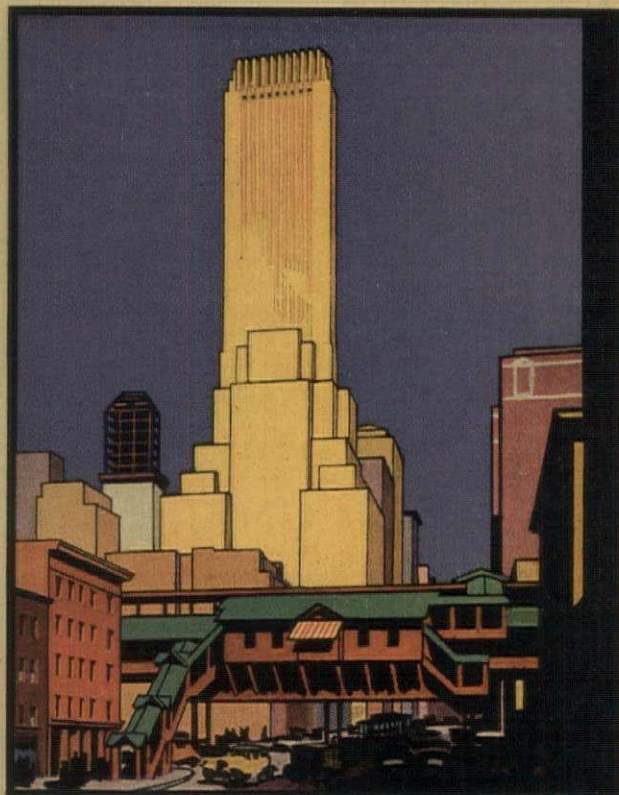


THE  
ARCHITECTURAL  
FORUM



IN TWO PARTS PART ONE

ARCHITECTURAL DESIGN

OFFICE BUILDING REFERENCE NUMBER

JUNE 1930

PRICE \$3.00





TORE FRONTS  
*designed with*  
**FORMICA**

**M**ANY very attractive modern store fronts have been designed and erected with Formica.

For this purpose Formica sheet is vulcanized onto a backing of asbestos board. The product has many advantages. It is not brittle and there is no breakage either before or after installation.

The exceptionally high gloss finish of the Formica does not check or crack with exposure to weather. It does not absorb stains. Therefore it maintains its excellent appearance indefinitely.

There are two marble finishes, jet black, solid colors and wood grains.

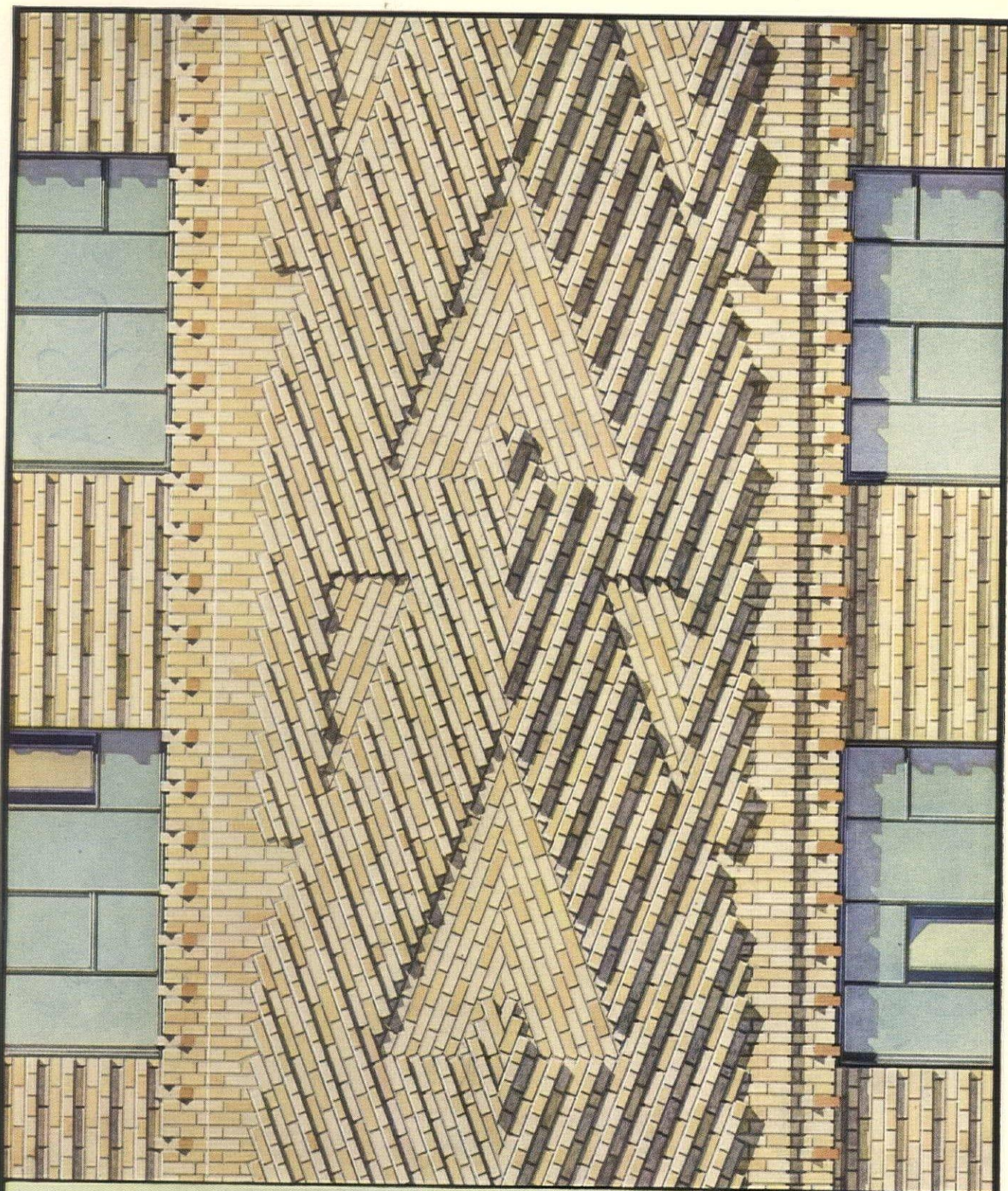
*Write for literature and samples.*

THE FORMICA INSULATION COMPANY  
 4666 Spring Grove Avenue - - - Cincinnati, Ohio

**FORMICA**

*for* **BUILDING PURPOSES**





This pilaster treatment of a commercial building is modern in form and demonstrates the versatility of face brick. An infinite variety of form and color may



Established 1893

**HANLEY COMPANY, INC.**

*Largest Manufacturers and Distributors of Face Brick in the East*

BOSTON—260 TREMONT ST.

BRADFORD, PA.

NEW YORK—565 FIFTH AVE.

be worked out with this medium . . . It is a simple, flexible material and can be laid in the wall in varying forms at a low cost by using standard size brick.



# STANDARDIZED AND COMPLETE IN ONE UNIT

SAVE  
by Low Costs  
Build  
NOW



## GENFIRE STEEL CASEMENTS AND SCREENS

These outstanding products provide the advantages of standard casements for all installations regardless of any screening problem. If screens are required, Genfire Rol-Up or Casement Side Hinged Screens can be applied directly to the casement frame where they become integral with the window unit. They may be applied at any time and can be removed just as easily without impairing the appearance of the window. No special mouldings, no cutting or fitting are required. Nor do these screens necessitate any change in the architect's details. Their extreme simplicity of installation requires only the provision of a 5/8" minimum clearance of the casement frame at the side jambs. Write for catalog and detailed information.

GENFIRE STEEL COMPANY . . . YOUNGSTOWN, OHIO  
Warehouses and Offices in Principal Cities. Dealers Everywhere



# Specify Pure Lead Paint . . . .

● and there won't be any paint problem



## EAGLE SUBLIMED BLUE LEAD

for rustproofing metal surfaces

Sublimed Blue Lead makes a pure lead, rust preventive paint with very marked advantages. Quickly thinned to paint consistency like White Lead. Does not harden in the container. Grips metal surfaces tenaciously, preventing rust and corrosion. Spreads out smoothly and evenly under the brush, is easy to apply. Has excellent covering power. Being pure lead, it is very enduring. And its cost per square foot of surface protected is considerably less than other high quality metal paints. Free booklet on request.



## EAGLE WHITE LEAD

for all general painting

Pure white lead, mixed quickly to paint consistency by a painter, continues to be the most satisfactory answer to all general painting problems.

In the hands of a good painter, Eagle White Lead is mixed to suit *exactly* all the requirements of each job. There is no guesswork. You know perfectly what materials go on your client's walls—and you know, because the paint is high-lead-content, it will stand up against all conditions.



The Eagle-Picher Lead Company - 134 North La Salle Street, Chicago





## BEAUTY that is BRICK

American business builds for beauty, for beauty pays.

Beauty and color permanency in this splendid Sears, Roebuck store were achieved through the medium of weather-resistive Acme Face Brick—the material that needs no cover-up.

Acme service, backed by thirty-nine years in the art of brickmaking and ten Acme owned-and-operated plants, offers "A Brick for Every Type, a Color for Every Color Scheme."

Let us help you solve your color problems.

SEARS, ROEBUCK & CO., RETAIL STORE, HOUSTON, TEXAS

Nimmons, Carr & Wright, Architects  
B.W Construction Co., Contractors

*It is faced with a blend of Acme Weather-Resistive Brick in varying and refreshing shades of ivory-grays from our Perla Kilns.*

# ACME BRICK

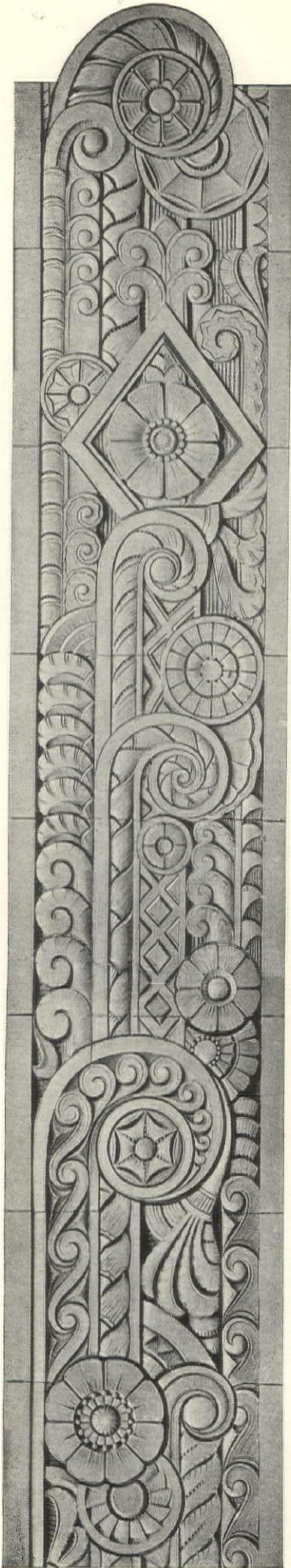
ACME BRICK CO. Established 1891

General Offices, Fort Worth, Texas

Manufacturers of the Products We Sell  
150,000,000 Face Brick Capacity per Year

*Plants, Offices, Displays and Dealers Throughout the South and Southwest*





**M**ODEL of ornamental design in terra cotta used in Toll Building, of the Southwestern Bell Telephone Company, Kansas City, Mo. Hoit, Price & Barnes, Architects. I. R. Timlin, Associated Architect.

