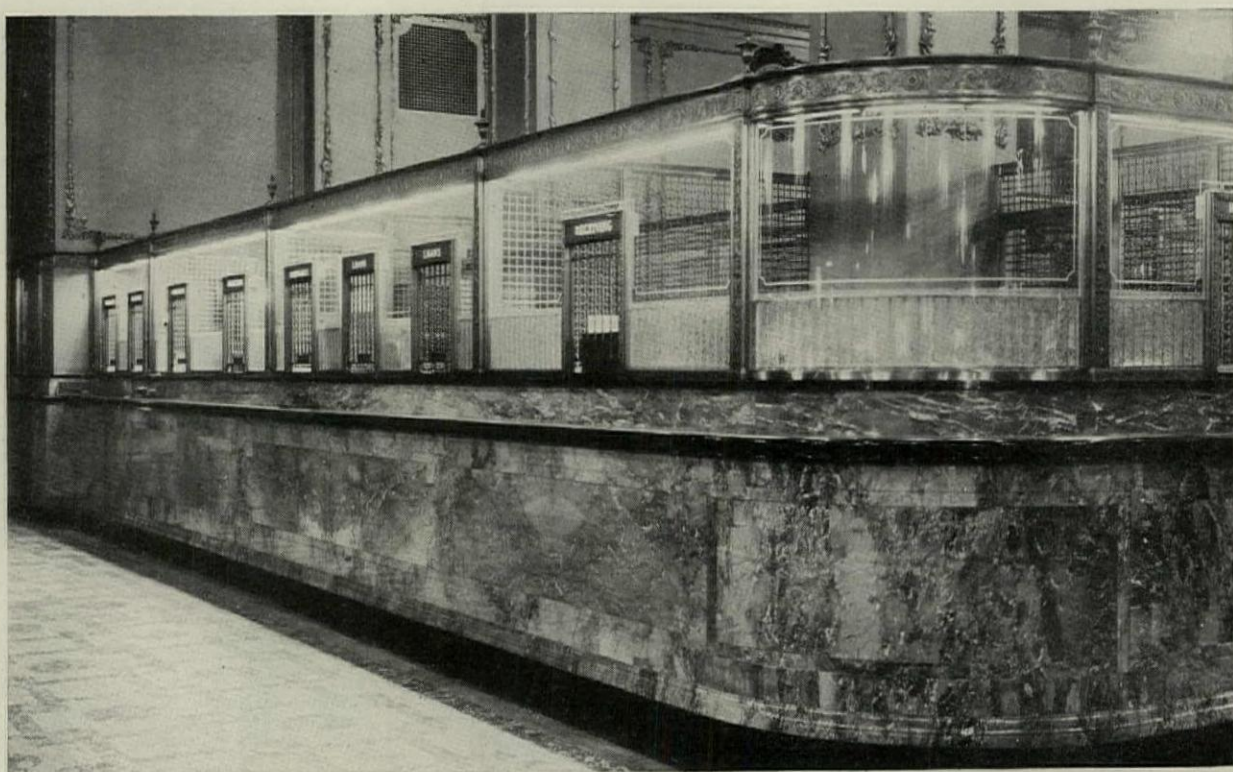
\*1024 vibrations per second.

Boston Acoustical Engineering Division of Housing Company, 40 Central St., Boston, Mass. P-7  
Please send Specifications and Details on the Use and Application of Acoustex for our acoustic file.

Name .....

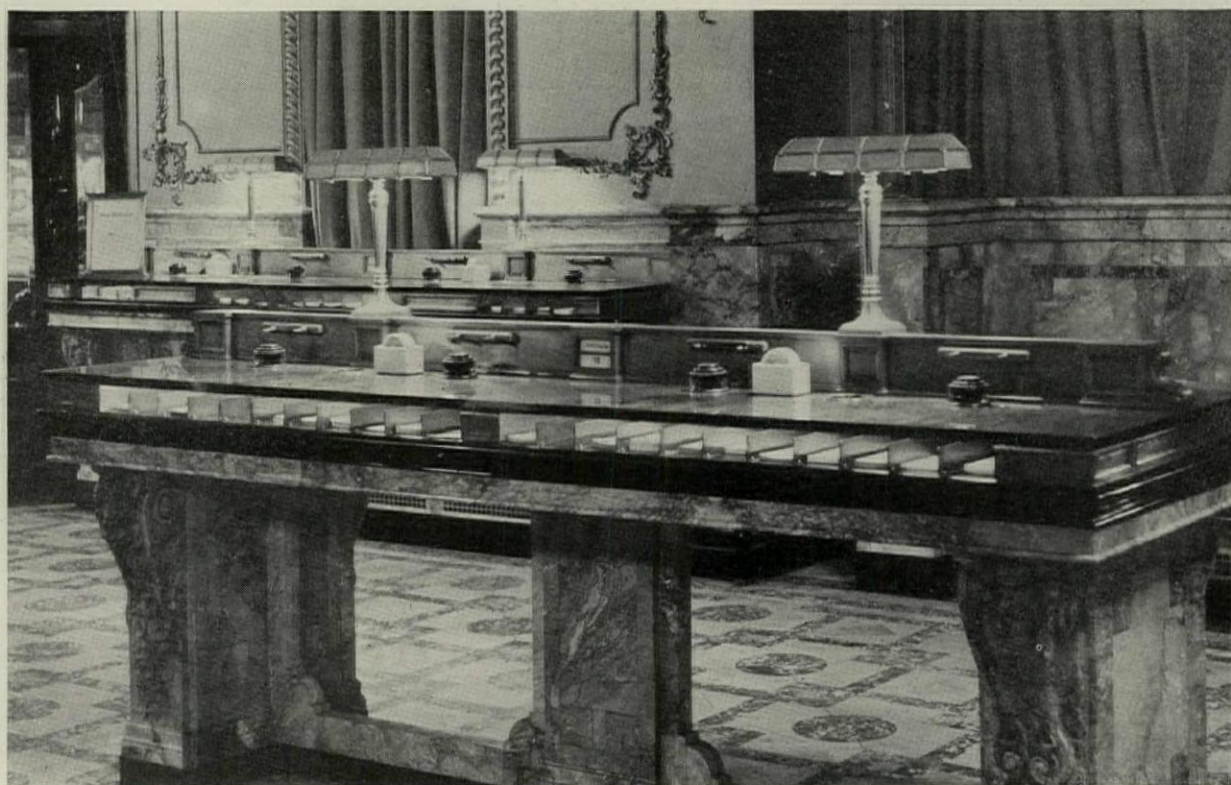
Address .....





The above view of the Union Trust Company, Providence, R. I., G. F. Hall, architect, shows the counter screen equipped with Frink continuous bronze reflectors. Wickets are provided with "Empco" signs.

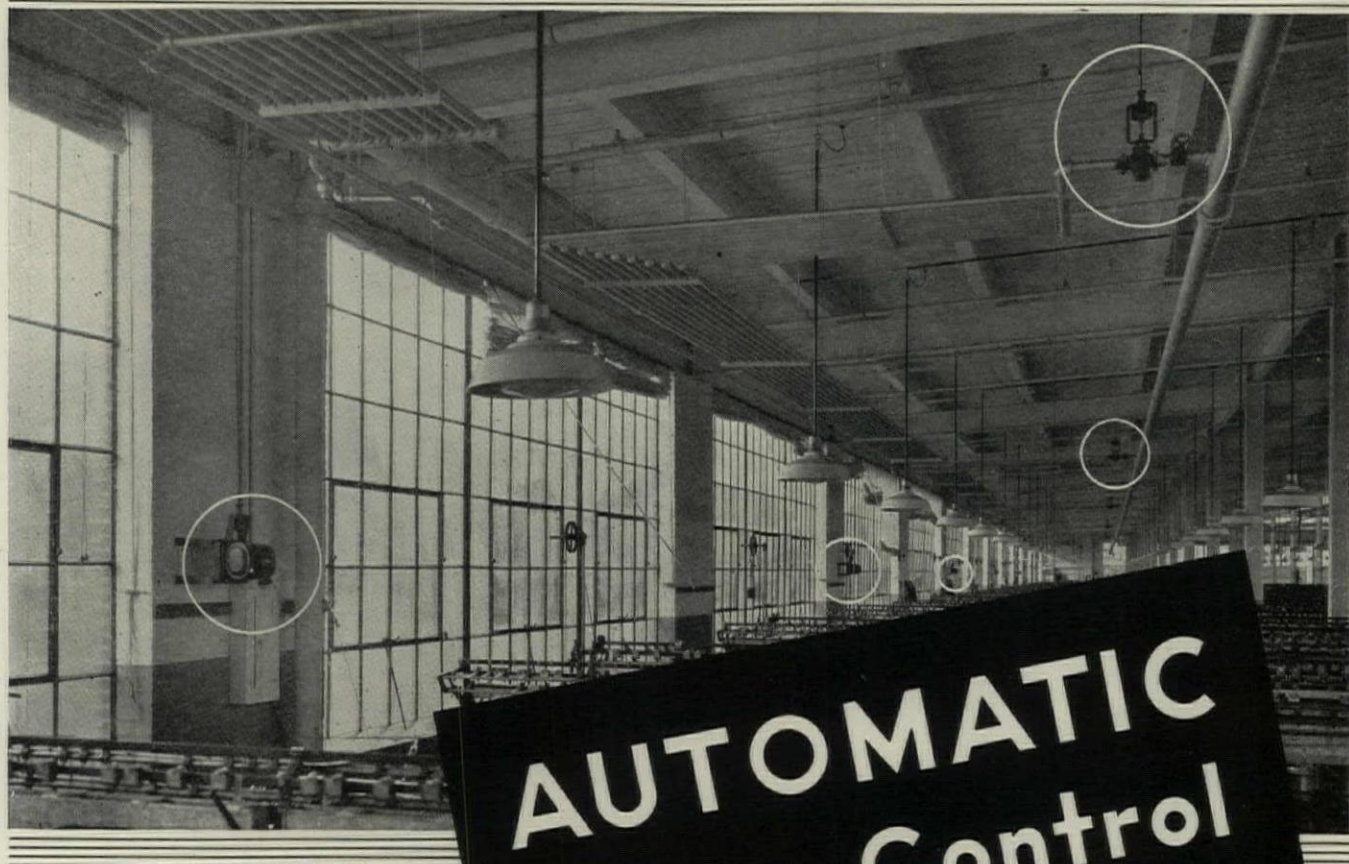
Below illustrates the customers' check desk equipped with specially designed bronze reflectors.



# THE FRINK CORPORATION

23-10 BRIDGE PLAZA SOUTH, LONG ISLAND CITY, N. Y.





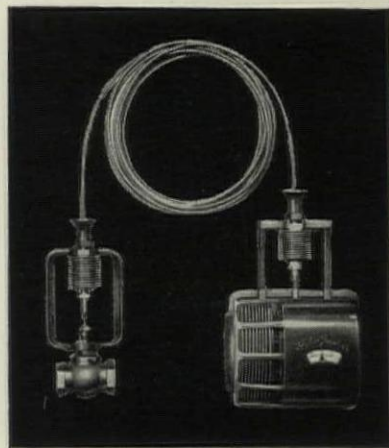
# AUTOMATIC Room Control

*Sylphon*  
TRADE MARK

NO. II

## REGITHERM

The Regitherm provides the easiest and most practical means for controlling temperature of dry rooms of all descriptions: varnish driers, turkish baths, greenhouses, proofing rooms in bakeries, factory work rooms, weave rooms and conditioning rooms in textile mills, rooms where paints and varnishes must be applied at certain temperatures, rooms for storage for various products such as automobile, bicycle and motorcycle tires which should be maintained at certain temperatures, cotton warehouses, and for the control of air currents in fan and duct systems. Also for control of cold storage rooms where calcium brine is used for the cooling medium.



Under or overheating — means loss of health, loss of wages, loss of material, loss of profits — and it helps nobody. Stop this senseless waste by installing a Sylphon Regitherm that will automatically, and accurately maintain the temperature you desire 24 hours every day, year in and year out, with very little attention.

The Sylphon Regitherm is made in many types and sizes to fit your particular requirements. Thousands of installations in the past 16 years, many of which are still in operation, attest to the accurate performance and serviceability of this type of temperature controller.

If you wish to know more about the Sylphon Regitherm and what it can do for you, write for Bulletin NP—No. 175. No obligation.

**FULTON SYLPHON Co.**  
KNOXVILLE, TENN., U.S.A.



Representatives in all Principal Cities in U. S. A., European Representatives, Crosby Valve and Eng. Co., Ltd., 41-2 Foley St., London, W. I., Eng., Canadian Representatives, Darling Bros., Ltd., 140 Prince St., Montreal, Que., Canada.



# Walls

may "have ears"—  
but they can't read!

WALLS can't read the advertising about the Plaster that goes on them, so they don't know what to expect of it. A wall just has to put up with the Plaster your contractor puts on—whether it makes the wall feel strong or puny. Whether it slips easily, or drags across with leaden feet. So let's leave this question of using Gypsteel Gypsum Plaster to the walls and ceilings.

If they feel stronger and tougher when Gypsteel goes on, fine. You'll keep on using Gypsteel. If they don't like it, you won't want Gypsteel no matter how many nice things we say about it.

Just test Gypsteel on the walls of your next job. Feel the difference in their strength and toughness.



If this test didn't prove out so often there wouldn't be so many architects and builders insisting on Gypsteel Plasters.

General Offices:  
Linden, N. J.

STRUCTURAL GYPSUM CORPORATION

Sales Offices in  
Principal Cities





# TIME



**Bullock's Wilshire  
Department Store,  
Los Angeles.**

John Parkinson & Donald  
B. Parkinson, Los Angeles,  
Architects.

Mechanical Engineering  
by E. L. Ellingwood,  
Los Angeles.

Sanitary Engineering by  
John Parkinson & Donald  
B. Parkinson.

Plumbing and Heating by  
Thomas Haverly Company,  
Los Angeles.

## WHERE BEAUTY DEFIES TIME

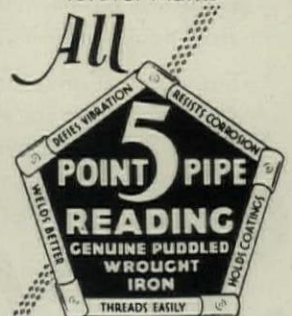
On Wilshire Boulevard, Los Angeles—artery for fashionable motor traffic—rises beautiful Bullock's Wilshire Department store, one of the most impressive buildings of its type. Modern in its soaring lines, Bullock's Wilshire smiles at Time—That Tough Old Tester. For deep within its walls is the pipe that keeps buildings new. Throughout the long years, the beauty of this structure will remain unmarred by costly pipe replacements and repairs. Wisely, Reading Genuine Puddled Wrought Iron Pipe was specified for plumbing and heating lines—the rust-resisting pipe that defies Time's onslaughts as does no other!