Soaring to far, clean heights and glorified by flood-lighting, the famous terra cotta skyscrapers of modern America are no less inspiring than are the sonnets of Shakespeare or the music of Beethoven. Symphonies in clay worthy to rank with the masterpieces of all time, they thrill the most devoted lovers of beauty; the dreamer, the poet, the artist. Yet buildings faced and ornamented with Northwestern Terra Cotta are also symbols of far-sighted thrift; as enduring and economical as they are beautiful.

**THE NORTHWESTERN  
TERRA COTTA COMPANY**

DENVER • CHICAGO • ST. LOUIS

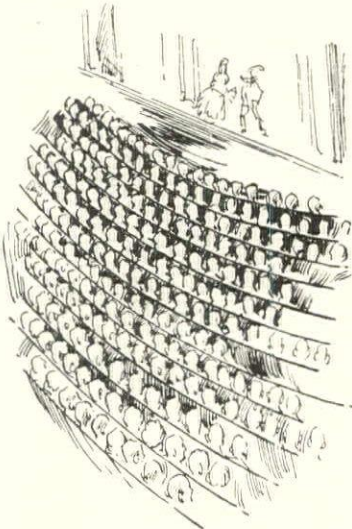


# For the Safety of a vast Audience



AUDITORIUM, SHREVEPORT, LOUISIANA—Architects: Jones, Roessle, and Olschner

## Featherweight Concrete INSULATING ROOF SLABS



Audiences everywhere are assured their proper protection against fire and the elements by a roof of pre-cast concrete. Owners, whether public or private, are protected too, against all expense for repairs, painting or other maintenance.

Featherweight Concrete Slabs are of Haydite aggregate instead of sand. That means *trapped air cells*, bringing the weight down as low as 10 lbs. per sq. ft. and giving an insulating value new to concrete.

Innumerable public buildings are covered with these slabs — Shreveport and Flint Auditoriums — Chicago's Field Artillery and Naval Armories — Adler Planetarium — Detroit Municipal and Wayne County Hangars — Lawrence College Gymnasium — Gateway Theatre and many more. Industrial and railroad buildings add their evidence on the permanent fire-proof, no-maintenance service of this roof. "Catalog and Roof Standards" gladly sent on request.

Made, Laid and Guaranteed by

### FEDERAL CEMENT TILE COMPANY

608 South Dearborn Street

Chicago

FOR OVER A QUARTER CENTURY



# Brasco

introduces a  
complete system of

## MONEL METAL Store Fronts

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

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

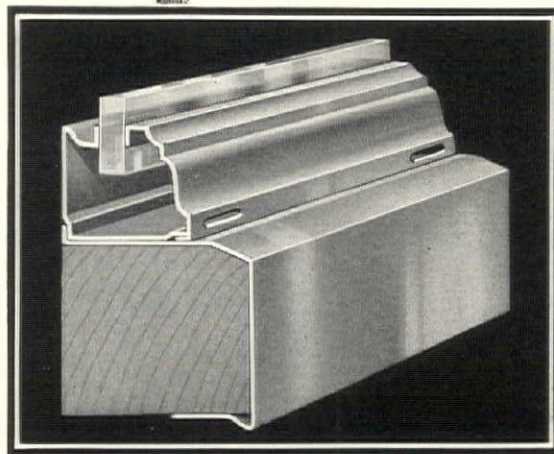
Lustrous silvery beauty in keeping with today's style in architecture—absolutely rust proof—non-ferrous yet with the strength of steel—retaining its original brightness under all atmospheric conditions with a minimum of care, Monel Metal adds a new touch of perfection to the time-proven Brasco principles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

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



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

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

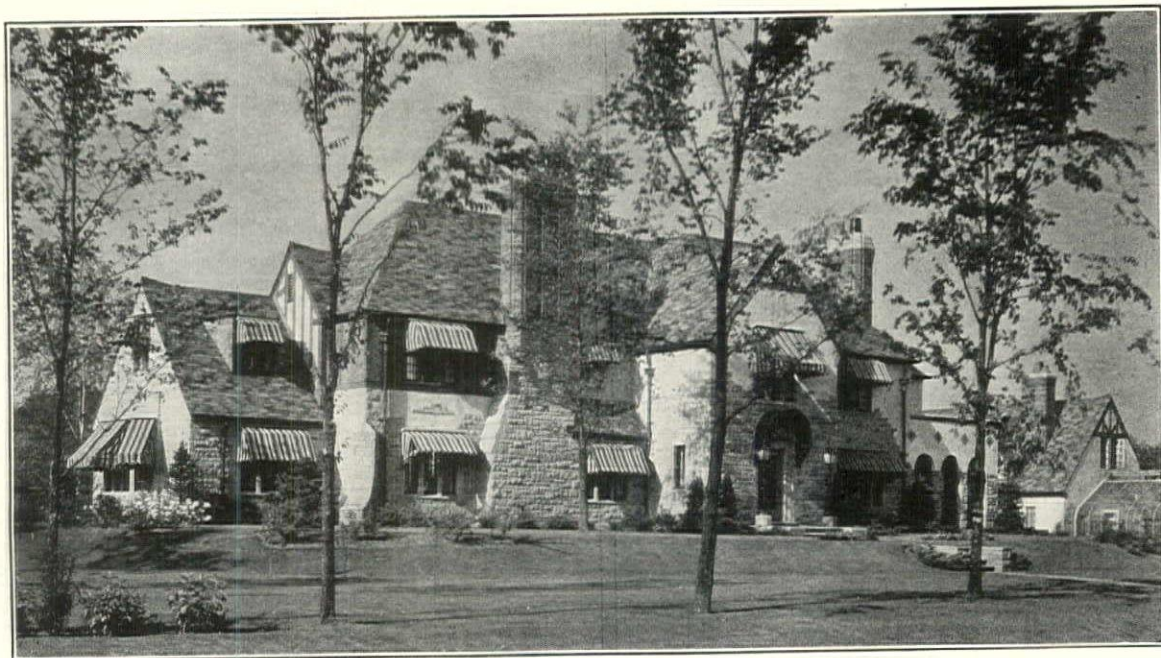


Brasco Store Fronts may be obtained in Monel Metal - Bronze - Copper - PermaWite - Davis Solid Bronze



## 3 Sheldon Slate Stepping Stones . . . . . . and we have reached the House

In April we showed you the garden, in which Sheldon's slates have been so advantageously used; in May the garage, whose Sheldon slate roof makes it a fit subordinate to the residence; and now we have come to the house itself, with its "Roof of Eternal Beauty."



It is the residence of C. M. Day, Jackson, Michigan; Beckett & Akitt (Detroit) Architects, a project which serves as an illuminating example of the beauty of appropriateness of Sheldon colored slates everywhere: inside and out, on the ground and in floors as well as on the roof.

In this particular case the combination selected is that of Sheldon's light and dark unfading greens, weathering greens and grays, and clear and mottled purples, set off with a sprinkling of brown pheasants.

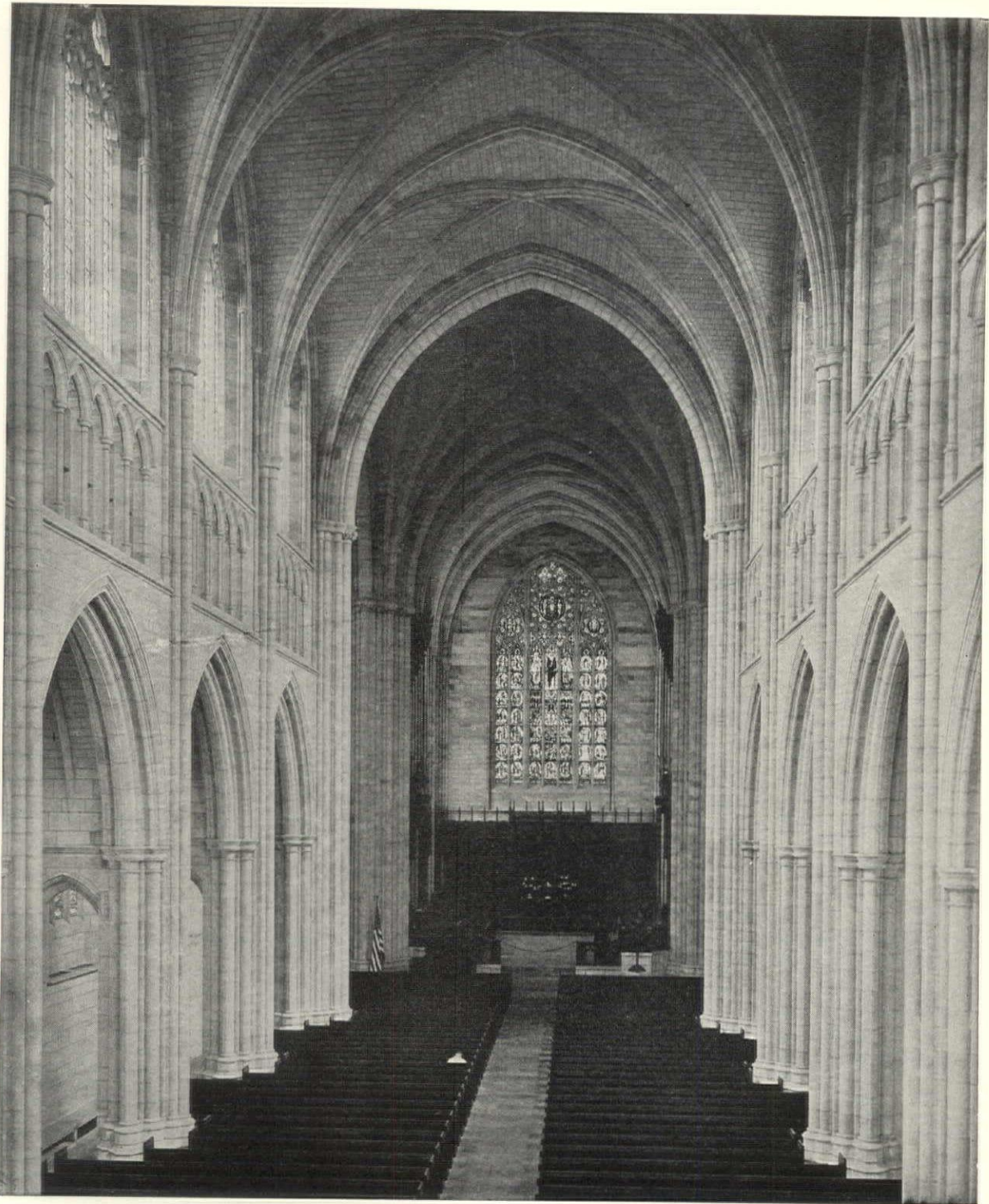
All from Sheldon's own quarries; where, in fact,

are found the whole gamut of the colors in which nature yields slate, including the exclusively Sheldon Unfading Arabian Red.

You will find four Sheldon slate roofs, in natural colors, in Sweet's Architectural Catalogue; but those give no more than a glimpse of the practical and beautiful possibilities of Sheldon slates, and we respectfully urge you to consult us on the use of colored slate in any project you may have in hand. And not in the roof alone, but for floors, walks, stepping-stones, etc. as well.

**F.C. SHELDON SLATE CO.**  
 GENERAL OFFICES · GRANVILLE · N.Y.  
 • BRANCHES IN PRINCIPAL CITIES •





PRINCETON UNIVERSITY CHAPEL  
Princeton, New Jersey

Cram & Ferguson  
Architects

### ACOUSTICAL MASONRY VAULTING

Vaulted Ceilings of Guastavino Timbrel Tile Construction with soffit of AKOUSTOLITH Sound Absorbing Artificial Stone. Side walls lined with similar AKOUSTOLITH in large size units to simulate stone ashlar.