Through generations of service, Reading 5-Point Pipe has earned the reputation for outlasting the building in which it is installed. You can specify this pipe with the confidence that it means enduring satisfaction.

READING IRON COMPANY, Reading, Pennsylvania

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

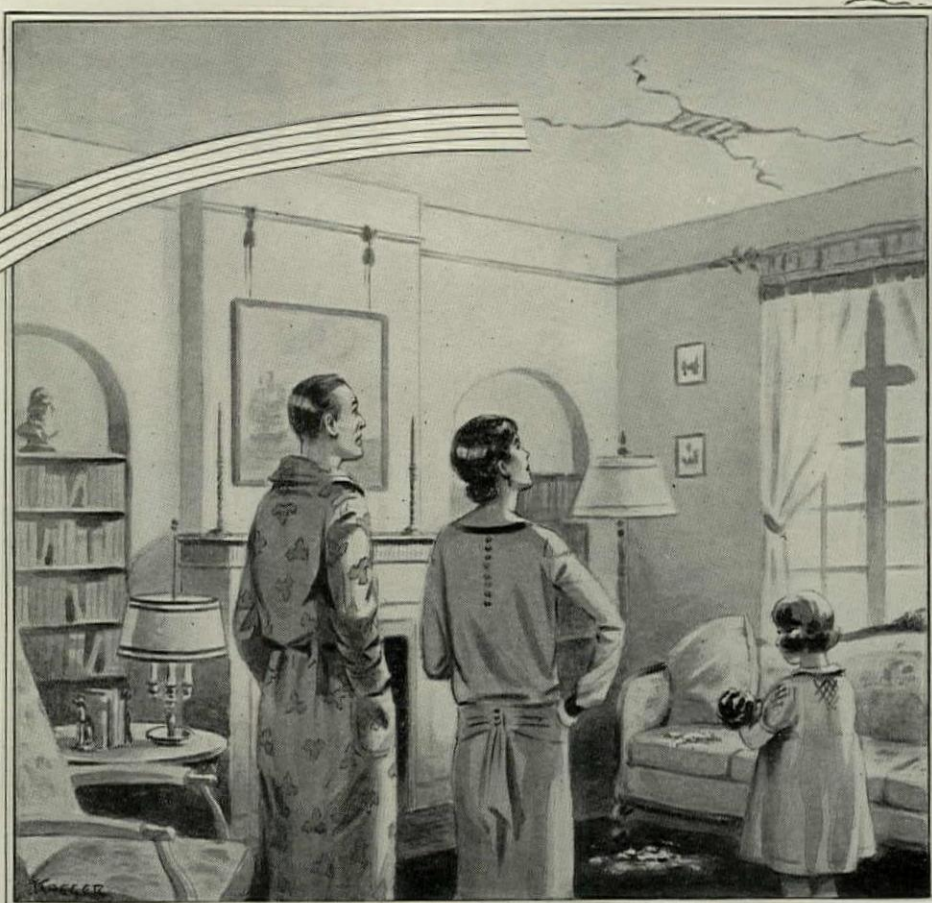
For Your Protection.  
This Indented Spiral  
Forever Marks



*Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron*



*everyone  
loses*



## when the PLASTER cracks !

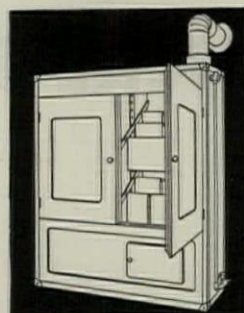
**A**RCHITECT—contractor—owner—all lose when unsightly cracks appear on plastered walls and ceilings.

Futile to explain away their existence by saying; "Ordinary lath naturally expands and contracts in changing moisture conditions;" that "cracks appear due to slight foundation settling."

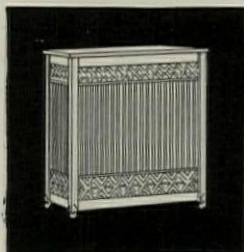
For the question then arises, "Why wasn't steel lath used instead?" Steel lath that prevents plaster cracking . . . that affords protection from fire . . . that eventually saves its own cost in minimized redecoration charges.

Buyers are paying more and more attention to the plaster base. They have become educated to the comfort, economy and safety brought about by the use of steel in the home—colorful steel furnaces, enameled steel tile for the bathroom and basement; laundry trays, radiator enclosures, clothes chutes—even steel doors and trim.

For information concerning any steel building product write Trade Research Division, National Association Flat Rolled Steel Manufacturers, Terminal Tower Building, Cleveland, Ohio.



The all-steel clothes dryer has a decided influence on the sale or renting of a home. Saves labor and time.



Steel radiator covers add another piece of beautiful furniture to the home and vanishes the unsightly radiator.

Save    with **Steel LATH**



WATERPROOFINGS

**HORN**  
PRODUCT

FLOOR-TREATMENTS

**NON-SLIP**

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



**JOINTER**

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

**COLORUNDUM**

For Coloring

Armor Plating

**Cement Floors**

When the Floor Is Laid

**What It Is**

**C**OLORUNDUM is a powder. It's composed of powerful non-fading, lime resisting coloring mediums. These are combined with fused aggregates of diamond-like hardness.

Colorundum colors. Armor Plates. Waterproofs. Dustproofs. Slipproofs.

So far as we know, no single coloring product accomplishes so many results, each complete and satisfactory in itself.

**Its Four Colors**

**M**ADE in the four most generally used colors. Brown, Green, Red, French Grey. The one price for all colors. Yes, even to the Green.

**Its Smoothness**

On first thought you would say it was impossible for a cement floor surface to have a glass-like smoothness and still be non-slip. But it's so. It's the special kind of fused aggregates used that do it. And keep on doing it for the life of the floor.

**A. C. HORN COMPANY**

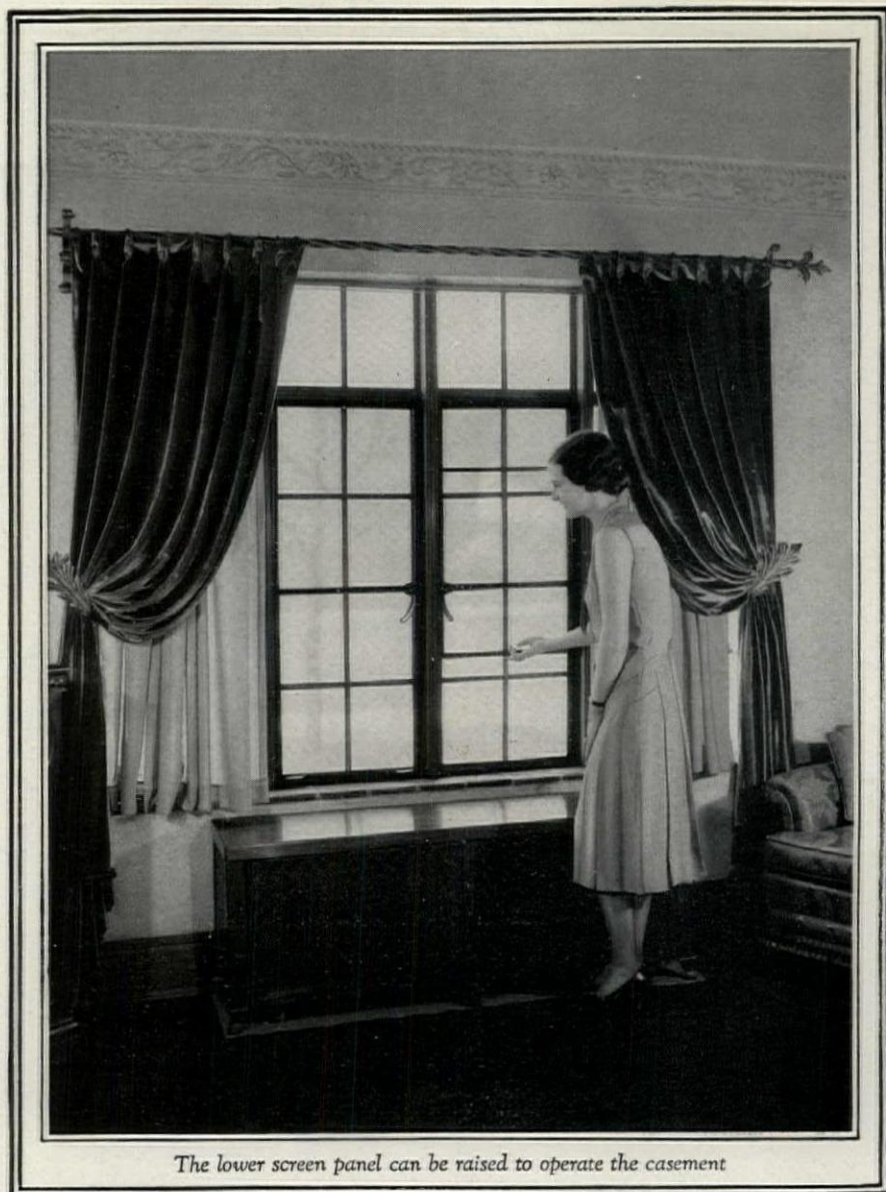
GENERAL SALES OFFICE  
New York: 101 Park Ave.

Branch Offices in All Principal Cities

WORKS:  
Long Island City, N. Y.



# Now NORMAN CASEMENTS



*The lower screen panel can be raised to operate the casement*

## ARE AVAILABLE WITH SCREENS BY CRITTALL

Offered now with standard screens, Crittall Norman Casements are more than ever the ideal windows for fine residential buildings.

Crittall screens—as furnished with both Norman and Stanwin Casements—are attractive in appearance and unusually simple and efficient. They fit snugly and compactly against the window on the inside—and are inconspicuous when in place. The lower screen panel can be raised with the finger tips permitting the window to be operated easily and naturally.

Crittall screens can be installed and removed

quickly, without the use of tools. The rigidity of their frames permits storage without damage—an essential feature.

Outward-opening Stanwin and Norman Casements with screens by Crittall are available in a wide variety of standardized sizes and designs.

Upon request we will gladly send you detailed information regarding Crittall Screened Casements. Our complete catalog is in Sweet's—Pages A1131 to A1200.

CRITTALL CASEMENT WINDOW COMPANY  
10957 Hern Avenue     ,     ,     Detroit, Michigan

# CRITTALL CASEMENTS

STANWIN CASEMENTS     ,     ,

NORMAN CASEMENTS     ,     ,

UNIVERSAL CASEMENTS





# CLEAR THE COURT!

OF DEAD AIR, DRAFTS, DUST  
AND NOISE FROM THE STREET!

Courtrooms that are stuffy, dusty and drafty, work a hardship on both bench and bar. Where so much depends on clear heads, the air should be clean... and invigorating!

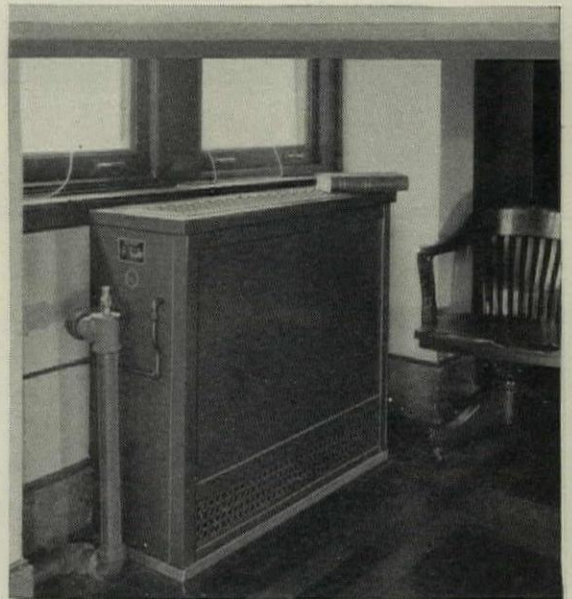
Just step into this modern courtroom. Here the air is always refreshing, always at the right temperature. Windows are closed...there are no drafts, no noise and dust from the street. Proceedings are not hampered by the depressing effects of bad air.

There are 17 Sturtevant Unit Heater-Ventilators in the courtrooms, libraries, and complaint rooms. These units bring in outdoor air, filter it, temper it...then pass it gently into the rooms. They are quiet, automatic, and finished to blend in with the rich oak woodwork.

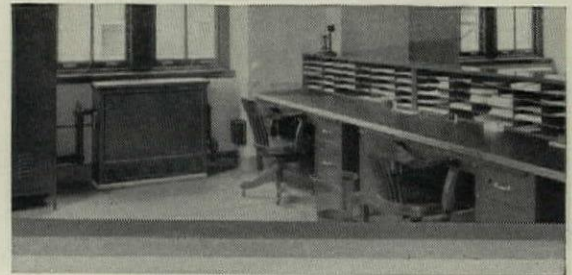
Sturtevant Unit Heater-Ventilators are adaptable to a wide variety of installations in schools, churches, institutions, office buildings, etc. You will be interested in our Catalog 361...and it will be a pleasure to send you a copy.

**B. F. STURTEVANT COMPANY**  
Main Offices: HYDE PARK, BOSTON, MASS. - CHICAGO ILL., 410 No. Michigan Ave., - SAN FRANCISCO, CAL., 681 Market St.

Branch Offices in Principal Cities. Canadian Offices at: Toronto, Montreal and Galt. Canadian Representatives: Kipp Kelly, Ltd., Winnipeg.  
Agents in Principal Foreign Countries.



*Above, a corner of a library; below, the traffic complaint room, in the Washington Heights Court House, New York City; Architect: George M. McCabe, New York; Engineer: J. P. Whiskeman, New York; General Contractor: Jas. McWilliam, Inc., New York; Heating Contractor: Dierks Heating Co., New York.*

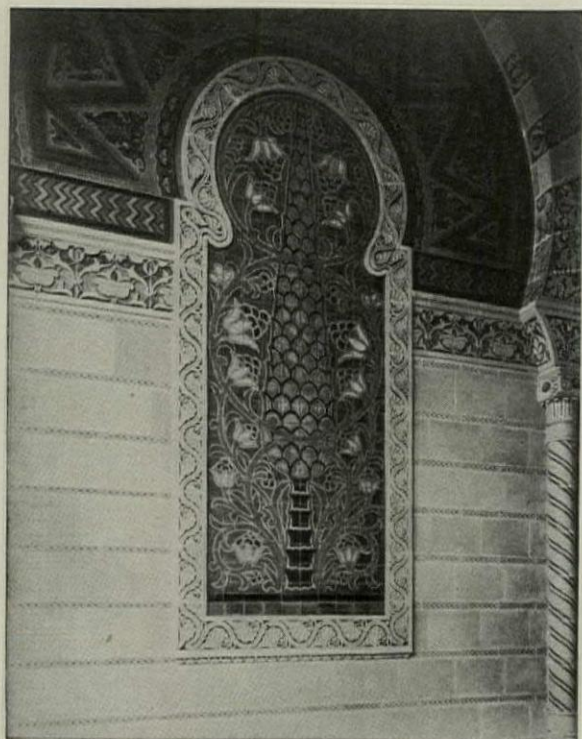


# Sturtevant Unit Heater-Ventilator

Reg. U. S. Pat. Off.

SUPPLIES OUTDOOR AIR ~ FILTERED CLEAN ~ AND TEMPERED





PANEL 6 feet by 20 feet

## POLYCHROME FAIENCE

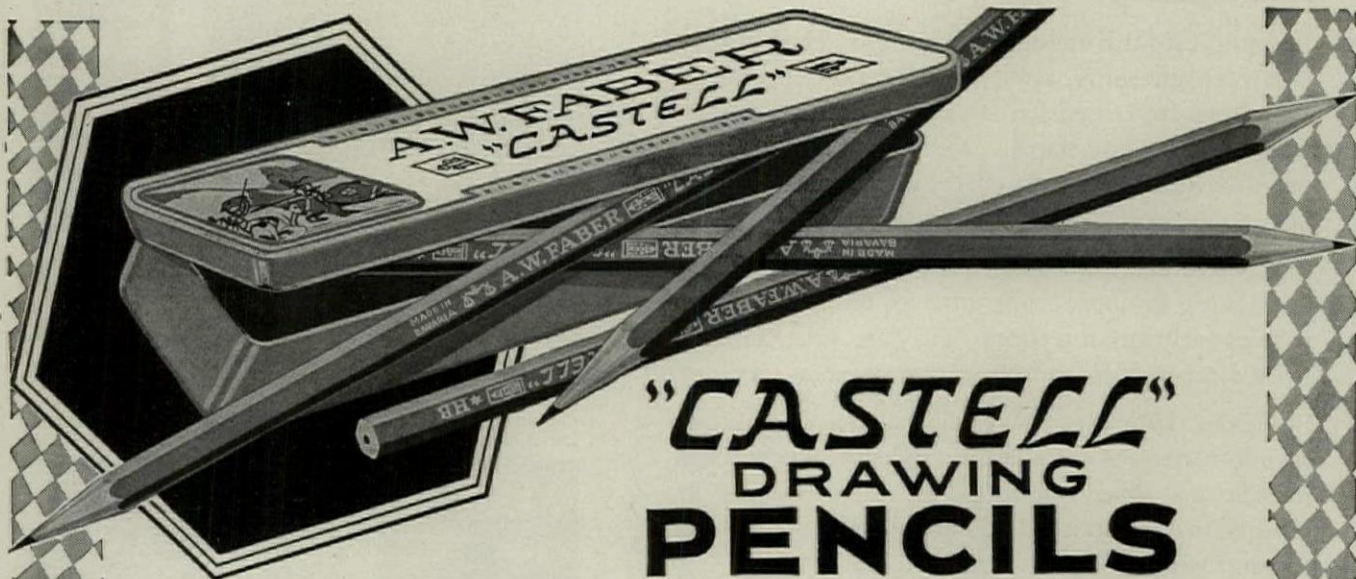
NEW MASONIC TEMPLE  
TRENTON, NEW JERSEY

WALTER HANKIN, ARCHITECT

TILE PANEL BY  
MUELLER MOSAIC CO.  
TRENTON, NEW JERSEY

NEW YORK DISPLAY ROOM  
103 PARK AVENUE

SEND FOR BOOKLET



## "CASTELL" DRAWING PENCILS

The world's best drawing pencil—the choice of great artists and craftsmen—made in sixteen degrees of hardness

["CASTELL" POLYCHROMOS PENCILS in 64 colors]  
A.W. Faber RUBBER ERASERS for the draftsman

## A.W. FABER

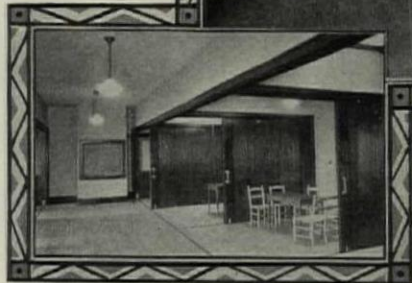
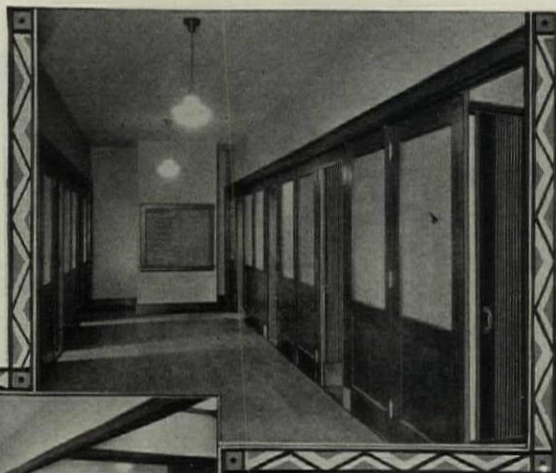
INCORPORATED  
NEWARK, NEW JERSEY, U. S. A.  
Pencil Manufacturers for over 169 years



**Wilson****Sectionfold and Rolling Partitions . . .**

(REG. U. S. PAT. OFF.)

Lake Street Pres-  
byterian Church,  
Elmira, N. Y.  
Harry M. Haskell,  
Arch't.



Note how combination of Wilson  
Sectionfold and Vertical Rolling Partitions  
sub-divide the large hall into  
many smaller classrooms. Partitions  
folded or rolled back out of the way  
at will.

**To Keep Within  
The Appropriation**

VERY often it is desirable to use Wilson Section-  
fold Partitions for sub-dividing auditoriums in  
churches, schools, etc., but ample funds are not available.

In this event we suggest a combination of Sectionfold  
Partitions with Wilson Rolling Partitions as illustrated.  
This effects a considerable saving in price with no les-  
sening in the utility or convenience of the room.

Glass may be introduced in the Sectionfold Doors to  
provide light, if necessary, and shuttle doors between  
classrooms, or between corridors and classrooms may be  
used for convenience.

When all the Partitions are folded or rolled up the  
entire room is free to be used as an auditorium when  
necessary.

We are at your service for furnishing data for just  
such layouts as this.

Send for our Catalog No. 4

**OVER FIFTY YEARS IN BUSINESS**

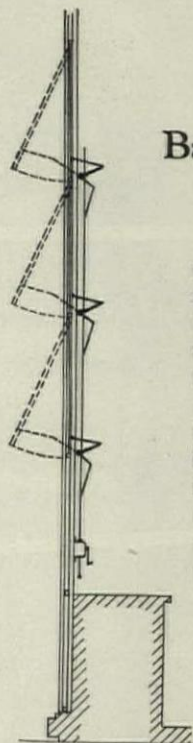
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**J. G. WILSON CORPORATION**

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Offices in all Principal Cities

**Group Operation  
of Sash in  
Banking Room Windows**

BRONZE ventilating sash at  
each side of the large window  
openings in the Lincoln Building,  
are controlled as a unit. The  
operators are mounted on the  
mullions, with operating cases near  
the sills. The action is positive.  
All equipment is in keeping with  
the high character of the appoint-  
ments of this most modern build-  
ing. As in this instance, the use  
of the Lord & Burnham name  
assures operators architecturally har-  
monious and thoroughly effective.



Vertical section through  
the bronze windows,  
showing apparatus.



The Lincoln Building, East 42nd Street, New York City.  
J. E. R. Carpenter, Architect.  
Dwight P. Robinson & Co., Builders.  
Bronze sash by The Gorham Company.

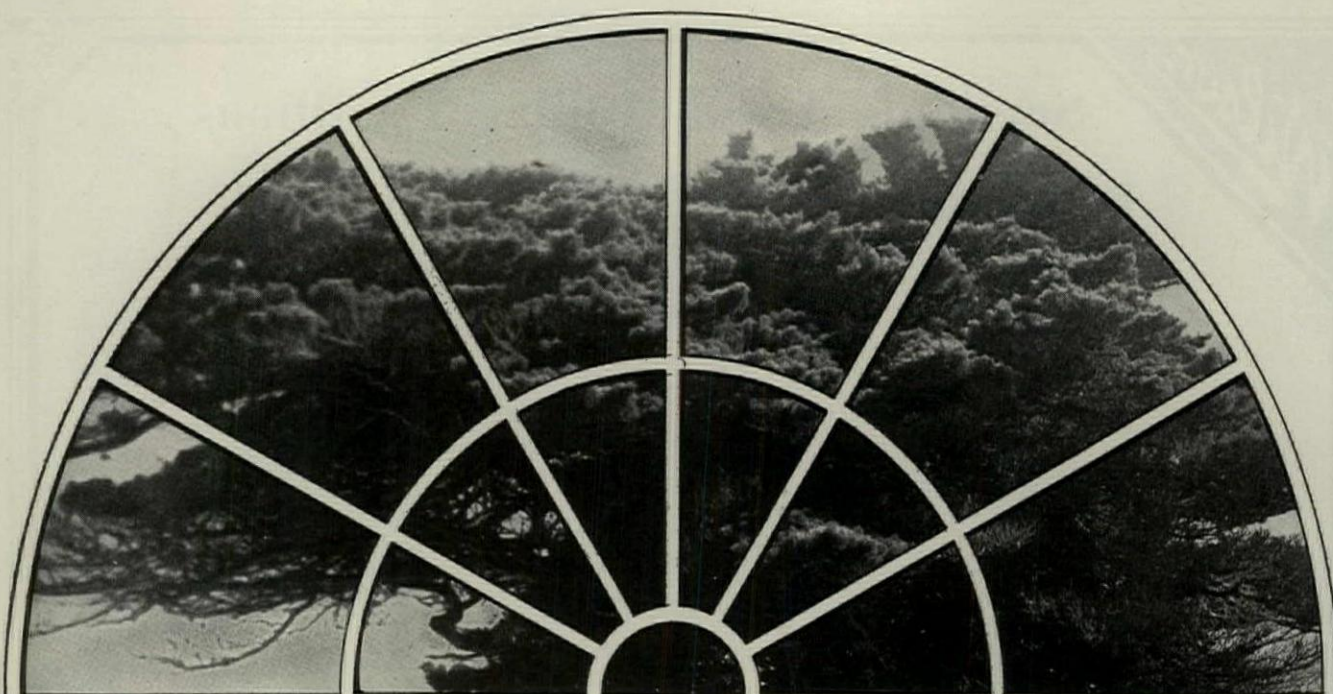
**Lord & Burnham Co.**

SASH OPERATING DIVISION  
Graybar Building New York City

Representatives in all Principal Cities  
of the United States and Canada

Steel sash by the International  
Casement Company, on the prome-  
nade, 53rd floor, are also operated  
by Lord & Burnham Co.'s operators.





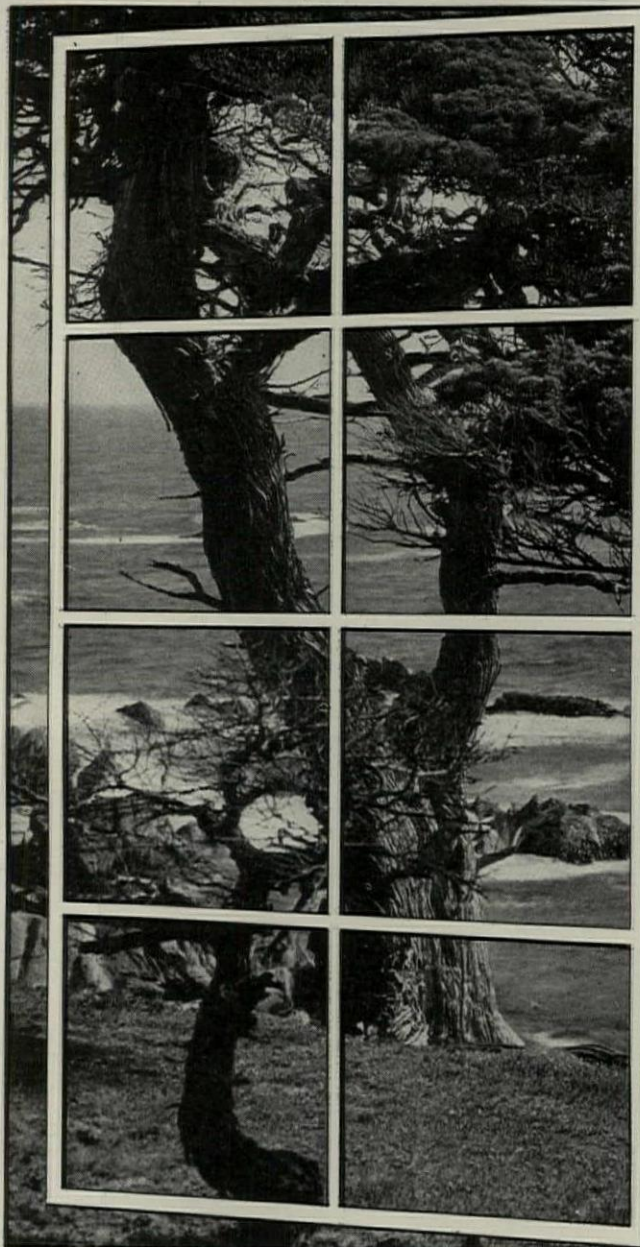
## FLATTER, BRIGHTER ON BOTH SIDES

**M**ADE by a brand-new process, the new Pennvernon Window Glass is *born* flat and *kept* flat throughout its entire manufacture—from molten “metal” to finished sheet. No chance to become bowed, bent, defaced. No “right” or “wrong” side to bother the glazier in setting this new glass.

And this brighter, flatter, better glass costs no more than *ordinary* window glass!

The warehouses of the Pittsburgh Plate Glass Co., conveniently located in all the leading cities of the United States, are ready to make prompt deliveries. Let us send you our new Pennvernon Booklet containing the absorbing story of the new process by which this glass is made. Write the Pittsburgh Plate Glass Company, Pittsburgh, Pa.

**PennVERNON**  
*flat drawn*  
**WINDOW GLASS**





It's New!!  
 Unique ....!  
 Useful .....!  
 Beautifying!