# R. GUASTAVINO COMPANY

40 COURT ST., BOSTON, MASS.

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

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



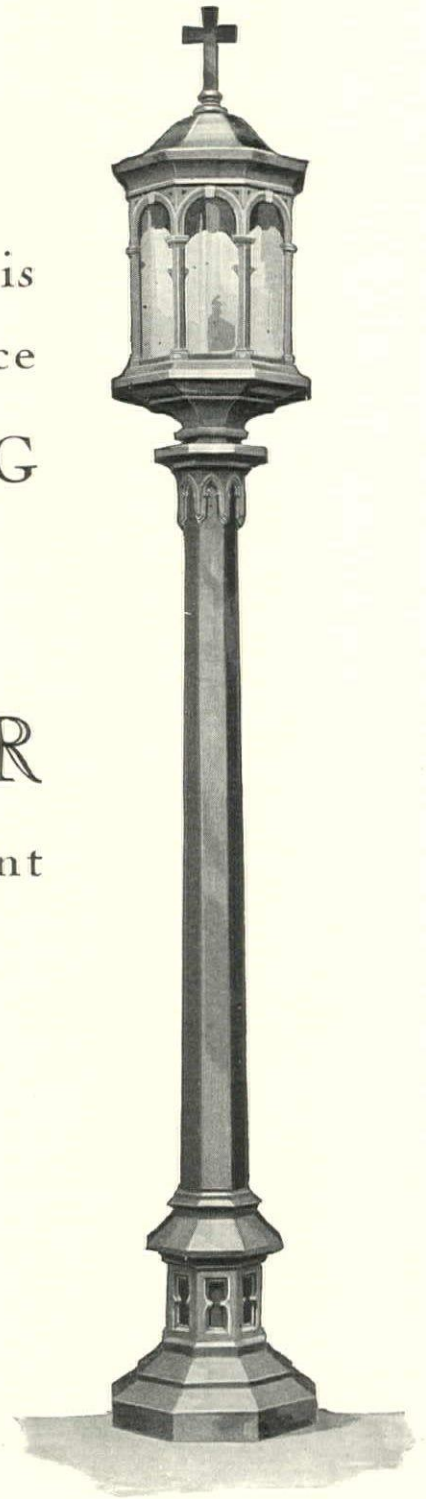
Judged on the basis  
 of appearance and permanence  
**EXTERIOR LIGHTING  
 FIXTURES**

by  
**SMYSER-ROYER**  
 will meet every requirement



**S**INCE 1840 Smyser-Royer craftsmen have been supplying exterior lighting fixtures for America's foremost architects. Ninety years of experience in faithfully interpreting and executing the architect's plans has enabled the Smyser-Royer Company to produce fixtures that are perfect in every detail, yet as durable as the building itself.

If an original design is not needed, the Smyser-Royer Catalogue will reveal a wide selection of artistic designs, created by craftsmen to meet all the needs of modern lighting.



*In Sweet's Catalogue, Section D, pages 5334 to 5344, two hundred Smyser-Royer fixtures for every period and purpose are illustrated.*

**SMYSER-ROYER COMPANY, Main Office and Works, York, Pa.**

*Philadelphia Office, 1700 WALNUT STREET*



# A man may "Walk a mile"

for a favorite relaxation or so the advertisements proclaim

--but

he will not walk far for even a good garage

For which reason the R. J. Reynolds Building in the home city of "Camels" has its d'Humy Motoramp garage adjoining.



So garages must be brought to where distance is measured in seconds.

The office building of today is incomplete without its own garage. The trend is toward d'Humy Motoramp Combination Buildings.

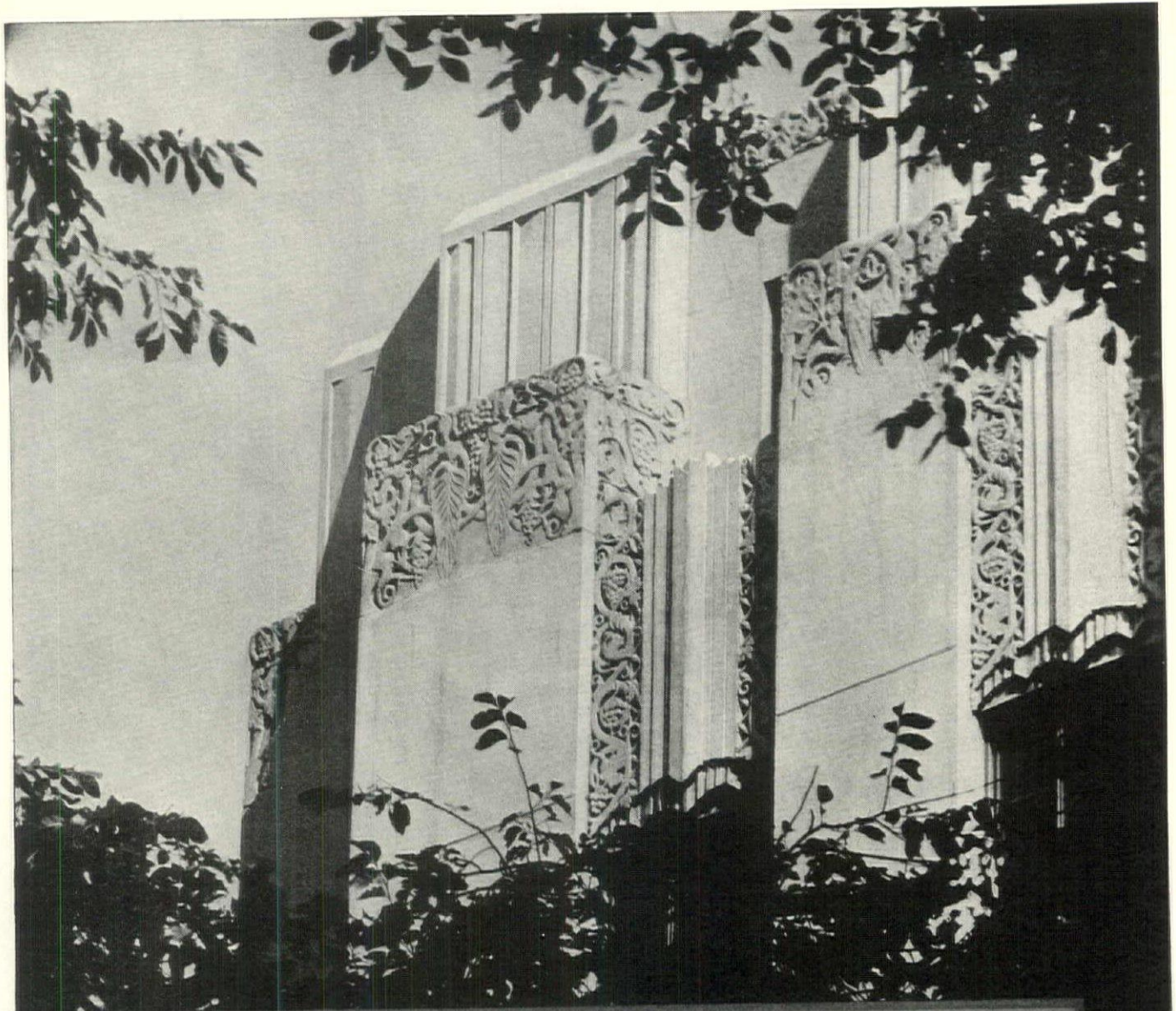
## RAMP BUILDINGS CORPORATION

21 East 40th Street, New York, N. Y.

Whose business it is to establish the economic soundness of a contemplated garage plan, and the efficiency of the building layout—working always in cooperation with the designing architect

Planned to serve the towering Reynolds Office Building, the Downtown Garage (Northrup and O'Brien, Architects) serves others in the mid-city area of Winston-Salem, also.





## *Dedicated to coming generations*

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

*— [ Informative booklets on concrete construction gladly mailed on request ] —*

**PORTLAND CEMENT** *Association*

*Concrete for permanence and firesafety*

**CHICAGO**



# CENTURIES OLD    ❧   ❧   ❧

## *The First Day They Are Laid*



*Humphries End Farm, Near Stroud, Glos*



TIME, the master painter, has etched his delicate colors into the tile of England's roofs. But here is a tile, fresh from the kiln, that faultless artistry has given all the charm of age--the softened broken lines, the

warmth, the soothing tones, the very warp and twist that mark Old England's tile--even the gentle, modulated coloring that comes with generations of exposure to the weather.

If you would have a roof of genuine aged appearance, by all means allow us to send you samples of HEINZ PLYMOUTH SHINGLES. They are faithful in every detail to the time-weathered tiles of the Old World.

## THE HEINZ ROOFING TILE CO.

DENVER, COLORADO    3659 COUNCIL ST., LOS ANGELES, CALIF.    101 PARK AVE., NEW YORK





● "Modern skill," says *House & Garden*, "has supplied admirable substitutes for old English tiles, mellow hued in soft, rich reds and russet browns. There is now tile as crude and rough in appearance as the hand-made product of Elizabethan days." The writer very probably was referring to *IMPERIAL Antique Shingle Tiles*, whose uneven surfaces are splendidly illustrated by the photograph above. In color they closely resemble century-weathered tiles.

**L U D O W I C I - C E L A D O N   C O M P A N Y**

*Makers of IMPERIAL Roofing Tiles*

NEW YORK: 565 FIFTH AVENUE

104 S. MICHIGAN AVENUE, CHICAGO

WASHINGTON: 738 FIFTEENTH ST., N. W.



# Store fronts in chromium

Our Chromium Plating Equipment completely installed in our plant renders the facilities for turning out all store front construction members in genuine Chromium plate. This plating is applied on Duplex Nickel Plated rolled or extruded bronze or copper shapes of our standard design, or to individual specifications.

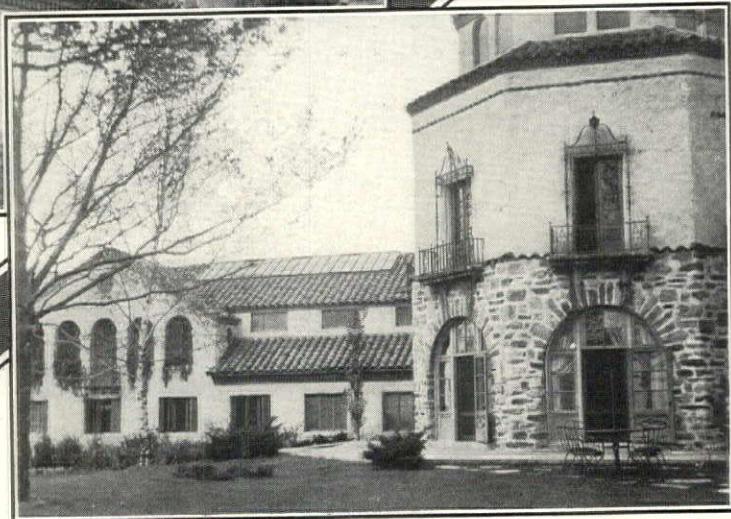
Our equipment is of a capacity that enables us to take care of all requirements and is reputed the largest of any plating plant in the West. The white metal effects so desirable in Modernistic and Modern American designs are available for quick delivery.

**Zouri Drawn Metals Company**

Factory and General Offices: Chicago Heights, Illinois



# NORTH HILLS COUNTRY CLUB



Architect C. C. Wendehack, in the designing of the North Hills Country Club at Douglaston, Long Island, has bequeathed to the membership a life-long gift of beauty, enhanced in no little measure by the unique unmatchable color tones

of the Riviera fireflashed roofing tile which, in this case, is not merely a shelter from the elements,—but something to contemplate and enjoy. Just a line to Department F, Daisy, Tennessee, will bring to you pleasing proof.