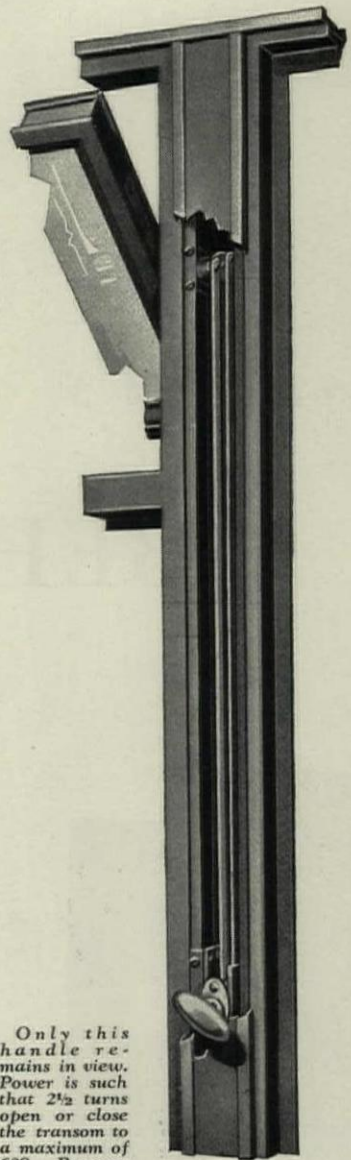
and We Must Do All the Shouting for

# This MODEST DEVICE

**D**ELIBERATELY designed to serve unseen, this new Rixson (No. 50) Concealed Transom Operator, is too important in application to be whispered about. It now permits mechanically magic operation of transoms in metal partition installations.

Rixson designers, whose excellent past record is well-known, attacked the problem of hiding the usually ugly operating device within the limited space provided by metal partitions. It was fully recognized that the action must be infallibly positive.

The result is a most efficient screw and sector mechanism, supplying ample power to operate practical center hung transoms. And, this operator nestles neatly into a space only 2 inches deep by 1 3/16 inches wide.



Only this handle remains in view. Power is such that 2½ turns open or close the transom to a maximum of 60°. Brass or bronze knob handle standard.

NO. 50 CONCEALED TRANSOM OPERATOR—FOR USE  
 IN METAL PARTITIONS—GIVING POSITIVE ACTION IN SMALL SPACE

# RIXSON

Send the Coupon for New Data Sheet with full information

THE OSCAR C. RIXSON COMPANY  
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You Can Stake Your Reputation  
 On RIXSON  
 HARDWARE

## COUPON

THE OSCAR C. RIXSON CO.

Please send me full information in your supplementary data sheet, covering the Rixson No. 50 Operator.

Name .....

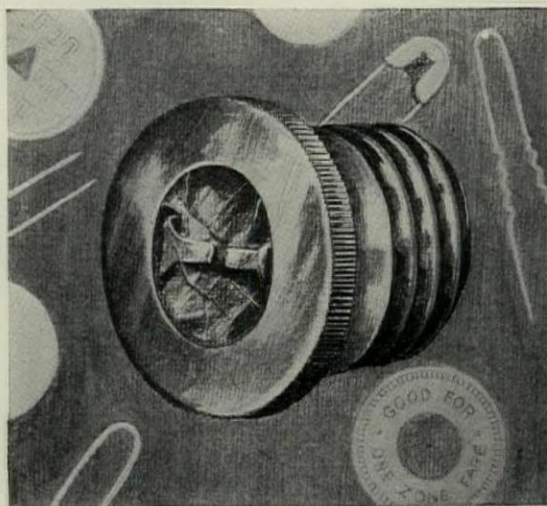
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City ..... State .....

P.P.-7-30

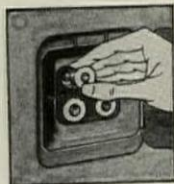
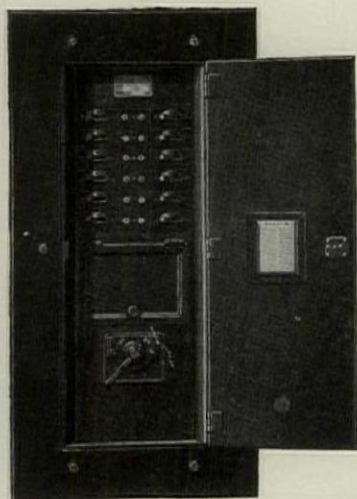




*...what's*

**BEHIND**

*the missing  
link?*



Ends tampering  
with fuses.



Eliminates ser-  
vice calls.



No fuse replace-  
ment hazards.

A PENNY? Wire? A Hairpin?—no matter what—it is destroying the protection the fuse affords.

The Westinghouse Nofuz panelboard overcomes this dangerous practice. A circuit-breaker replaces the switch and fuse in the branch circuits. This breaker cannot be held closed against an abnormal overload or short-circuit. Its calibration cannot be altered. Its action cannot be blocked. And anyone can reclose the breaker with perfect safety.

Have the Westinghouse panelboard specialist call on you today with a sample breaker and complete information.

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

**Westinghouse**

T 30970





# There are Many different ways in which Alcoa Aluminum Serves the Architectural Designer

All unnoticed perhaps, aluminum, which means "pots and pans" to most of us, has come a long way since it was first used in architectural design forty-six years ago. Today, as an architect, you can specify—and one, or several, of 177 leading manufacturers will fill your order for—Alcoa

Aluminum Conduo Base, Mop-strip, Casement and Sash, Kick Plates, Hinges, Ball Bearing Butts, Rolling Doors, Lamp Standards and Brackets, Radiators, Screen Frames, Shingles, Hollow Doors and Trim—these and perhaps a score more building products.

## Here are forty-five ways

Balustrades	Entrances	Marquises	Risers	Spandrels
Columns	Fascias	Newels	Saddles	Stair Railings
Conduit	Frames	Ornamental Fences	Sash	Statuary
Coping Tiles	Grille Work	Panels	Screens	Store Front Work
Cornices	Gratings	Partitions	Scuppers	Store Facing
Cresting	Gutters	Pendants	Sheet Roofing	Treads
Doors	Lamp Standards	Pilasters	Shingles	Ventilators
Door Hardware	Lighting Fixtures	Radiators	Sills	Weather Strip
Down Spouts	Mail Chutes	Radiator Covers	Skylight Frames	Window Frames

## Here are the 177 Leading Manufacturers who regularly fabricate Alcoa Aluminum Building Products and Specialties

**Abbott & Ney Co., Inc.**  
New York, N. Y.  
Aluminum screens  
Aluminum ventilators

**Acme Pattern Works**  
Kansas City, Mo.  
Fabricating ornamental aluminum castings

**Acme Steel Screen & Mfg. Co.**  
Chicago, Ill.  
Aluminum strong alloy screens

**Alan Wood Steel Company**  
Conshocken, Pa.  
Rolled aluminum tread floor plates

**Alexander-Johns Co.**  
Philadelphia, Pa.  
Skylights

**Allith-Prouty Company**  
Danville, Ill.  
Airport door hardware  
Warehouse door hardware

**American Abrasive Metals Co.**  
New York, N. Y.  
Safety door saddles  
Safety elevator door sills  
Safety stair treads

**American Iron and Wire Works**  
Chicago, Ill.  
Architectural metal fabricators

**American Sheet Metal Works**  
New Orleans, La.  
Sheet aluminum architectural products

**American Skylight Co.**  
Chicago, Ill.  
Ventilating skylights

**American Mason Safety Tread Co.**  
Lowell, Mass.  
Aluminum step plates  
Stair treads  
Nosing

**American 3-Way Luxfer Prism Co.**  
Cicero, Ill.  
Sidewalk, roof & transom lights  
Ventilators

**American Warming & Ventilating Co., The**  
Toledo, Ohio  
Louvers & screens  
Sidewalk grilles  
Mixing louvers & by-pass dampers  
Back pressure dampers

**Anco Mfg. Co.**  
Chicago, Ill.  
Store fronts

**Art Metal Construction Co.**  
Jamestown, N. Y.  
Decorative & architectural aluminum  
Hollow metal doors & trim

**Atchison Revolving Door Co.**  
Independence, Kans.  
Revolving doors & enclosers for entrances

**Atlas Iron & Steel Company**  
Detroit, Mich.  
Decorative & architectural aluminum of all kinds

**Bach, Oscar B.**  
New York, N. Y.  
Decorative & architectural aluminum  
Doors

**Beardslee Chandelier Mfg. Co.**  
Chicago, Ill.  
Lighting fixtures

**Becker Co., Geo. H.**  
New York, N. Y.  
Architectural aluminum

**Blaski Manufacturing Co.**  
Chicago, Ill.  
Ventilating skylights

**Bliss Steel Products Corp.**  
East Syracuse, N. Y.  
Office windows

**Blum & Co., Inc., Julius**  
New York, N. Y.  
Extruded aluminum shapes for architectural and ornamental purposes

**Braun Company, J. G.**  
Chicago, Ill.  
New York, N. Y.  
San Francisco, Calif.  
Extruded aluminum shapes for architectural work  
Door saddles  
Window sills

**Breese and Son, F. J.**  
Detroit, Mich.  
Aluminum weatherstrip  
Aluminum threshold

**Burt Manufacturing Co.**  
Akron, Ohio  
Stationary, revolving & direct connected fan roof ventilators

**Campbell Metal Window Corp.**  
New York, N. Y.  
Double hung windows  
Campbell casement windows

**Chamberlin Metal Weather Strip Co., Inc.**  
Detroit, Mich.  
Aluminum rolling screen

**Chapman Co., Inc., Wm. O.**  
Brooklyn, N. Y.  
Decorative & architectural aluminum

**Cleveland Wire Cloth & Mfg. Co.**  
Cleveland, Ohio  
Aluminum wire cloth & screen

**Coburn Trolley Track Mfg. Co.**  
Holyoke, Mass.  
Bar, extruded & sheet fabrications

**Coleman, Adelbert E.**  
Chicago, Ill.  
Architectural metal fabricators

**Corbin, P. & F.**  
New Britain, Conn.  
Locks & Builders' hardware

**Cox, Nostrand & Gunnison**  
Brooklyn, N. Y.  
Lighting fixtures

**Crescent Steel Co.**  
St. Louis, Mo.  
Windows  
Casements  
Factory sash

**Crown Iron Works**  
Minneapolis, Minn.  
Architectural aluminum

**Cutler Mail Chute Co.**  
Rochester, N. Y.  
Mail chute equipment for office, hotel, apartment & public buildings

**Dahlstrom Metallic Door Co.**  
Jamestown, N. Y.  
Elevator entrances  
Hollow metal doors & trim  
Mop strip  
Conduo base



**Detroit Show Case Company**  
Detroit, Mich.  
Store front moldings  
Hollow metal moldings

**Eagle-Heath Bronze Corp., The**  
Mount Vernon, N. Y.  
Decorative & architectural aluminum

**Edwards Co., The O. M.**  
Syracuse, N. Y.  
Counters  
Cases  
Desks  
Vault equipment  
Document files of aluminum

**Ellison Bronze Co., Inc.**  
Jamestown, N. Y.  
Decorative & architectural aluminum

**Empire City Iron Works**  
Long Island City, N. Y.  
Anything in ornamental or architectural cast, wrought or extruded aluminum

**Empire Fireproof Door Co.**  
New York, N. Y.  
Reinforced extruded aluminum doors

**Estey Bros. Co., Inc.**  
Brooklyn, N. Y.  
Decorative & architectural aluminum

**Fells, Lent, Cantor & Katz**  
Long Island City, N. Y.  
Store fronts  
Extruded aluminum doors

**Ferro-Co Corporation**  
Brooklyn, N. Y.  
Miscellaneous products designed & built to order

**Francis Metal Door and Window Corp.**  
Rochester, N. Y.  
Architectural & decorative aluminum for all purposes

**Friedley-Voshardt Co.**  
Chicago, Ill.  
Sheet metal ornamental stampings

**Garrison Bronze Corp.**  
Chicago, Ill.  
Ornamental store fronts  
Bank fixtures

**General Bronze Corp.**  
Minneapolis, Minn.  
Architectural aluminum

**Globe Wire & Iron Works**  
Milwaukee, Wis.  
Elevator grilles  
Bank doors  
Interior grilles

**Gorham Co., The, Bronze Division**  
Providence, R. I.  
Fine architectural and ornamental metal work of any description  
Sculptural castings

**Greenpoint Brass & Bronze Co., Inc.**  
Brooklyn, N. Y.  
Decorative & architectural aluminum

**Halback & Co., C. E.**  
Brooklyn, N. Y.  
Ornamental castings, spandrels, desks, doors, casement windows

**Hansell-Elcock Company**  
Chicago, Ill.  
Architectural metal fabricators

**The Harrington & King Perforating Co.**  
Chicago, Ill.  
Grilles & ventilators of perforated aluminum

**Harsch Bronze & Foundry Co., John**  
Cleveland, Ohio  
Ornamental parts  
Extruded store fronts & doors

**Hasselman and Salterini, Inc.**  
New York, N. Y.  
Decorative & architectural aluminum

**Hauenstein & Burmeister, Inc.**  
Minneapolis, Minn.  
Window screens & screen doors

**Hauserman Co., E. F.**  
Cleveland, Ohio  
Metal partitions (movable) for offices & factories

**Herrmann & Grace Co.**  
Brooklyn, N. Y.  
Hollow windows  
Doors  
Air ducts  
Clothes chutes

**Hill-Standard Company**  
Anderson, Ind.  
Playground & swimming pool equipment

**Himmel Brothers Company**  
New Haven, Conn.  
Rolled & extruded Store fronts & doors

**Hirschman Co., Inc., W. F.**  
Buffalo, N. Y.  
Roof ventilators

**Hope & Sons, Inc., Henry**  
New York, N. Y.  
Casements  
Windows

**Hunger Brass Co., H. J.**  
Cleveland, Ohio  
Toilet partition hardware for marble

**Ilg Electric Ventilating Co.**  
Chicago, Ill.  
Ventilating Systems

**Imperial Brass Mfg. Co.**  
Chicago, Ill.  
Building hardware

**International Casement Co., Inc.**  
Jamestown, N. Y.  
Casements  
Windows  
Hollow metal window frames & Spandrels

**Intervale Iron Works, Inc.**  
New York, N. Y.  
Miscellaneous architectural aluminum

**Ionia Ventilator Co., Inc.**  
Philadelphia, Pa.  
Ventilators

**Irving Iron Works Company**  
Long Island City, N. Y.  
Aluminum gratings & stair steps  
Dining car kitchen floor mats