## B. Mifflin Hood Company

**KIL-KRAFT TILES**

TRADE MARK

DAISY, TENNESSEE

*Above all things use Hood Roofing Tile*



# THEY OVERLOOK NOTHING . . . BUT THE LANDSCAPE!

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

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

We recommend the use of plate glass.

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

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

The cost of these new casements is very little more than that of an old-fashioned window. Made in standard sizes to suit a wide variety of architectural treatments. Consult your current edition of Sweets' catalog for complete details. David Lupton's Sons Co., 2207 E. Allegheny Ave., Philadelphia, Pa.

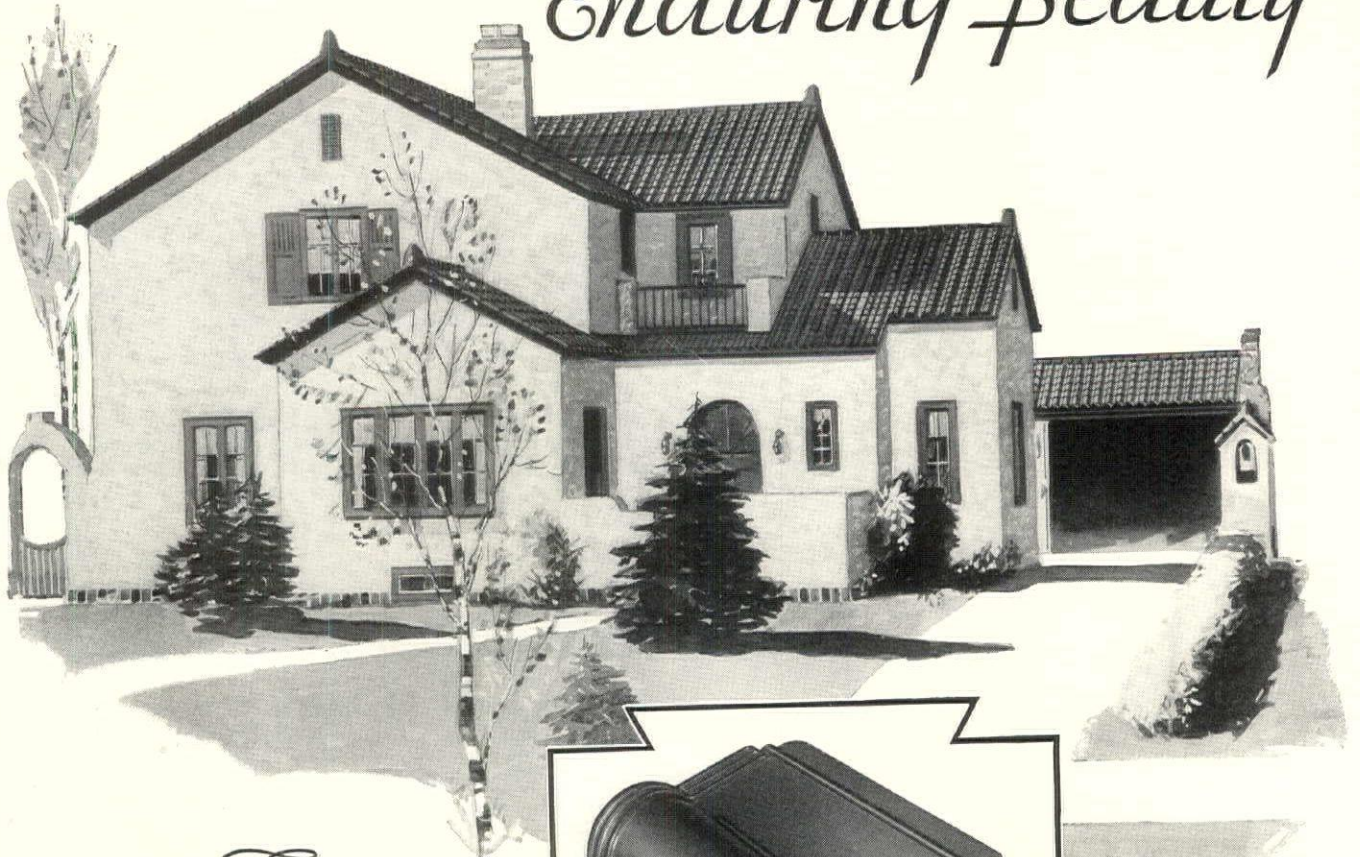


# LUPTON

where steel is fused with sincerity



# A ROOF OF *Enduring Beauty*



THESE are many types of homes that demand the quaint charm of true Spanish atmosphere as revealed by *Milcor* Spanish Tile . . . for others it is entirely optional . . . Yet in no home can the benefits of permanence and firesafety be discounted.

*Milcor* Spanish Metal Tile places in the hands of the architect the means of creating and reproducing a roof of enduring beauty . . . a roof that is free from fire hazard and deterioration. Upkeep costs can be disregarded . . . *Milcor* Spanish Metal Tile will not crack . . . break . . . or warp. The famous "Tite-Lock" edge . . . distinctly a *Milcor* advancement . . . seals the roof against water seepage. Costly sub-construction is eliminated, for, while



**MILCOR**  
Coppered Metal Spanish Tile

*Milcor* Spanish Metal Tile so closely resembles real tile that it cannot be detected . . . it is far lighter in weight. For every style of building there is a *Milcor* Metal Tile or Shingle . . . architecturally correct in all its trimmings. May we send you a copy of the *Milcor* Catalog with a complete description of all *Milcor* designs.



*Milcor* Spanish Metal Tile is available in pure Anaconda Copper; Copper-bearing Terne Plate or Armco Ingot Iron, galvanized after formation; Copper-bearing Terne Plate or Armco Ingot Iron painted red or green.



MILWAUKEE CORRUGATING COMPANY, 1405 Burnham Street, MILWAUKEE, WIS.  
FP-5

## MILCOR PRODUCTS

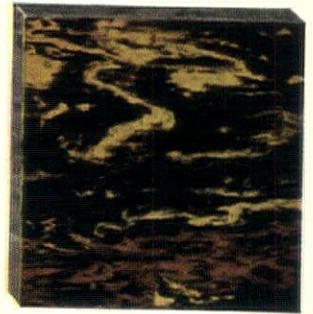
Branches: Chicago, Ill., Kansas City, Mo., La Crosse, Wis.

Sales Offices: Boston, Mass., Atlanta, Ga., Little Rock, Ark., Minneapolis, Minn., New York, N. Y.  
Eastern Plant: THE ELLER MANUFACTURING CO., Canton, Ohio



# .....make full use of color!

in the Floor. Twenty-seven correct color types in tile, strip and molded forms, afford the widest latitude in design arrangement. Practical floors can now be created to complement the architectural treatment of walls and ceiling—to interpret the motif and purpose of a room. The light gay atmosphere of a beauty salon or tea shop, the grandeur of a rotunda, the quiet dignity of a church—each can be expressed correctly and completely in a quiet and lasting floor of this modern material.



**Black Gold Paisley**  
Black with veinings of Gold and Dark Red

## Stedman Reinforced\* Rubber Tile

meets modern flooring needs. *Color:* with veinings of unusual fineness and beauty. *Comfort:* quiet under foot, firm yet resilient, smooth but not slippery. And *Economy:* a floor you can depend upon to wear well and look well for many years.

Eight million square feet have already been installed in institutional buildings and private homes.

When you specify Stedman Reinforced Rubber Tile you enlist the services of an organization of specialists, from creation to installation. Full information and color charts sent gladly.

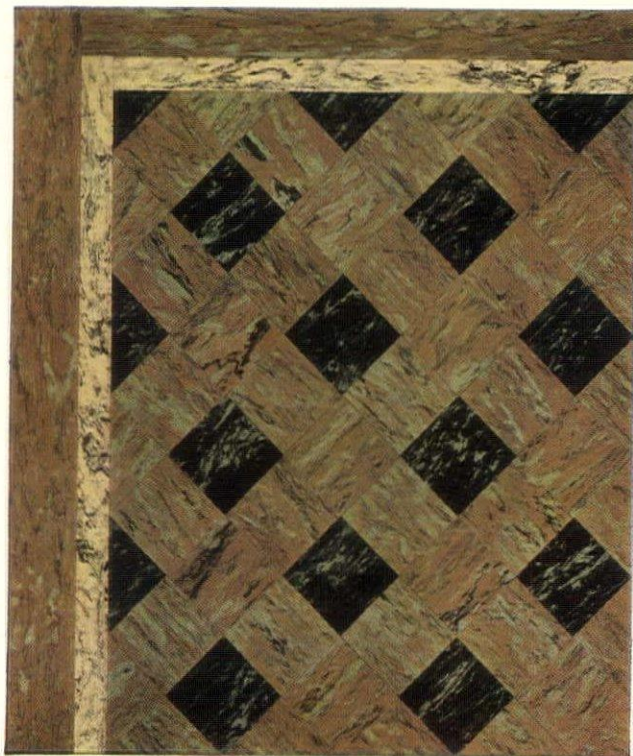
**STEDMAN RUBBER FLOORING COMPANY**  
SOUTH BRAINTREE, MASSACHUSETTS



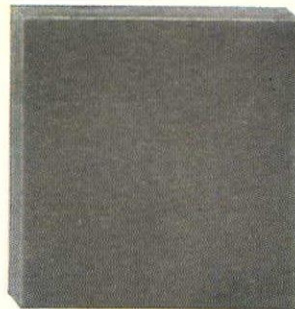
**Black Grey**  
Black with veining of Grey



**Brown Gold Paisley**  
Brown with veinings of Black and Gold



**Design No. 27.** An achievement in the ordinarily commonplace diagonal pattern. Predominating color type is Brown Green Paisley; darker squares are Black Green; the narrow border is Buff Black.



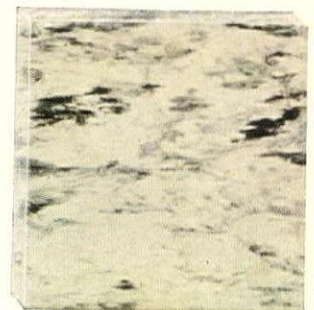
**Grey**



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



**Black Gold**  
Black with veining of Gold



**White Black**  
White with veining of Black

\*REINFORCED: In the Stedman Process minute cotton filaments, uniting with the rubber under high pressure and heat, are responsible for its unusual resistance to wear and distention, its lasting resilience and smooth, impervious surface—characterized by color veinings of remarkable fineness and beauty.



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



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

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

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

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

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

It can be used for paneling, doors, window frames,

baseboards, molding — anywhere, in short, where you want the matchless charm of Tidewater Red Cypress.