**Ivanhoe Division of the Miller Company**  
Cleveland, Ohio  
Aluminum lighting equipment  
Vapor proof equipment

**Jackson Company, Wm. H.**  
Brooklyn, N. Y.  
Decorative & architectural aluminum

**Jamestown Metal Desk Co., Inc.**  
Jamestown, N. Y.  
Elevator doors & fronts  
Hollow metal doors

**Jamestown Screen & Mfg. Co., Inc.**  
Jamestown, N. Y.  
Bank & vision screens  
Window, door, porch & roll screens

**Jensen Foundry Company**  
Detroit, Mich.  
All kinds of architectural aluminum castings for buildings

**Johnson-Meier Company**  
Chicago, Ill.  
Architectural metal fabricators  
Lighting fixtures  
Elevator doors

**Jones & Co., Trevor F.**  
New York, N. Y.  
Grilles, tablets, plaques, signs, letters, figures

**Jury Metal Arts Company**  
Detroit, Mich.  
Aluminum for interior & exterior decorative purposes

**Kantack & Company, Inc.**  
New York, N. Y.  
Special lighting fixtures  
Hardware  
Grilles

**Kawneer Company, The**  
Niles, Mich.  
Hollow metal doors  
"Sealair" in-swinging windows  
Store fronts

**Kernchen Ventilator Co.**  
Chicago, Ill.  
Ventilators

**Kloes, Inc., F. J.**  
New York, N. Y.  
Awning & canopy frames  
Awning outrigger equipment

**Knapp Bros. Mfg. Co.**  
Chicago, Ill.  
Metal building specialties  
Sanitary metal trim  
Conduo base, Mop strip

**Kohl and Vick Iron Works**  
Chicago, Ill.  
Architectural metal fabricators

**Kornbrodt Kornice Kompany**  
Kansas City, Mo.  
Fabricators of sheet aluminum for architectural purposes

**Krans & Trustin**  
Omaha, Neb.  
Ornamental contractors

**Lewis Co., Fred H.**  
Chicago, Ill.  
Shower bath compartments & pans

**Lingo & Son, Inc., John E.**  
Camden, N. J.  
Flagpoles

**Long Island Wire Works, Inc., The**  
Brooklyn, N. Y.  
Wire grill work  
Bank cages

**Lord & Burnham Company**  
Irvington, N. Y.  
Des Plaines, Ill.  
St. Catharines, Ontario, Can.  
Greenhouses  
Sash operating apparatus  
Sludge beds

**Lundell-Eckberg Mfg. Co., Inc.**  
Jamestown, N. Y.  
Casements  
Sash windows

**Lupton Sons & Co., David**  
Philadelphia, Pa.  
Casements  
Sash  
Commercial doors

**Macomber Steel Co.**  
Canton, Ohio  
Aeroplane hangar doors

**Manhattan Perforated Metal Co., Inc.**  
Long Island City, N. Y.  
All kinds of perforated aluminum sheets

**Marty Iron Works, A. H.**  
Cleveland, Ohio  
Extruded aluminum store fronts  
Extruded doors, grilles, railings

**McDougall & Potter Co.**  
New York, N. Y.  
Architectural & ornamental aluminum work for buildings

**Metal Door & Trim Co.**  
La Porte, Ind.  
Elevator enclosures  
Metal trim rolled shapes  
Swing door units

**Michaels Art Bronze Co., Inc., The**  
Covington, Ky.  
Decorative & architectural aluminum

**Miller Company, The**  
Cleveland, Ohio  
Meriden, Conn.  
Ivanhoe lighting fixtures

**Miller & Doing**  
Brooklyn, N. Y.  
Ornamental sheet stampings

**Mills Company, Incorporated, The**  
Cleveland, Ohio  
Aluminum partitions of all kinds

**Model Iron & Aluminum Corp.**  
New York, N. Y.  
Casements  
Ventilators  
Store fronts  
Sash of every description

**Moynahan & Duchene, Inc.**  
Detroit, Mich.  
Decorative & architectural aluminum

**Mutual Metal Mfg. Co.**  
Chicago, Ill.  
Lighting fixtures

**National Regulator Co.**  
Chicago, Ill.  
Ventilating equipment

**Nelson Corporation, The**  
Herman Moline, Ill.  
Invisible radiators  
"Hijet" unit heaters  
"Univent" & "Volu-Vent" ventilators



# ALCOA



**Newman Manufacturing Co.**  
Cincinnati, Ohio  
Decorative & architectural  
aluminum

**Olson Mfg. Co., C. W.**  
Minneapolis, Minn.  
Ornamental aluminum castings  
Store & elevator fronts  
Railings

**Olson & Co., Samuel**  
Chicago, Ill.  
Laundry chutes  
Pneumatic conveyors

**Orange Screen Co.**  
Maplewood, N. J.  
Aluminum insect screens & frames

**Page Fence Association**  
Chicago, Ill.  
Chain link fence  
Wrought fencing

**Painesville Metallic Binding Co., The**  
Painesville, Ohio  
Extruded stair nosings

**Paltridge Metal Equipment Co.**  
Chicago, Ill.  
Cast & hollow metal  
Elevator doors & trim

**Payson Manufacturing Co.**  
Chicago, Ill.  
Door hardware

**Penn Brass & Bronze Works**  
Brooklyn, N. Y.  
Metal work for architectural pur-  
poses of every description

**Penn Ventilator Company**  
Philadelphia, Pa.  
Ventilators

**Pennsylvania Wire Glass Co.**  
Philadelphia, Pa.  
Corrugated wire glass skylight trim

**Philadelphia Metal Stamp-  
ing Co.**  
Camden, N. J.  
Architectural sheet metal ornaments

**Progressive Brass Mfg. Co.**  
Kansas City, Mo.  
Tulsa, Okla.  
Aluminum sand castings

**Pyle-National Company**  
Chicago, Ill.  
Floodlights

**Richey, Browne & Donald,  
Inc.**  
Maspeth, N. Y.  
Windows  
Casements  
Sash

**Riesner, Inc., Benjamin**  
New York, N. Y.  
Sheet roofing  
Louvers

**Rixson Co., Oscar C.**  
Chicago, Ill.  
Door hardware

**Robertson Company, H. H.**  
Pittsburgh, Pa.  
Sash  
Skylights  
Smoke jacks  
Ventilators

**Reliance Bronze & Steel Corp.**  
Brooklyn, N. Y.  
Extruded architectural aluminum  
Metal covered doors, windows, par-  
titions

**Sanymetal Products Co.**  
Cleveland, Ohio  
Partitions & door screens for hospi-  
tals, toilets, dressing rooms

**Sargent & Company**  
New Haven, Conn.  
Locks & builders' hardware

**Schaeffer Company, The**  
Chicago, Ill.  
Sheet metal fabricators

**Schreiber & Sons Company,  
The L.**  
Cincinnati, Ohio  
Aluminum sand casting work  
Extruded aluminum shapes

**Sexauer & Lemke, Inc.**  
Long Island City, N. Y.  
Decorative & architectural  
aluminum

**Shannon Metalcraft Corp.**  
Philadelphia, Pa.  
Ornamental & architectural  
aluminum

**Shean Steel Window Co.**  
Chicago, Ill.  
Sheet metal fabricators

**Simpson-Frisch Co.**  
Chicago, Ill.  
Ornamental metal

**Smyser Royer Company**  
York, Pa.  
Ornamental & architectural  
aluminum

**Southern Ornamental Iron Works**  
Dallas, Tex.  
Decorative & architectural  
aluminum

**Southwestern Ornamental Iron Company**  
Kansas City, Mo.  
Decorative & architectural  
aluminum

**Stanley Works, The**  
New Britain, Conn.  
Ball bearing butts  
Builders' hardware

**Steelbilt Products Corp.**  
Clifton, N. J.  
Hollow metal doors & trim  
Elevator enclosures

**Stephens & Danner, Inc.**  
Woodhaven, N. Y.  
Ornamental sheet metal work of  
aluminum

**Superb Bronze & Iron Co., Inc.**  
Brooklyn, N. Y.  
Decorative & architectural  
aluminum

**Swartwout Co., The**  
Cleveland, Ohio  
Rotary ball bearing ventilators

**Sykes Sheet Metal Company**  
Chicago, Ill.  
Sheet metal fabricators

**Thermal Units Company**  
Chicago, Ill.  
Concealed radiation  
Unit heaters

**Thorpe Fire Proof Door Co.**  
Minneapolis, Minn.  
Hollow metal doors & frames

**Trane Company, The**  
La Crosse, Wis.  
Concealed & visible heaters

**Truss Built Door Co.**  
St. Paul, Minn.  
Hollow doors  
Frames

**Tucker & Fickeisen, Inc.**  
New York, N. Y.  
Grilles, screens, cages  
Aluminum wire cloth

**Tuttle & Bailey Mfg. Co.**  
Canton, Ohio  
Street light standards  
Porch columns  
Ornamental lamps & brackets

**Tyler Company, The**  
Cleveland, Ohio  
Exterior & interior decorative work  
of every description

**Tyler Company, W. S.**  
Cleveland, Ohio  
Elevator cabs & doors  
Store fronts  
Ornamental parts  
Wire cloth & screens

**Union Metal Mfg. Co.**  
Canton, Ohio  
Street light standards  
Ornamental lamps & brackets

**United Metal Products Co.**  
Canton, Ohio  
Hollow metal doors & trim  
Elevator fronts  
Mop strip  
Conduo base

**Unit Sash & Sales Company**  
Lincoln, Neb.  
Extruded window sashes  
Store fronts  
Doors  
Sand castings

**Usona Mfg. Company**  
St. Louis, Mo.  
Aluminum doors & trim  
Ornamental & architectural  
aluminum

**Van Kannel Revolving Door Co.**  
New York, N. Y.  
Revolving doors & enclosures for  
entrances

**Viking Metal Products Corp.**  
Jamestown, N. Y.  
Aluminum doors  
Interior trim, partitions  
Elevator fronts

**Voigtmann & Co.**  
Chicago, Ill.  
Heavy & light gauge double-hung  
metal windows  
Hollow metal doors

**Wagner Architectural Iron Works, A. F.**  
Milwaukee, Wis.  
Spandrels & grilles

**Wakefield Brass Co., The**  
F. W.  
Vermillion, Ohio  
Commercial lighting fixtures  
Miscellaneous reflectors

**Warman & Cook**  
New York, N. Y.  
Lighting fixtures  
Ornamental aluminum

**Warren & Co., Walter G.**  
Chicago, Ill.  
Lighting fixtures

**Watson Manufacturing Co.**  
Jamestown, N. Y.  
Counters, cages, cases, etc., for banks  
& hospitals  
Metal frame screens

**Weis Mfg. Co., Inc., Henry**  
Elkhart, Ind.  
Partitions & doors for toilet stalls,  
shower compartments, dressing  
rooms, etc.

**Wendel August Forge**  
Brockway, Pa.  
Ornamental hand wrought  
aluminum

**Western Architectural Iron Company**  
Chicago, Ill.  
Architectural aluminum fabricators

**Westinghouse Electric Ele-  
vator Co.**  
Chicago, Ill.  
Passenger & freight elevators

**Weymer Co., Inc., E. M.**  
Chicago, Ill.  
Architectural metal fabricators

**White-Metals Architectural Products Corp.**  
New York, N. Y.  
Architectural & ornamental  
aluminum

**Wickwire Spencer Steel Co.**  
New York, N. Y.  
Stamped aluminum grilles

**Williams, Inc., Jno.**  
New York, N. Y.  
Architectural & ornamental Metal  
work—Founders

**Williams Iron Works**  
New York, N. Y.  
Ornamental & architectural  
aluminum

**Wilson Corp., The J. G.**  
New York, N. Y.  
Rolling doors & shutters  
Inside, porch & awning blinds

**Wooster Products, Inc.**  
Wooster, Ohio  
Extruded stair nosing

**Zouri Drawn Metals Co.**  
Chicago Heights, Ill.  
Entrance, shower & showcase doors  
Store fronts drawn & extruded

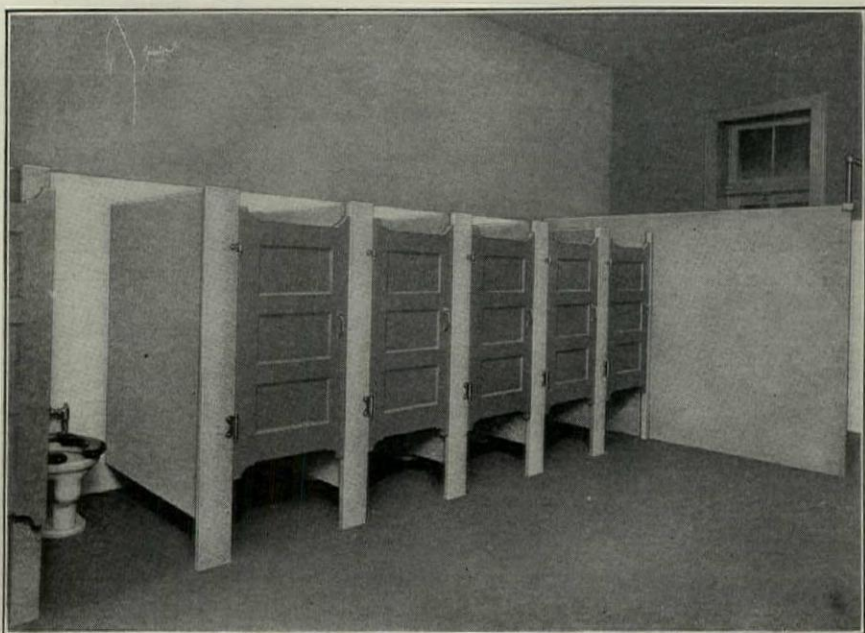
Alcoa Aluminum lends itself to any character of individual design. It is readily workable. It need not be painted. It resists corrosion. It permits the architect to plan a decorative effect that will endure as long as the

building. Write for more detailed information on the many uses of Alcoa Aluminum in the Architectural Field. ALUMINUM COMPANY of AMERICA; 2406 Oliver Building, PITTSBURGH, PENNSYLVANIA.

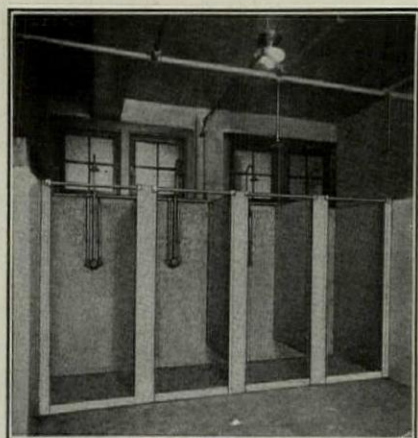
# ALUMINUM



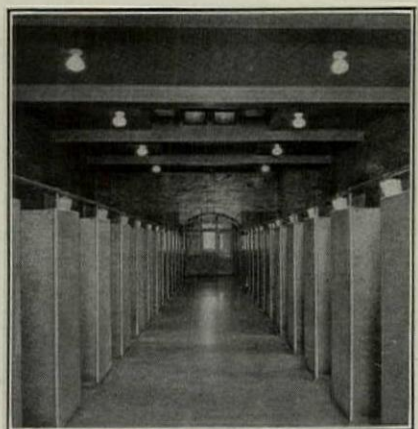
Suitable for  
Country Clubs  
and Schools—



permanent, sanitary, economical Alberene Stone



The use of 4-inch curbs is recommended as a safety measure.