*A Book of Interiors — sent free*

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

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

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

## TIDEWATER RED CYPRESS

(COAST TYPE)

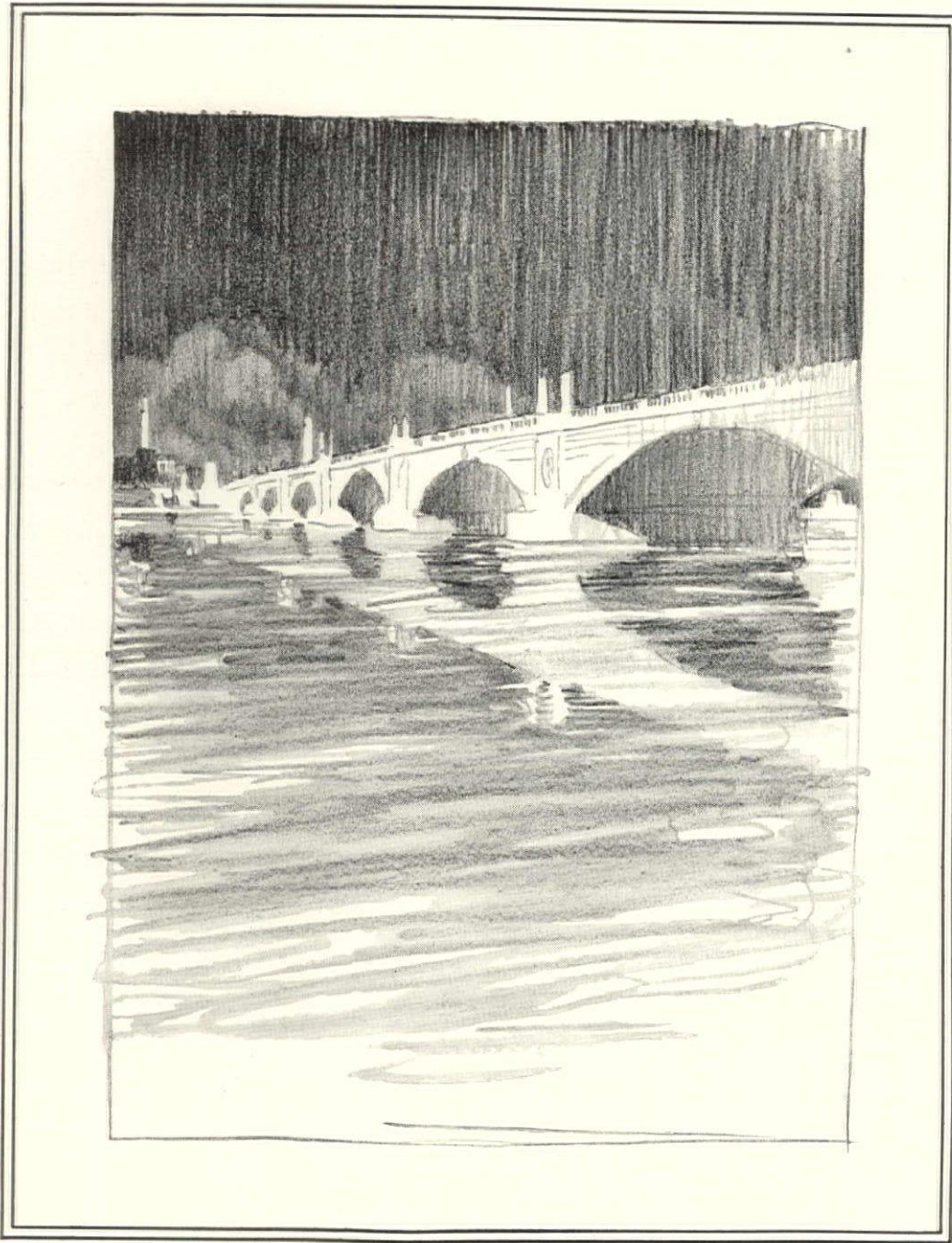
THE WOOD ETERNAL

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

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.

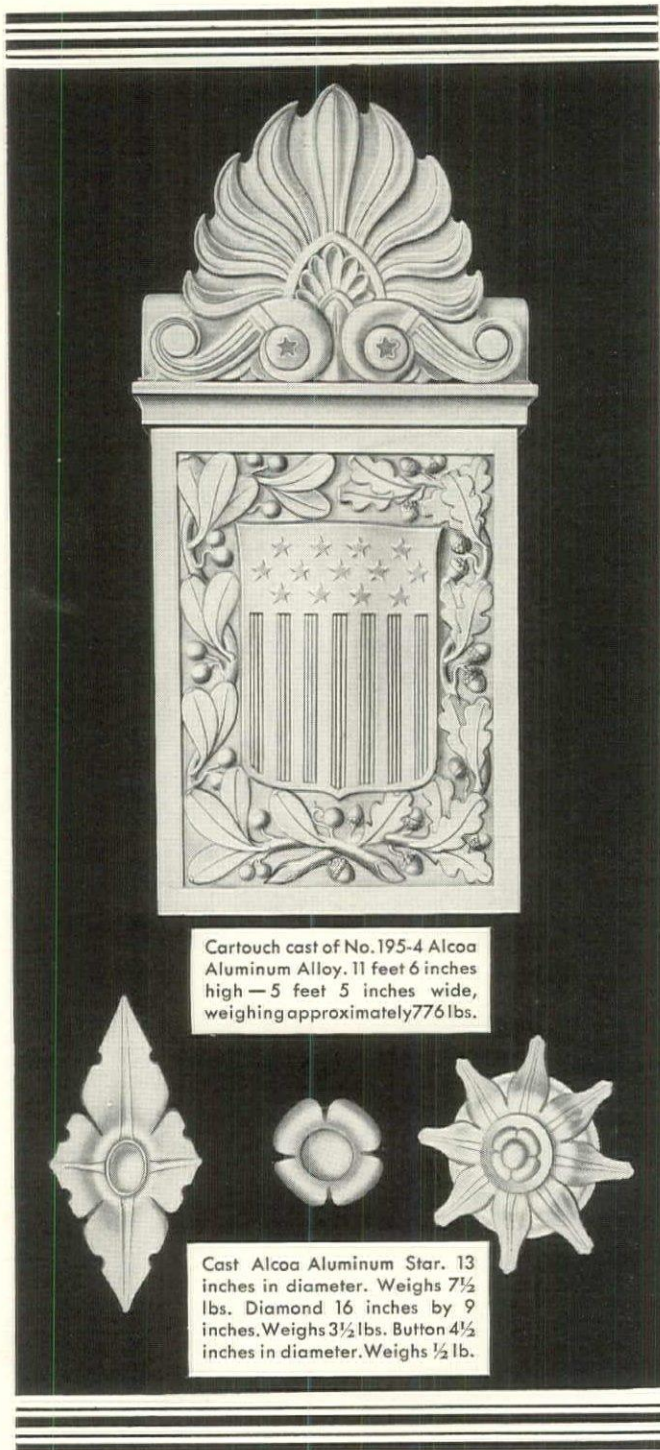




Bascule draw span for Arlington Memorial Bridge at Washington, D. C. McKim, Mead and White, architects. Phoenix Bridge Company, Phoenixville, Pennsylvania, contractors for bascule span. Decorative castings, balustrade, balustrade cap, base and rail, etc., of Alcoa Aluminum. See next two pages for particulars.



# Draw Span of Arlington Memorial Bridge



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

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

## Lightness with Strength

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

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

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

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



# relieved of 100,000 lbs. dead-weight

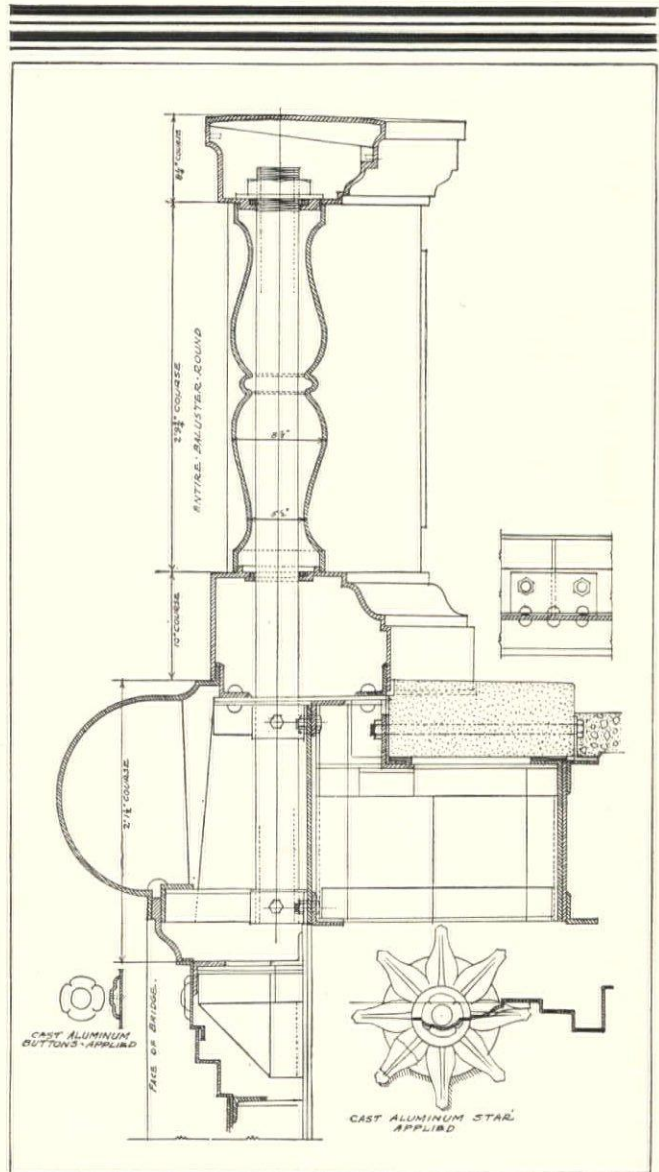
streak adjoining surfaces. This modern metal possesses great ductility—a characteristic that eliminates many of the difficulties encountered in erecting other metals. Alcoa Aluminum can be easily fitted into the irregularities in stone work.

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

## Specifications

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

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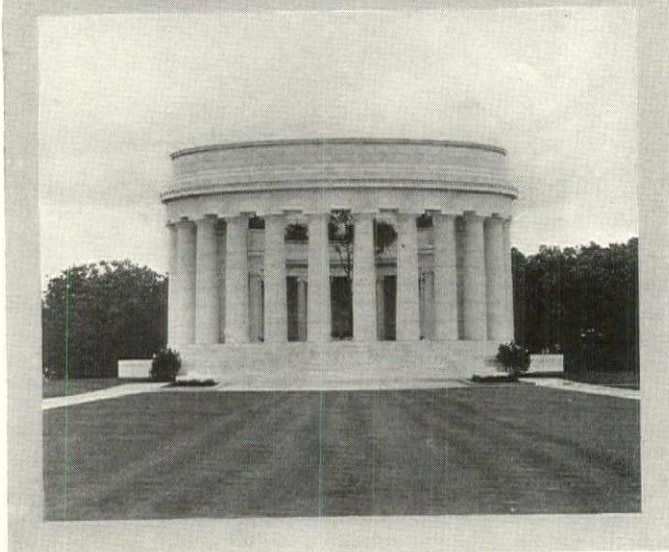
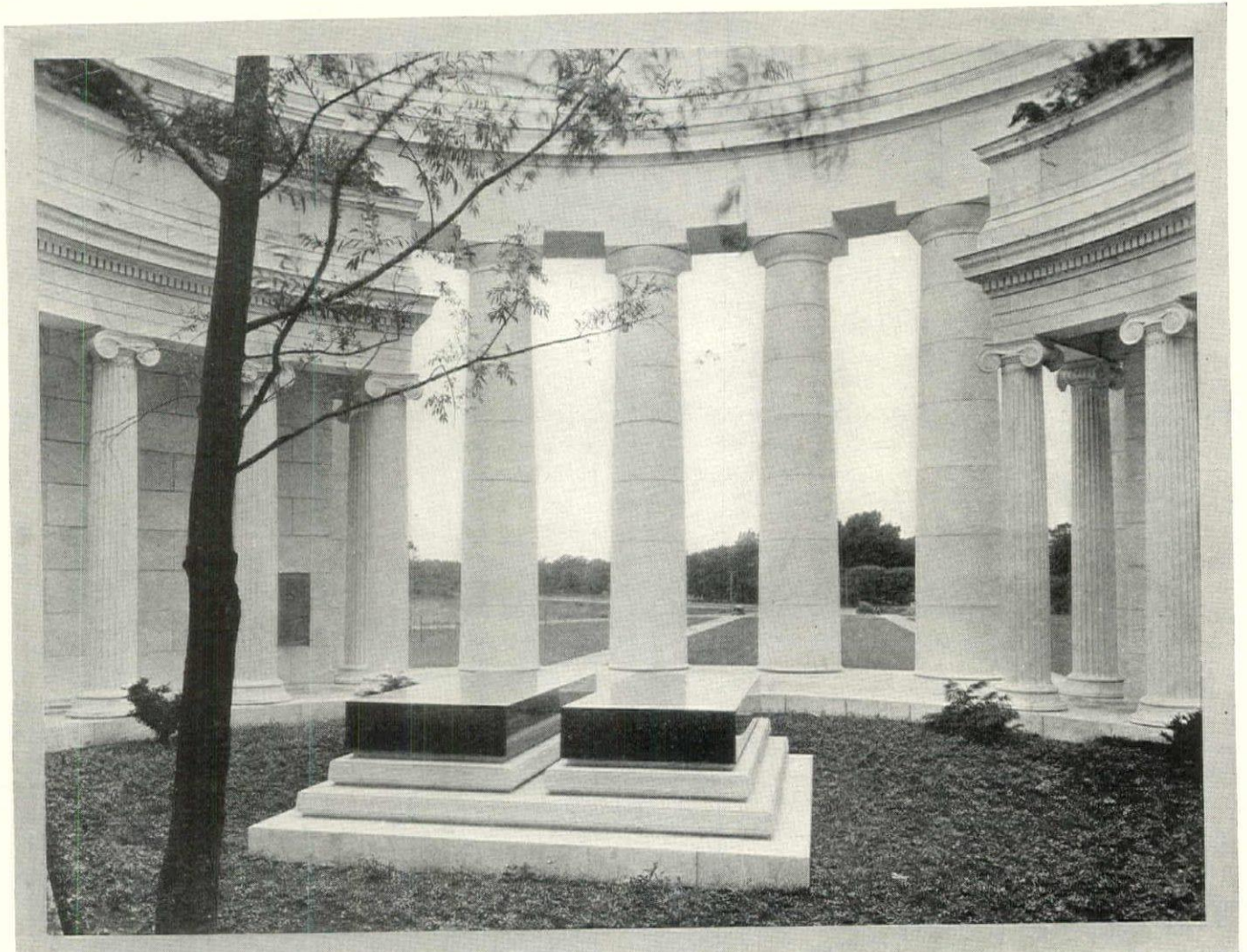


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## BOOK DEPARTMENT

### SOME DUTCH HOUSES IN THE HUDSON VALLEY

A REVIEW BY

CLIFFORD WAYNE SPENCER

AS an archæological source for architectural inspiration the early houses in and about the Hudson River valley are particularly rich in those admirable qualities of domestic quaintness so much to be desired for homes of all classes. As one drives about among the pleasant valleys of the region one comes everywhere upon comfortable, substantial farm-houses which, although often greatly altered in appearance by additions and so-called improvements that have been made from time to time, still preserve in their walls and in many of their details the characteristics incorporated by the original Dutch settlers. And if one is sufficiently interested to go farther afield and explore the byways and country lanes, one is sure to have the search rewarded by the discovery of examples even less spoiled by the march of progress.

Then, too, there are in the towns, such as Albany and Kingston, remnants of the dwellings of the sturdy burghers, some of which have been preserved in their original state by public societies or by appreciative owners. As in the case of other examples of early American architecture, the authentic original examples become fewer and harder to find as time passes, and it is probable that the tendency toward the desertion of farms in this part of the country will have the effect of allowing many more to fall into ruins within the next few years. Many of the finest have already become mere memories, and the appearance of still others is preserved only in the form of indistinct and inadequate photographs or crudely made drawings.

In order that the treasures still in existence may be preserved for the enjoyment of future generations, and the documents now so widely scattered and difficult of access may be assembled and presented in such a manner as to afford a picture of the lives of the people who built and lived in the houses, Helen Wilkinson Reynolds undertook for the Holland Society of New York a field survey of the houses and an investigation of the records pertaining to them as found in both public and private libraries. With the assistance of Margaret de Motte Brown, who made the camera studies, she visited and carefully studied a great number of houses built in the

counties of Westchester, Albany, Dutchess and Ulster before the American Revolution. The volume in which she presents the results of these studies and pilgrimages constitutes a noteworthy architectural document, though its author disavows any intention of treating the subject

from an architectural viewpoint, but rather from that of archæology as a record of human society, and of the peculiar genius of a given community. In spite of this statement on the part of the author it is easy to see that she has a keen understanding and appreciation of the essential qualities of good architecture. Had the work been studied and prepared as a purely architectural volume, its quality as such could not have been improved; in fact, it is highly probable that much of the natural charm of the present work would have been lost had



The Bevier-Elting House, New Paltz

it been subjected to any such professional limitations.

A great part of the charm of the volume lies in the extreme simplicity of the houses shown, for, as Miss Reynolds explains, with few exceptions the houses built by the Dutch settlers were of the greatest possible simplicity and quite unpretentious. Legends of the grandeur of family seats and manor houses are more often than not the results of false family pride or of pure imagination. The main concern of the early settlers was to provide themselves with protection against the elements, and the first dwellings were often in the form of rough dugouts in which families spent the first few years until land could be cleared and there was time to erect more comfortable dwellings. The hardships which these pioneers endured cannot be exaggerated, and it is not to be expected that under these circumstances people would spend much time in erecting for themselves pretentious homes. It is true that there were varying degrees of prosperity among the settlers, but the homes of the more prosperous were not greatly different from those of their humbler neighbors. It is characteristic of the rugged fearlessness of the Dutch settlers that, in general, their homes are not clustered in villages as is so largely the case with those of many of the English settlers of that period, but are more likely to be found in the form of isolated farms snuggling away by themselves.

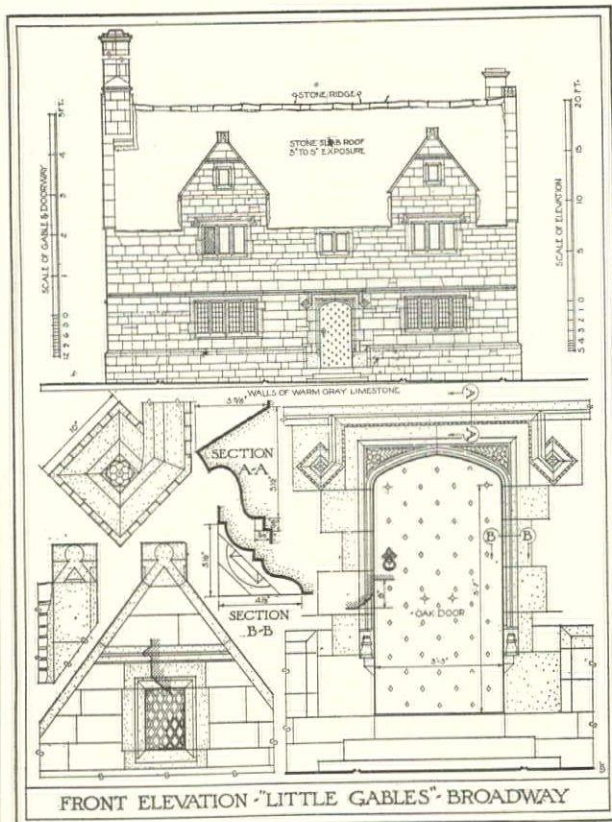
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# Tudor Homes OF ENGLAND

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By SAMUEL CHAMBERLAIN



**T**HIS new material on Tudor architecture will be welcomed by every designer of artistic homes. The beautiful collection of 300 illustrations from photographs, 30 full page measured drawings, 12 x 16 inches in size, and 60 reproductions of Mr. Chamberlain's delightful pencil sketches and dry points, are the result of an exhaustive search for new details and examples of smaller houses of the Tudor period. The descriptive text with its expression of this artist's viewpoint adds to the usefulness of this handsome volume. Every architect who has seen it has wanted it.

Working from carefully prepared data, the author visited most of the Tudor mansions of importance in central and southern England, and sketched and photographed many remote and unheralded houses of unique interest. The stone houses of the Cotswolds, the plaster cottages of Essex, the timbered work of Cheshire and Herefordshire, the brickwork of Norfolk, all of these pure types, and innumerable variations of them are fully treated. Manors as famed as Horham Hall, East Barsham Manor, Stokesay Castle and St. Osyth's Priory are illustrated side by side with such obscure and delightful places as Madeley Court, "Josselins" at Little Hookesley, and the rectory at Great Snoring. All of the material has been selected with the predominating purpose of providing data and illustrations which will furnish practical, adaptable information for the domestic architect in this country.

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The charm of the Dutch Colonial style has long been recognized and employed in the design of modern American small houses. This adaptation has however been of a rather stereotyped nature and is characterized largely by the form of the roof, a gambrel roof often being the only excuse for calling this type of building "Dutch." As a matter of fact only a limited number of the Dutch houses possessed this feature, and it is much less important as a distinguishing mark of Dutch Colonial than are many other details. Certainly there is no excuse for monotony in the treatment of houses adapted from this type of precedent. While the bulk of the houses presented are of purely Dutch origin, there are some which by reason of their having been constructed during the same period are included even though they are not strictly Dutch in their derivation. Many of the colonists of New Netherlands were from countries other than Holland, and although the colony was under Dutch rule and while a strong influence of the architecture of the motherland is evident in the homes of the settlers, there are also traces of more northern European tendencies. The predominating feeling that one gets from these houses, however, is of something not borrowed from the customs of any foreign country but born of the soil of the new land, the result of the severe conditions under which the settlers lived. There is a solidity that suggests a closeness to the soil, and the very crudeness of the materials and workmanship lends a charm that is to be found only in primitive things.

In the text the author of this work has sketched briefly the historical background against which the houses are to be viewed, telling how the fur traders followed closely on the heels of the explorers and established their posts at Beverwyck (Albany) and at Wiltwyck (Kingston) and how the farmers followed the courses of the contributory streams inland and established their homes in the fertile valleys and plains. The materials of which the houses were built are of course largely of stone and brick. In connection with the latter material the author gives an interesting explanation of the often repeated legend that many of the houses were built of brick brought from Holland, to the effect that under both the Dutch and English law there were certain standard measurements to which brick in those countries had to be made, and it was only natural that in the new country brick in the one size should be called "English" brick and those in the other size "Dutch" brick, the result being that someone hearing that his ancestor had built his house of Dutch brick assumed that the brick had been brought from Holland, and passed the tradition along to posterity as a fact. Some few brick were no doubt imported from Holland in this way, but the number was so small as to be negligible, and practically all the brick were made in the domestic brick kilns which were founded soon after the establishment of the colony and whose operation soon became a flourishing industry.

Fortunately many of the houses were dated, either by numerals cut in the stonework or by wrought iron ornamental letters on the chimneys or facades of the buildings. This, although not of paramount importance from an archaeological point of view, serves to give an indication of the periods during which the various types of construction and ornament, if any, were used. Inlaid brick of contrasting colors were also sometimes used to give the date of construction or the initials of the builder.