A large shower compartment installation of Alberene Stone.

The major requirement for both shower compartments and toilet partitions is absolute sanitation and cleanliness. Alberene Stone, because of its close-grain density, is practically non-absorbent, which assures not only ease of cleaning and sanitation but long life. Being highly resistant to acids and alkalis, this Virginia soapstone can be said to be non-staining. Its use provides floors that are non-slipping—wet or dry. The natural light blue-grey color is pleasing and harmonious.

These qualities plus the structural soundness of Alberene compartments make for permanence and economy because there is no expense for upkeep or repairs.

Complete data and specifications are contained in our catalog which will be sent, gladly, on request.

ALBERENE STONE COMPANY, 153 West 23rd Street, New York  
Branches: Boston Chicago Newark, N.J. Washington, D.C. Cleveland Pittsburgh  
Richmond Philadelphia Rochester  
Quarries and Mills at Schuyler, Va.

# ALBERENE STONE

TOILET PARTITIONS and SHOWER COMPARTMENTS



# TRADE **YALE** MARK

**FINE BUILDERS' HARDWARE**  
equips many of the world's important buildings

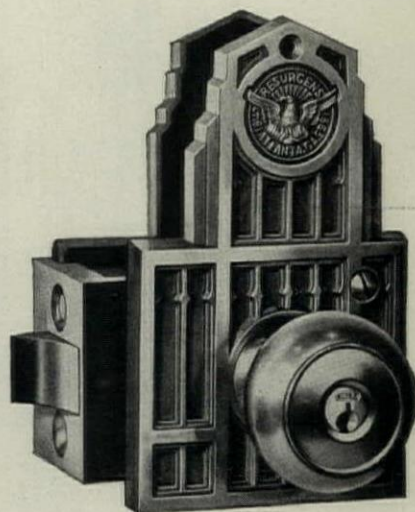


**I**n the most important buildings in any community, anywhere, look for the name on that structure's locks, hardware and door closers. It is significant to note how often the name is YALE.

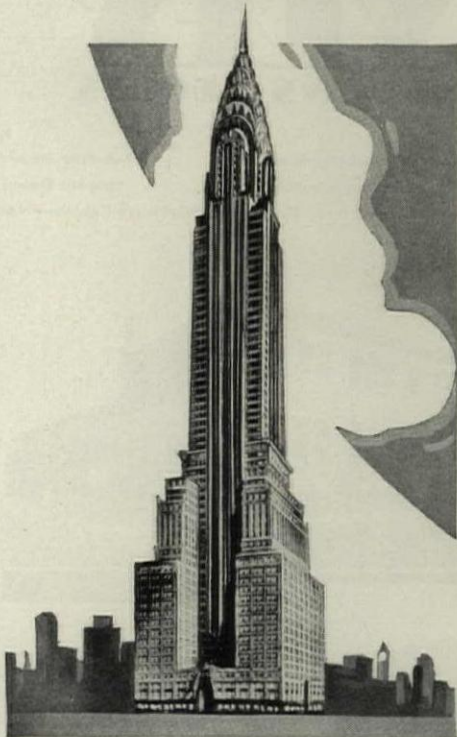
¶ Yale Fine Builders' Hardware is the most practical, as well as the most beautiful, equipment of its kind.

¶ For the now widely used hollow metal doors, Yale has developed a complete line of standard template locks—each lock instantly interchangeable in the same mortise and in every door throughout the building. This is the greatest simplification of installation the architect and builder has ever known.

¶ Yale Fine Builders' Hardware is available in a wide variety of patterns to complement any school of architecture—and also made in special designs to the architect's order. In all Yale Hardware you will find that fidelity to quality of material and accuracy of design that so distinguishes true craftsmanship.



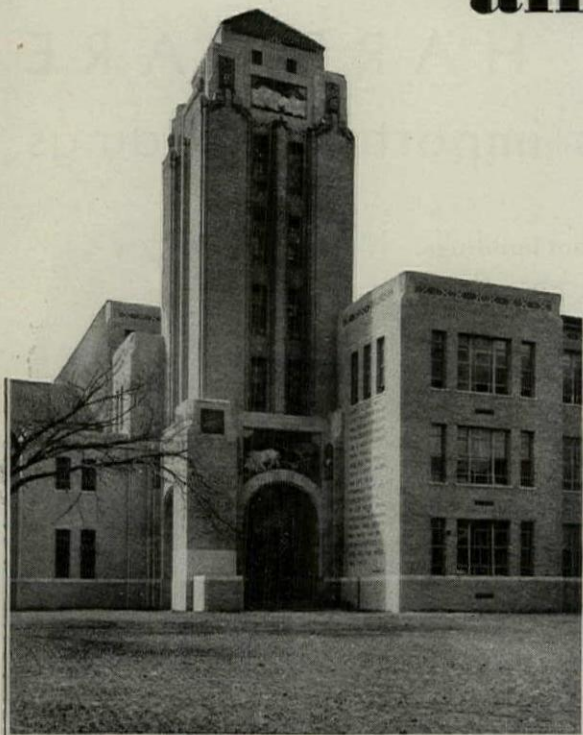
THE YALE & TOWNE MFG. CO.  
STAMFORD, CONN., U. S. A.  
*Canadian Works at St. Catharines, Ont.*



**YALE MARKED IS YALE MADE**



# The Three H's —they're in all Bayley Products



**H**HEAD, Heart and Hand — the best of each — go into Bayley Windows and Doors. This blending of ingenuity, sincerity and craftsmanship makes Bayley Products outstanding.

Even the casual observer recognizes their better value — in design and construction — while the buyer finds his good judgment confirmed in the enduring satisfaction they give, year after year.

Building service into products is a rigid Bayley policy, accepted and understood by every man in the organization — which includes veteran mechanics and their sons.

No organization has more cause for justifiable pride in its work, for no organization puts more of itself into its products. The best thought and skill are embodied even in the smallest details.

Forty-nine years of experience in metal work provides a valuable background for Bayley engineering cooperation, which is available without cost or obligation . . . The William Bayley Company, 134 North St., Springfield, Ohio.

#### District Offices

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Boston, 5 Park St.	Washington, 1427 I St., N. W.
Chicago, 75 E. Wacker Drive	Atlanta, 407 Bona Allen Bldg.
Springfield, O., North St.	

*Sales Agencies also in Principal Cities*

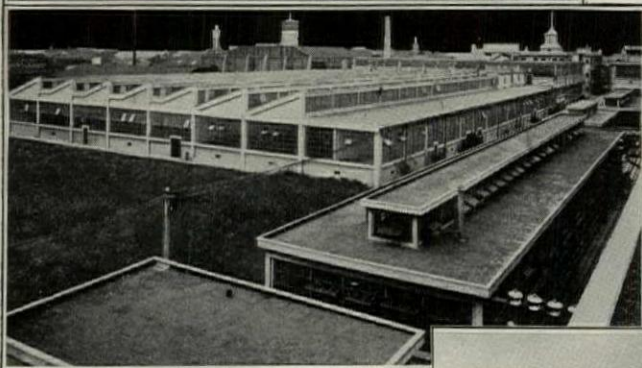
## BAYLEY

### STEEL WINDOWS & DOORS

<b>Pivoted Windows</b>	<b>Pivoted Windows Screened</b>	<b>Tubular Doors</b>
<b>Prison Windows</b>	<b>Casement Windows</b>	<b>Airport Doors</b>
<b>Projected Windows Architectural</b>	<b>Projected Windows Commercial</b>	



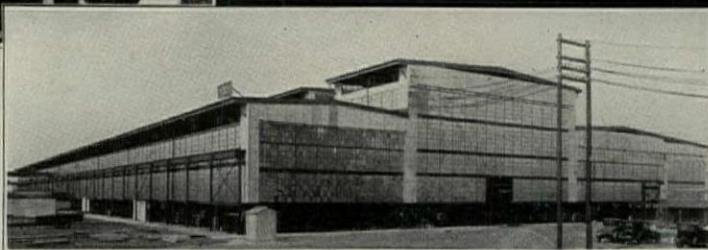
Seybold Baking Co., Miami, Fla.  
McCormick Co., Architects, Pittsburgh.  
Equity Construction Co., Contractors, New York.



High School, Wichita, Kansas. Glen H. Thomas, Architect — Wichita, Kansas. Ernest Rokahr & Sons, Contractors, Lincoln, Nebr.

Residence — Eastman & Budke, Architects, Springfield, Ohio. Ralph A. Paterbaugh, Contractor, Springfield, Ohio.

Weave shed of the Textile Mfg. Co., Shanghai, China. Anderson Meyer & Co., Ltd., Engineers, Shanghai, China. Dao Kwei Kee, Contractor, Shanghai, China.



Atlantic Coast Line Shop, Ucceta, Fla. Designed and built by Dwight P. Robinson & Co., Engineers and Contractors, Philadelphia, Pa.



*Prevent the line loss and expensive work that result from dew damage. Insulate all brine cold lines with moisture-resistant Novoid Cork Covering.*

*When dew gets into the covering on cold lines, and insulation is soaked with moisture, line losses go up. Pipe chases must be opened and covering replaced.*

*Natural dew-drop magnified.*



# Dew Damage threatens every COLD LINE

*Novoid Cork Covering gives long service because it is moisture-proof*

**M**OISTURE is the enemy of most cold pipe coverings. It works into crevices, spreads through the insulation, and—when cooled below the dew-point—condenses as dew. Then the covering is useless and must be replaced.

But this does not happen where Novoid Cork Covering is

used. Novoid Cork Covering is impervious to moisture.

That is why you can use Novoid Cork Covering on brine, ammonia or ice water lines running through hot, humid rooms. Or seal it up in partitions or pipe chases and know that it won't absorb moisture and have to be replaced in a short time.

That, too, is why Novoid Cork Covering keeps its insulating value indefinitely. It stays dry and efficient and is not subject to progressive deterioration, which means steadily increasing line losses and overloaded refrigerating machines.

Novoid Cork Covering is made for all sizes of pipes and fittings and in thicknesses suitable for all classes of cold lines from below zero brine to drinking water.

## Novoid Cork Covering

CORK IMPORT CORPORATION



345 W. 40<sup>TH</sup> ST. NEW YORK

Samples and further information will be sent on request. Cork Import Corporation, 345 West 40th St., New York City.



# A Pile Contract for Akron that had to jibe with the Timetables of Three Railroads...

An underground forest of compressed concrete piles—driven in the midst of main line tracks . . . *Our work was so carefully planned and so efficiently timed that these main line tracks of each railroad were kept open for every train.*



*Check your requirements  
against*

*MacArthur qualifications:*

PRODUCT . . .	proven
EXPERIENCE . . .	20 years
EQUIPMENT . . .	latest
RESOURCES . . .	unlimited
PERSONNEL . . .	capable
CLIENTELE . . .	illustrious
RESPONSIBILITY	demonstrated
ENGINEERING . . .	sound
PERFORMANCE . . .	100%
SPEED . . .	record-breaking

**WE** seem to attract the toughest jobs, no doubt because of our record for signal success with tough jobs in the past.

Here we drove our standard MacArthur Compressed Concrete Piles for the foundation of the Thornton Street Viaduct at Akron.

The contract was completed on schedule time to the entire satisfaction of the city of Akron, the Baltimore and Ohio R. R., the Erie R. R., and the Pennsylvania R. R.

"Put it up to MacArthur," means just that. And because we drive every type of pile, we are in the best possible position to recommend the most suitable type for your particular need.

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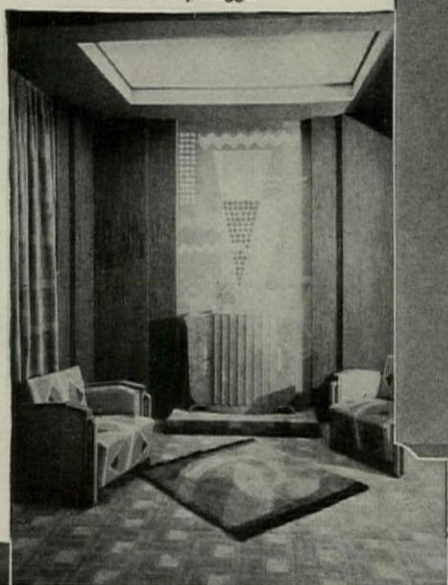
MANUFACTURERS OF "SUPERIOR WIRING DEVICES" SINCE 1888—MANUFACTURERS OF HEMCO PRODUCTS



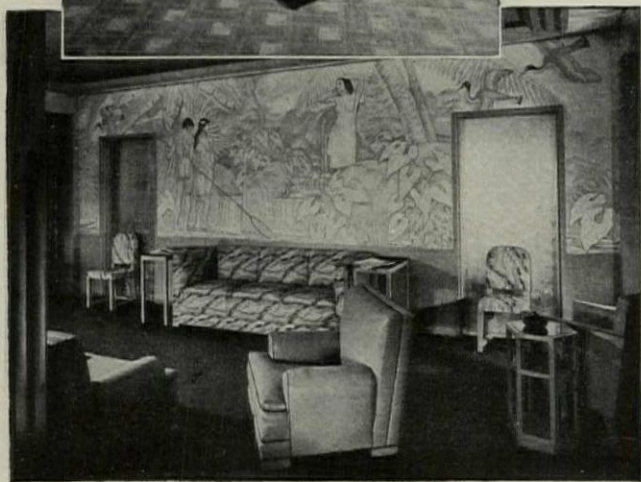
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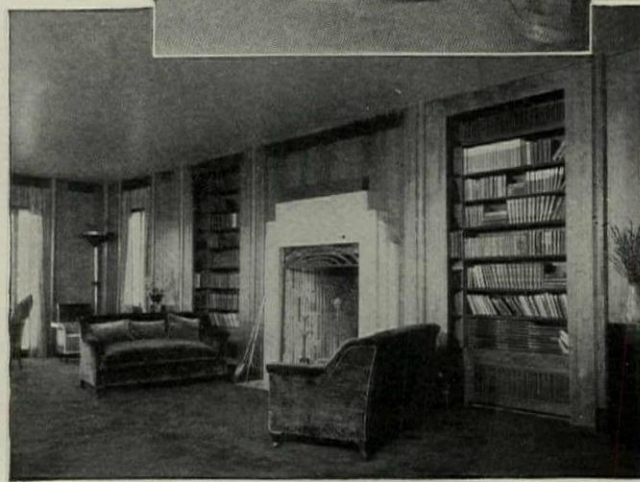
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Pages 1042-1047