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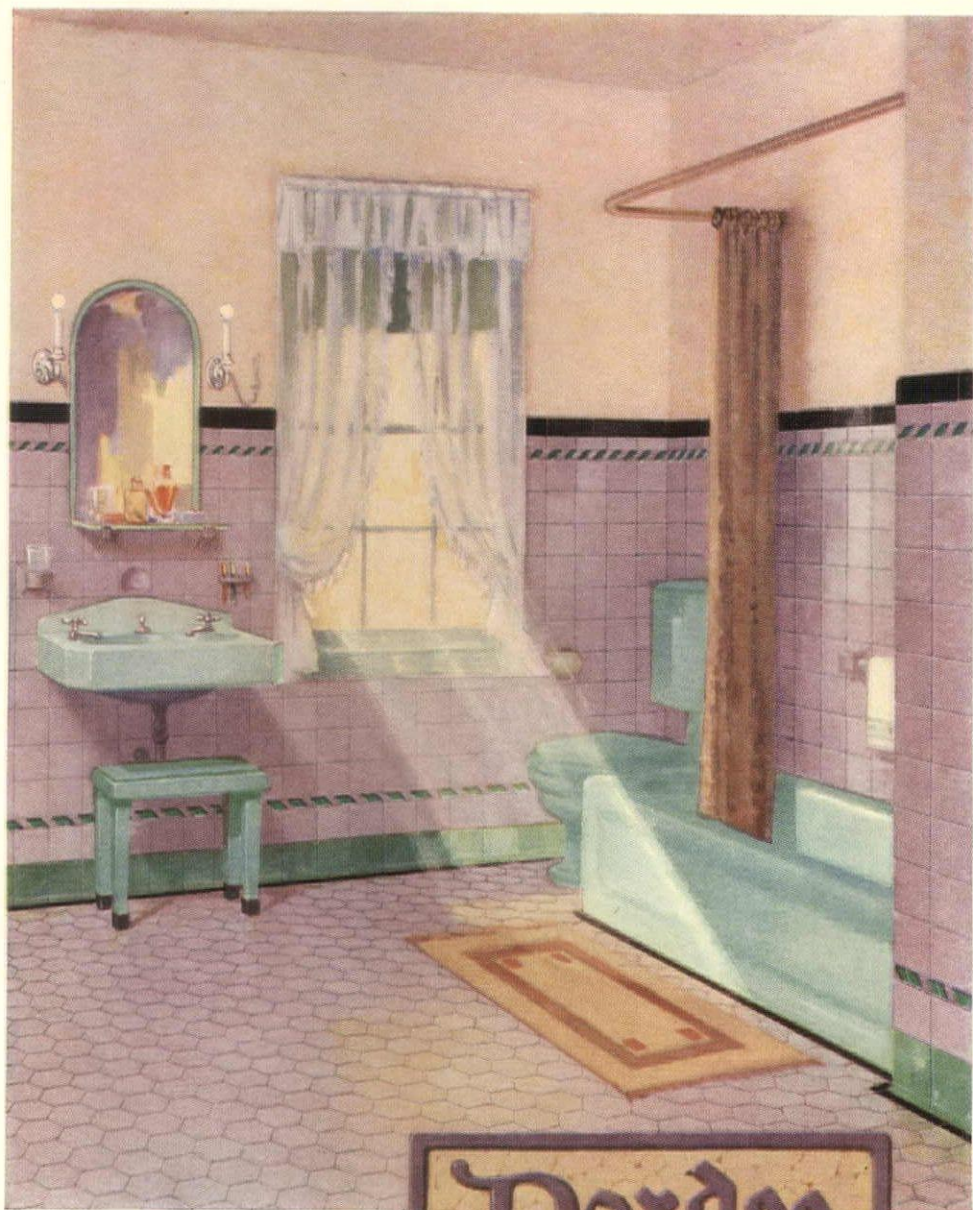
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In architectural detail the buildings are quite simple as regards ornament, their characteristic appearance being due largely to the general proportions and to the slopes of the roofs. In the early houses the roofs were either extremely steep or rather low and sweeping. The gambrel roof was a later development which became quite popular. Hip roofs were also used in a few of the more pretentious of these houses. Chimneys were large, and windows comparatively few, while the timbers and floor beams were often enormous. Doors were typically Dutch, being low and wide and often divided horizontally so that the upper part might be opened while the lower remained closed. In the later period, when there were more time and money to devote to embellishment, a few of the homes of the more well-to-do showed balustrades along the roof lines. The folklore which Miss Reynolds has gathered in the course of her investigations is woven throughout the fabric of the text and adds a touch of romantic interest to what might otherwise be a rather monotonous and long list of houses, dates, and names. Many of the legends of this neighborhood, which is so pre-eminently rich in tradition, are recounted.

For the purposes of the book several counties are grouped together under the main headings. The first of these is Albany County, which includes not only Albany

itself, but also Columbia, Rensselaer, Greene, and Schenectady. In the introduction to this part of the book the author presents a detailed picture of life during the early days in this particular locality. The bulk of the letterpress of the work consists of a list of the houses themselves, and there are over 150 of them, with a description giving the dates, the names of owners, and interesting legends or historical facts connected with each particular house. The examples chosen were selected with the fact in mind that the work was being prepared under the auspices of the Holland Society, and houses were included on the same basis on which members are admitted to the Society itself. That is, their builders must have been citizens or descendants of citizens of New Netherlands prior to the year 1675. Although this might seem to put an arbitrary limitation on the quality of the volume, such is not the case, as the number of examples available is so great as to leave plenty of leeway for the exclusion of the less interesting.

Valuable as is the text of this work, it would hardly be complete without adequate illustrations to supplement the descriptions, and this is abundantly provided.

**DUTCH HOUSES IN THE HUDSON VALLEY BEFORE 1776.**  
By Helen Wilkinson Reynolds. 467 pp., 8 x 11 ins. Price \$15. Brewer & Warren, Inc., 6 East 53rd Street, New York.

## A STUDY OF THE MODERN SKYSCRAPER

WHEN buildings became and then began to exceed 14 or 16 stories in height, opposition to these and greater heights became common. Reasons of all kinds were advanced to uphold the contentions of height-limitation proponents. That these heights were uneconomic and would entail losses on the owners was one common objection; and fantastic claims were made about detriments to health, dangers to life, and street congestion. Experience has exposed the fallacy of these claims, but with the advent of extreme heights, ranging from 50 to 80 stories, the question of height economics became one that was entitled to serious consideration. Profitable ownership is essential to economic welfare.

Some architects have made investigations for their clients to determine the economic building height and have arrived at conclusions that do establish the plan and height limits. These studies, being the property of the owners, have not been made public, and the methods of investigation have not been disclosed. A disinterested and comprehensive investigation of the subject of the economic building heights has been made by W. C. Clark, Economist and Vice-President, S. W. Straus & Co., and J. L. Kingston, architect, with the collaboration of the most competent available experts. Clark employed what might be termed a "direct action" method. A definite site was selected and its value appraised. Under the New York code, a tower of unlimited height can occupy 25 per cent of the ground area, and it was evident that a large tower area was necessary to accommodate the required number of elevators and provide sufficient rentable floor area. In order that the height of the tower should not be limited by these considerations, a site 200 x 405 feet in size was selected. Plans and estimates of building cost, income, fixed and operating expenses were made of buildings

8, 15, 22, 30, 37, 50, 63 and 75 stories in height. Comparisons were made, and it was found that the law of diminishing returns set in above 63 stories in height.

The value of this work lies in the demonstration of certain economic principles that can be applied to sites of any size and value for the determination of the economic height of buildings. It also indicates the various factors that must be considered by the expert in the formulation of a correct conclusion. The architect and his engineers are the keymen, since everything except land value is controlled by the plan and the cost of construction. Building economics pertaining to value rather than cost of construction are receiving increasing attention, and their influence on architecture and architectural practice is evidenced by the frequency with which architects advise their clients not to engage in building projects that are not demonstrably profitable. In former days the architect merely planned and constructed as dictated to by the client. The architect is now, as he should be, the financial adviser of his client.

The subjects of the effect of tall buildings on public health, public safety and street traffic congestion are considered in the light of the latest *valid* data procurable, and many of the assumptions made by visionary idealists are shown to be just that,—assumptions. This book should be studied by architects, owners, bankers, realtors, building managers and contractors, because it is a clear and understandable exposition of the subject. Students of economics will find it a valuable source of information, and, if he will read it, the idealistic visionary will feel its sobering effect.

**THE SKYSCRAPER: A Study in the Economic Height of Modern Office Buildings.** By W. C. Clark and J. L. Kingston. 164 pp. 6 x 9 ins. illustrated. Published by the American Institute of Steel Construction, Inc., New York. Price, \$2.

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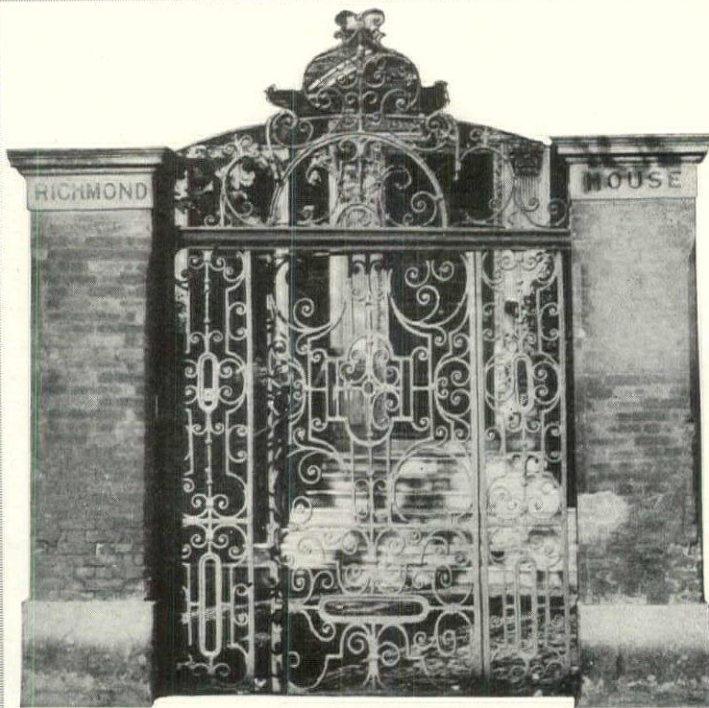
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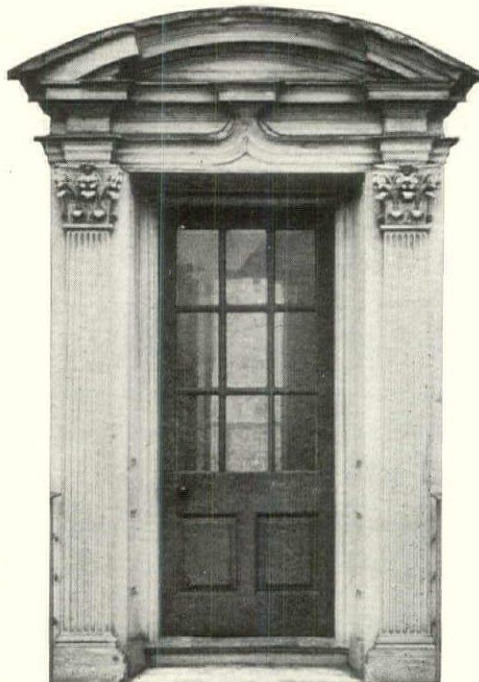


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## THE EDITORS' FORUM

### THE A. I. A. CONVENTION

COMPLETING his second and last year as President, C. Herrick Hammond, of Chicago, opened with a brief address of welcome the Sixty-third Convention of the American Institute of Architects in the Mayflower Hotel, Washington, May 21, 1930. The first day was devoted to a symposium on Contemporary Architecture, in which tradition, function, precedent and originality, as various sources of inspiration, were discussed vigorously. Advocates of both the new and the old were heard from. The first address was by George S. Howe, of Philadelphia, who daringly defended the originality and the disregard of precedent which characterize all so-called "Modern" work. This plausible plea for freedom in design was followed by a dramatic defense of architecture adapted or derived from historic precedent by C. Howard Walker, of Boston. Well known to all not only as an architect but also as a teacher of architectural history and design, this much beloved and vigorous dean of the profession strenuously and eloquently defended the cause of traditional architecture, stressing the unbroken sequence and relation of each succeeding style, and the natural continuity in architectural design throughout the ages. Earl H. Reed, Jr., of Chicago, talked about and showed views of recent buildings in the middle west which possess originality and freedom from precedent. Ralph T. Walker, of New York, far famed as one of the architects of several of the greatest and newest of the commercial towers on Manhattan Island, spoke conservatively and constructively in favor of modern design. Everett V. Meeks, the brilliant and efficient head of the Yale Architectural School, delivered a scholarly and convincing address in defense of the logical and justifiable continuance of tradition in architectural design. The many lantern slides with which Dean Meeks emphasized and illustrated the salient points in his address were of unusual interest and showed a far-reaching knowledge and a deep appreciation of the great architectural achievements of recent decades. Had judges been appointed to decide who won in this never-ending contemporary debate, the verdict would have undoubtedly been a tactful disagreement.