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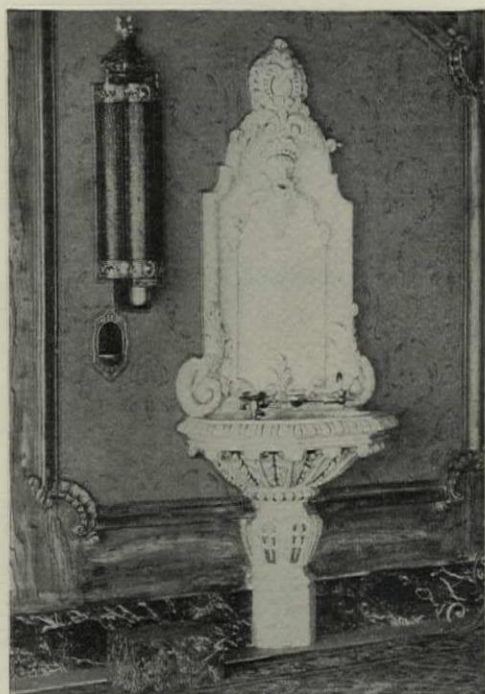
*Blabon's Linoleum installed by Miller & Paine, Lincoln, Neb.*

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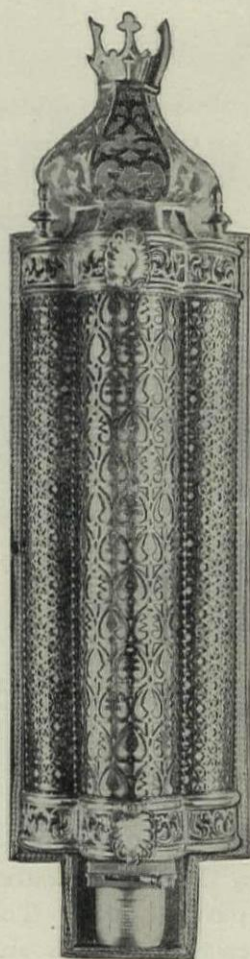
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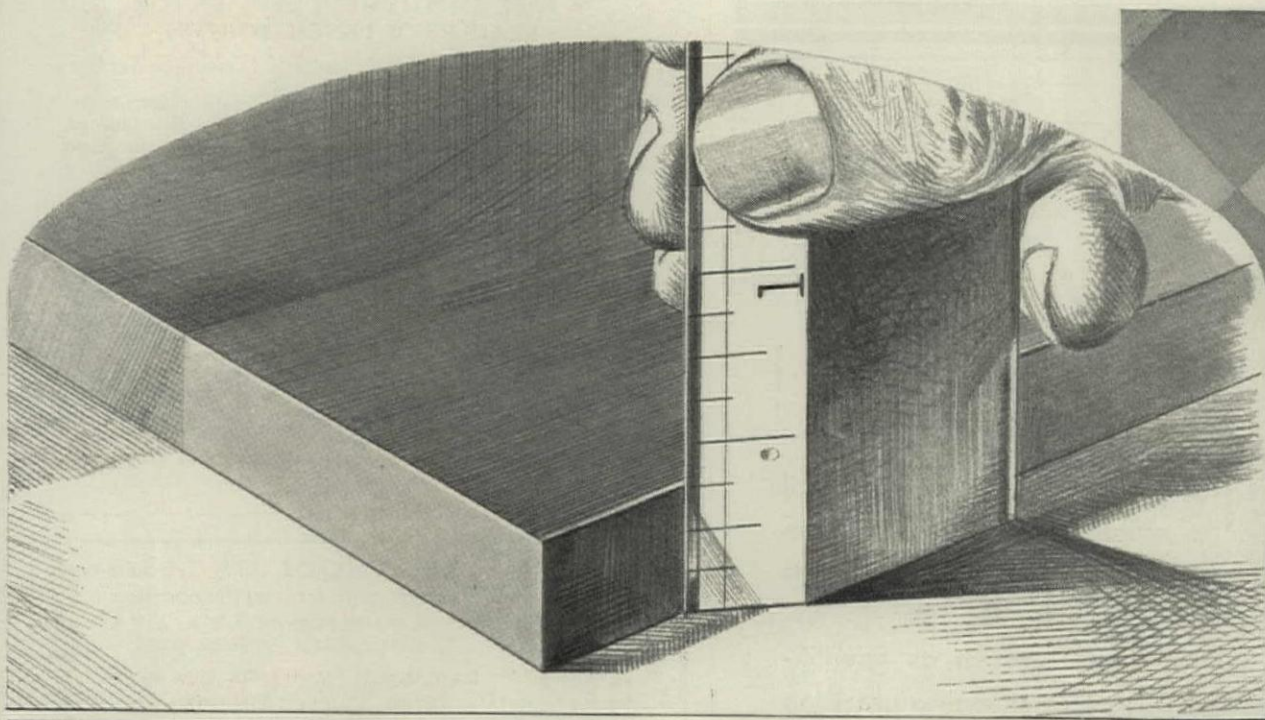
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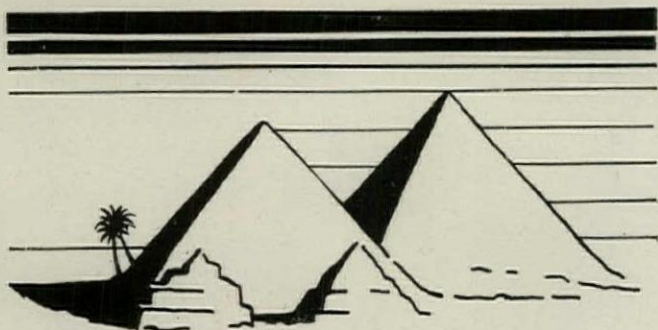
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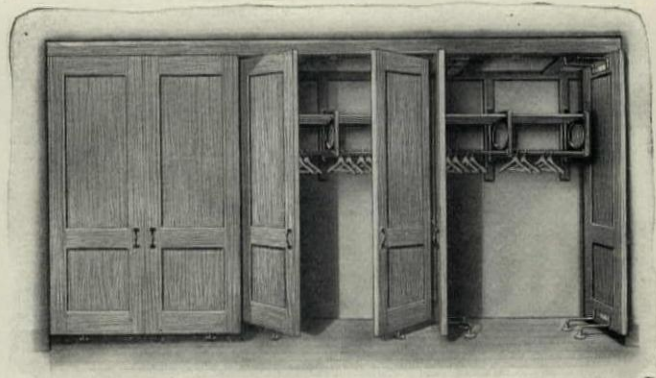
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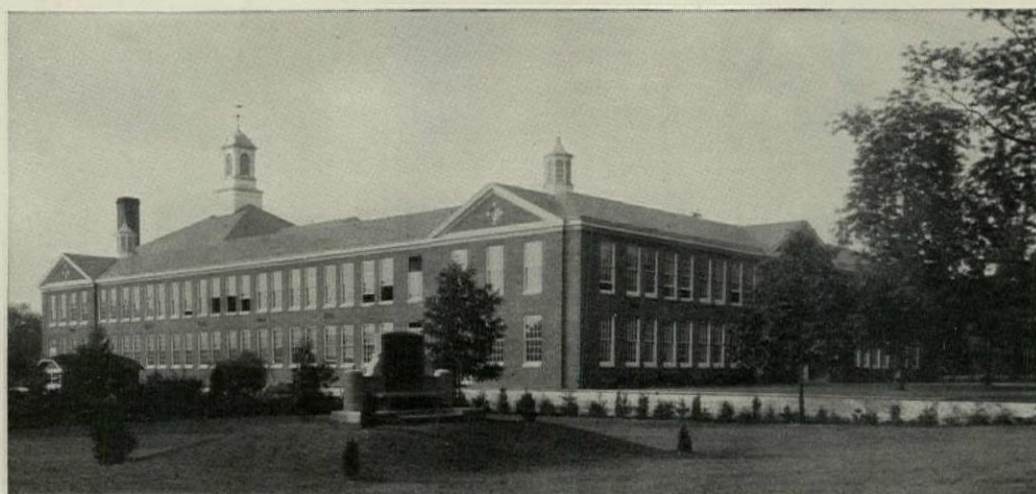


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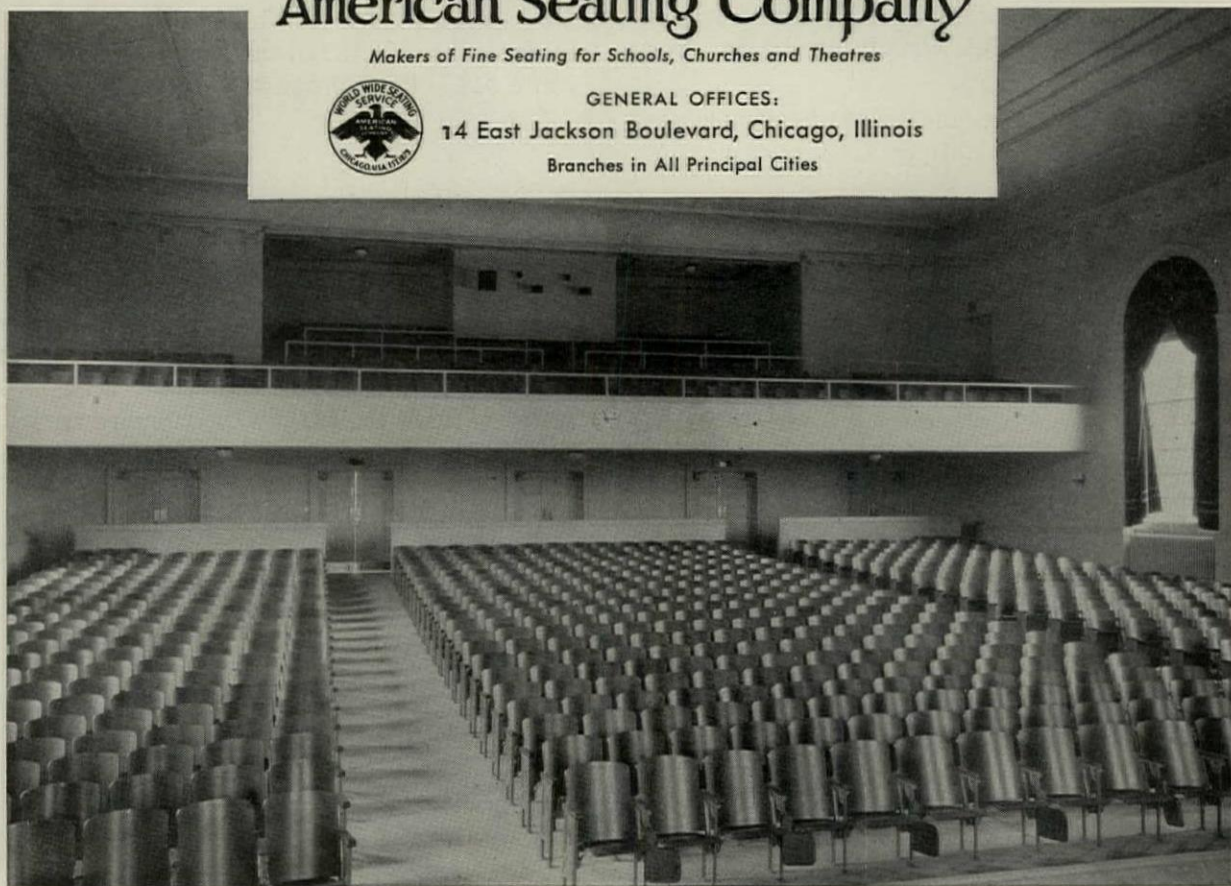
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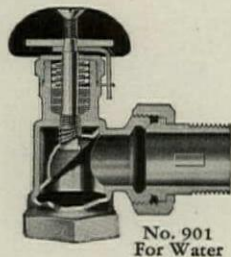


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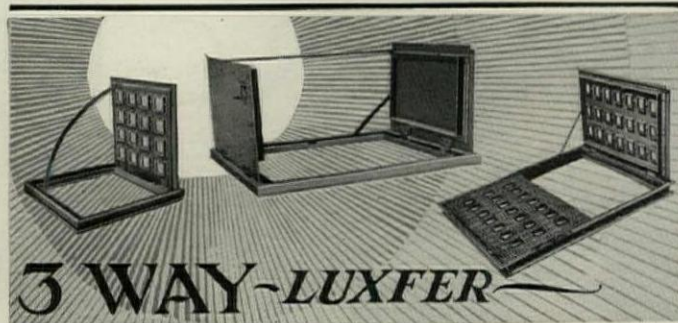
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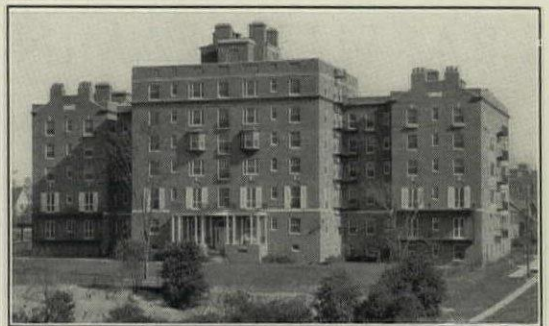
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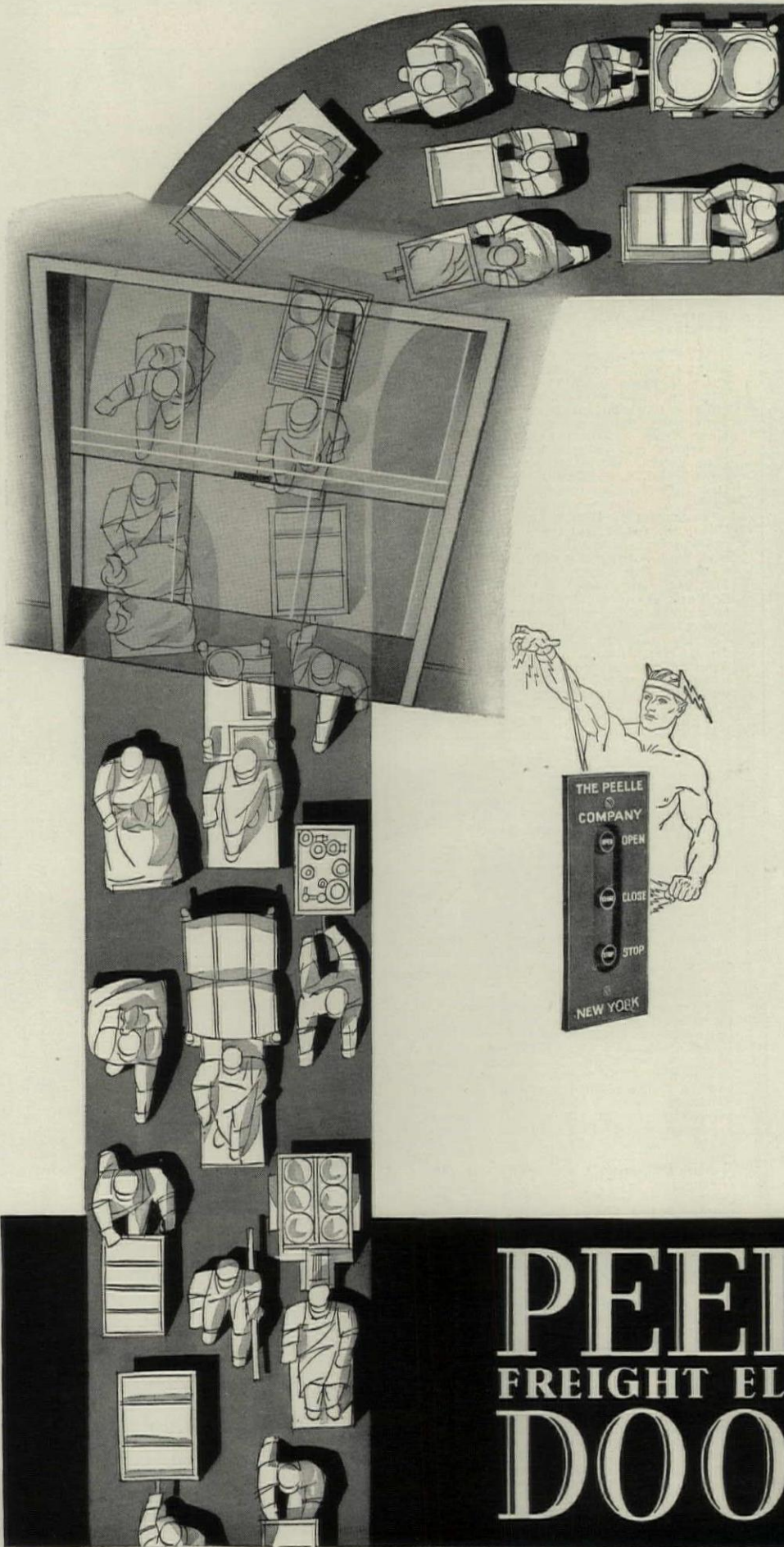


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In over 15,000 installations Peelle Doors pave the path for plant traffic, literally link each series of floors end-to-end, into one, smooth highway. In this great cavalcade of industry's indoor traffic, no step must lag, no wheel cease turning. Constant movement, continuous production is the slogan. Day in and day out Peelle Doors are proving their worth to industry by performance...saving both time and money. They accelerate the vertical flow of freight throughout the plant... speed traffic from ground floor to roof and back again. Electrified... automatically controlled by the touch of a button from any point... their greater convenience and efficiency is evident. Consult our engineers or write for catalog.

**THE PELLE COMPANY,  
BROOKLYN, NEW YORK**

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Atlanta, and 30 other cities • In Canada:  
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# PEELLE

## FREIGHT ELEVATOR

# DOORS



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William J. Weaver, formerly Northeastern district sales manager, has been appointed general sales manager of The Bryant Electric Company, Bridgeport, Conn., succeeding Robert M. Eames, recently made general manager. Coincident with this change, The Bryant Company has opened a Northeastern district office at 50 High Street, Boston, Mass. This office will be under the direction of Edward L. Durgan, newly appointed district sales manager. The company has also moved its New York office from 342 Madison Avenue, to the Lincoln Building, 60 East 42nd Street, this office being under the direction of George H. Williams, district sales manager.

Wm. F. Latimer, former manager of the New York office of James B. Clow & Sons from 1905 to 1920, has, after a lapse of ten years, returned to the Clow organization. He will represent the company in upper New York State, making his headquarters at Albany. For the past ten years, Mr. Latimer has been connected with Jaehning & Peoples, Inc., general contractors of Newark.

Yeomans Brothers Company, Chicago, manufacturers of pumping machinery, including sewage ejectors and rotary air compressors, announce the appointment of the Hallett Engineering Company, 809 S. Park Avenue, Springfield, Illinois, to represent them in that section of the state. F. G. Dolan will be in charge of the Springfield office. Jack Henning, Jr., with offices at 325 Locust Street, St. Louis, has been chosen to represent the company in that territory.

The Union Metal Manufacturing Co., Canton, Ohio, has moved its Philadelphia office to 110 E. 42nd St., New York City. E. B. Comfort, Eastern district sales manager at the Philadelphia office, will be located in the same suite with W. A. Daunt, New York sales manager for the same company.

It is announced that effective July 1, 1930, the Milwaukee Corrugating Co., Milwaukee, Wisc., and The Eller Mfg. Co., Canton, O., will be known as the Milcor Steel Company with general offices at Milwaukee, Wisc. Ownership, management and personnel will remain the same.

Adelbert E. Coleman, producers of fine sculptural and architectural metals, Chicago, Ill., formerly Chicago Ornamental Iron Co., has been purchased by The Kawneer Company, Niles, Mich. The new bronze division will be known as the Adelbert Coleman Company, 37th St. & Stewart Ave., Chicago, Illinois, operating under its own charter as a division of The Kawneer Company.

Announcement is made of the formation of a new organization under the name of the Libbey-Owens-Ford Glass Co. by the joining of the Libbey-Owens Glass Co., manufacturers of sheet glass, with the Edward Ford Plate Glass Co. Headquarters will be maintained at Toledo, Ohio.

A new asbestos shingle to be called "Salem Grey" has been developed by the Johns-Manville Corporation as a result of the steadily increasing popularity of the colonial type of architecture. This new shingle, made of a combination of asbestos fibre and Portland cement, is a literal counterpart in appearance, when applied, of the aged hand-hewn shingles of early New England. The shingles are supplied in 16 in. lengths, giving a weather exposure of 7 in. when laid. They can be obtained in either random widths of 6, 8, 10 and 16 in. or in one size, 8 x 16 in. The shingles are supplied in two thicknesses of approximately 5/16th and 7/16th in., and in a range of warm grey tones.

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# STORE FRONTS

BY

## ZOURI



*Fitch-Bryant Store, Boston, Massachusetts. Architect—Clifford Allbright.*

IN

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ROLLED & CAST BRONZE  
ROLLED ALUMINUM AND  
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# Announcement

EFFECTIVE  
JULY FIRST NINETEEN HUNDRED AND THIRTY.

Milwaukee Corrugating Co.  
and The Eller Mfg. Co. will  
be known as the

## MILCOR STEEL COMPANY

Both companies have been  
well and favorably known  
to the trade for nearly half  
a century. Ownership,  
management and person-  
nel will remain the same.

### MILCOR STEEL COMPANY

(formerly Milwaukee Corrugating Co., Milwaukee, Wis.  
and The Eller Mfg. Co., Canton, Ohio)

Main Offices: 36th Ave. and Burnham St., Milwaukee

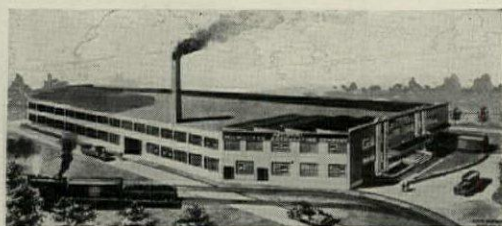
Plants at Milwaukee, Wis., Canton, Ohio, La Crosse, Wis.,  
Chicago, Ill. and Kansas City, Mo.

Sales Offices: New York, 418 Parshing Sq. Building; Boston, Mass.,  
726 Little Building; Atlanta, Ga., 207 Bona Allen Building;  
Minneapolis, Minn., 642 Bldg. Exchange Building;  
Little Rock, Ark., 104 W. Markham Street

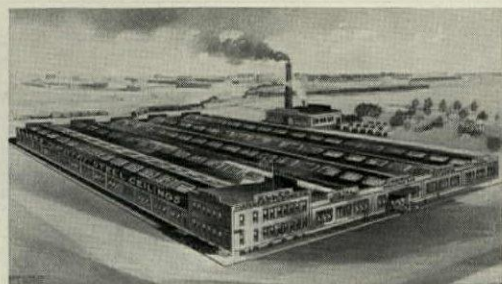
MAIN WORKS AND GENERAL OFFICES,  
MILWAUKEE, WISCONSIN



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SOUTHWEST PLANT, KANSAS CITY, MO.



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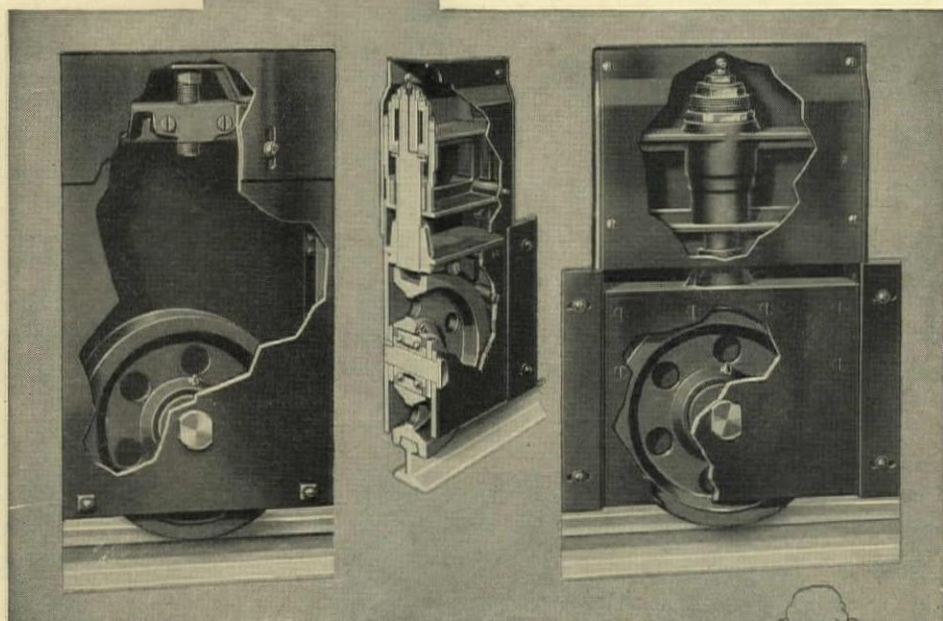


# R-W hangar door hardware---

50  
years  
1880/1930



*R-W bottom rollers fit standard (12"x20") slots on "round-the-corner" and straight sliding steel and wood doors up to 3000 lbs. each. Side plates are integral units with no springs or other intricate parts to break or get out of order.*



## Preferred!



"Quality leaves  
its imprint"

Wherever hangar doors are made and installed, R-W hardware is preferred. That's because each unit, each hidden part, is specially designed to provide smooth sliding and continued easy, trouble-free operation.

Ask your architect, your engineer, your door manufacturer. Consult an R-W engineer; counsel with him from the first planning stage. Write for catalog No. F-62.

## Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"  
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Branches: New York Chicago Boston Philadelphia Cleveland Cincinnati  
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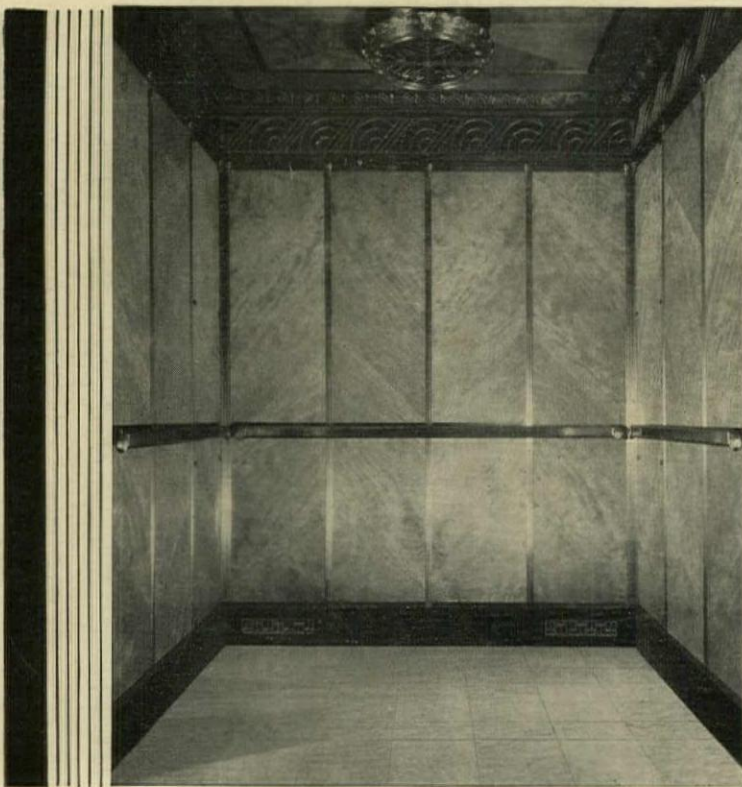
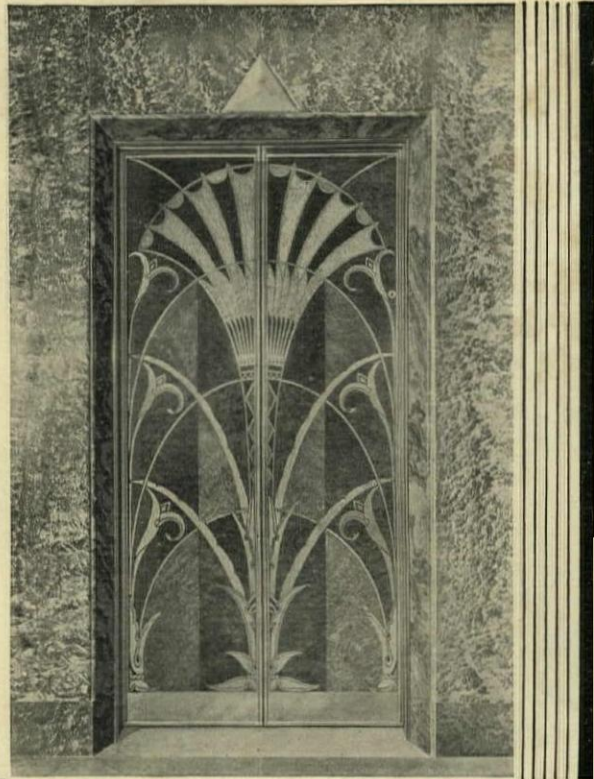


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*throughout the*

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