The remaining days of the Convention were taken up chiefly with routine business, the reading of the report of the Board of Directors and the election of officers. The evening of Wednesday, May 21, was given over to an animated discussion of "Advertising Architecture," and "Should the Architect Advertise?" As usual a great difference of opinion was found to exist on this very controversial subject, and no definite conclusions or results were arrived at. When architecture becomes a business and is no longer a profession, then will be the time to seriously consider the subject of advertising. The evening of Thursday was devoted to the interesting and important subject of Architectural Education, featuring the thoughtful and stimulating address of Leicester B. Holland. The Fine Arts Medal was awarded to Adolph

Alexander Weinman for achievement in sculpture, and the Craftsmanship Medal to John Kirchmayer for achievement in wood carving. On Friday evening, May 23, the Convention closed with a formal dinner followed by addresses by two members of the House of Representatives, Robert Luce, of Massachusetts, and Louis C. Cramton, of Michigan, and an address by Walter Pritchard Eaton, the writer and dramatic critic of Boston, after which came the announcement of elections, which showed that the destinies of the American Institute of Architects during the next two years have been entrusted to these well known and very efficient men: President, Robert D. Kohn, of New York; First Vice-President, Ernest G. Russell, of St. Louis; Second Vice-President, Horace W. Peaslee, of Washington; Treasurer, Edwin Bergstrom, of Los Angeles; and Secretary, Frank C. Baldwin, of Washington.

### THE FONTAINEBLEAU SCHOOL

ABOUT 125 American artists and art students will be registered at the American School of Fine Arts at Fontainebleau for the coming summer session, according to an announcement made by Jacques Carlu, director of the school and professor of architecture at the Massachusetts Institute of Technology, at the New York office of the Fontainebleau School at 119 East 19th Street. The summer session will begin on June 25 and continue for three months.

The Fontainebleau School, which was founded eight years ago through the initiative of the French Government and the Ministry of Fine Arts, as an outgrowth of the school for American soldiers established in France immediately after the Armistice, occupies one wing of the palace of Fontainebleau, and students are given free access to the palace collections and grounds. Administration of the school is in the hands of a French committee, and the enrollment of students is under the direction of a committee of prominent Americans, among them, Whitney Warren, Ernest Peixotto, Edwin H. Blashfield, Kenneth M. Murchison, J. Monroe Hewlett, James Earle Frazer, Benjamin Wistar Morris, Howard Greenley, John Mead Howells, Hermon A. MacNeil, James Gamble Rogers, Harvey Wiley Corbett, W. Howard Hart, and Ronald H. Pearce.

### THIRD CHURCH BUILDING COMPETITION

THE *Christian Herald* announces its Third Church Building Competition. This competition applies to churches already built which must have been completed within the last five years. Ten cash prizes will be awarded on the basis of photographs and floor plans to be entered by participating architects. More than six million dollars' worth of churches were entered in the 1929 *Christian Herald* Church Building Competition. The entries will be judged in Cleveland, October 8-12, 1930. Entries must be received by midnight, September 30, 1930.





An interesting group of San Francisco's newest buildings—all Corbin equipped.

(photo at top left)

WILLIAM TAYLOR HOTEL

Architect: Lewis P. Hobart  
Builders: Cahill Bros.

(second from top)

450 SUTTER STREET BLDG.

Architects: Miller & Pflueger  
Builders: Lindgren & Swinerton, Inc.

(lower left)

THE SHELL BUILDING

Architect: Geo. W. Kelham  
Builders: P. J. Walker Co.

(lower right)

SIR FRANCIS DRAKE HOTEL

Architects: Weeks & Day  
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- Merchants Exchange Building
- Commercial Union Building
- Financial Center Building
- Flood Building
- Phelan Building
- City Hall
- State Hall
- Fairmount Hotel
- Cathedral Apartments
- Huntington Apartments





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VOL. LII, No. VI

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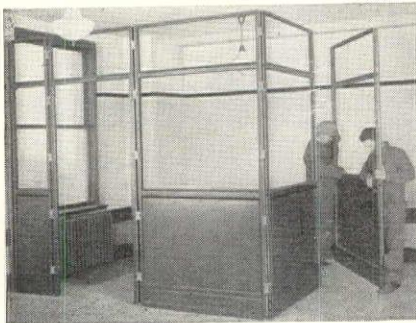


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# THE ARCHITECTURAL FORUM

VOL. LII

NUMBER SIX

JUNE 1930

## THE EMPIRE STATE BUILDING ORGANIZATION

BY

R. H. SHREVE

SHREVE, LAMB & HARMON, ARCHITECTS

In this, the first of the series of articles that will present in logical order the development of the Empire State Building, New York, Mr. Shreve explains the organization and coordination of the group that is functioning to produce, in record time, the tallest office building under construction.

ONCE, in those high and far off times when all women were beautiful and the brave deserved the fair, even the boldest of knights hesitated to challenge the ukase of one who called himself an architect. Truly the architect walked among the great, and none held his head higher. All wisdom was his. Omniscience sat upon his brow; omnipotence dwelt in the sweep of his hand. To the erectors and his menials he said, "Do thus and thus, and that quickly and without question"; to his king he said, "Thus have I decided, question not the wisdom of one to whom Art herself has whispered in profound intimacies the secrets she imparts only to her most favored."

Woe betide those who dared question his dicta. The great feared to be made little in the eyes of their peers as though knowing naught of Esoteric Harmonies. The lowly who came beneath the sway of his command, workers in stone or steel, artificers, expert foremen of the guilds, walked softly in his sight and with shut mouths. He exacted an unquestioning obedience, for he was the architect, and in him were all wisdom and authority.

\* \* \*

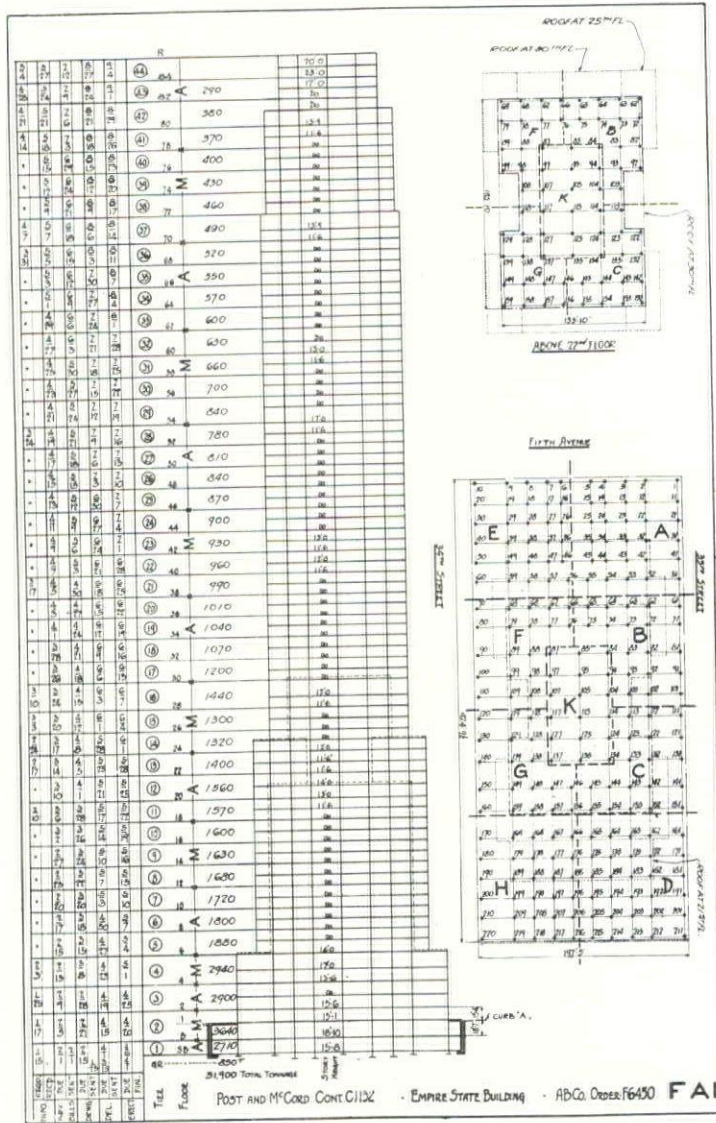
Today the world knows little of this legendary hero. The architect is still the leader in his art,—the coordinator of constructive forces, the master of his craft, but in the field of such intense activity as surrounds the construction of the great modern railroad terminal, in the lofty span and deep-seated base of the modern bridge, in the

towering commercial structures of our large cities, in all of these the architect has his role, but as part of an organization,—not as a despot.

That this must be true is evident if one studies the numerous questions which are presented in the course of the development and construction of any large modern business building. These problems must be dealt with through authority greater than the architect possesses; many of them require ability, experience and organization beyond the scope of a single professional unit,—or would, if undertaken by the architect's office, involve a duplication of effort and a loss of time too expensive to be tolerated in an operation requiring large capital investment.

The location of the plot to be built on, the use to be made of the structure, the nature of the space enclosed, and the time at which completion should permit occupancy, all affect the success of the project and should all be determined by the owner with the cooperation of his rental, management and operating staffs. Only the most thorough study of these steps in the program will pave the way to success. No experimenting is possible. Some help may be gotten from the records of others, from failures perhaps more than from successes; but once the decision is made and carried out there is no opportunity for reconsideration. The completed building has then to meet the test in the place where it stands; it must find or create a demand for its accommodations, or it must fail. It cannot move to a new





Schedule for the Structural Steel for the Empire State Building, giving dates of information and drawings required from the architects, mill orders, shop drawings, steel delivery and steel erection

market; only at great expense, if at all, can it be altered to a more marketable type, and even greater expense may be involved in its demolition if a new start is to be made. Location, use, character of space and time of building must be decided right the first time, and in these decisions the architect collaborates,—he does not control.

The heavy black pencil, long hair and a temperamental disposition might expect consideration in the study of the "design," but as Mr. Harmon laments in other pages of this issue of THE FORUM, even here the architect is beset with "influences." The owner and his practical advisers must test and pass upon the plan and its functioning; finance dictates the fenestration; rent rolls rule the "parti." The engineers, the builder and the Building Department impose material limitations affecting color and texture, while the zoning law and the budget cast their shadows over form and mass,—ancient domains of my Lord Architect—now jointly occupied by

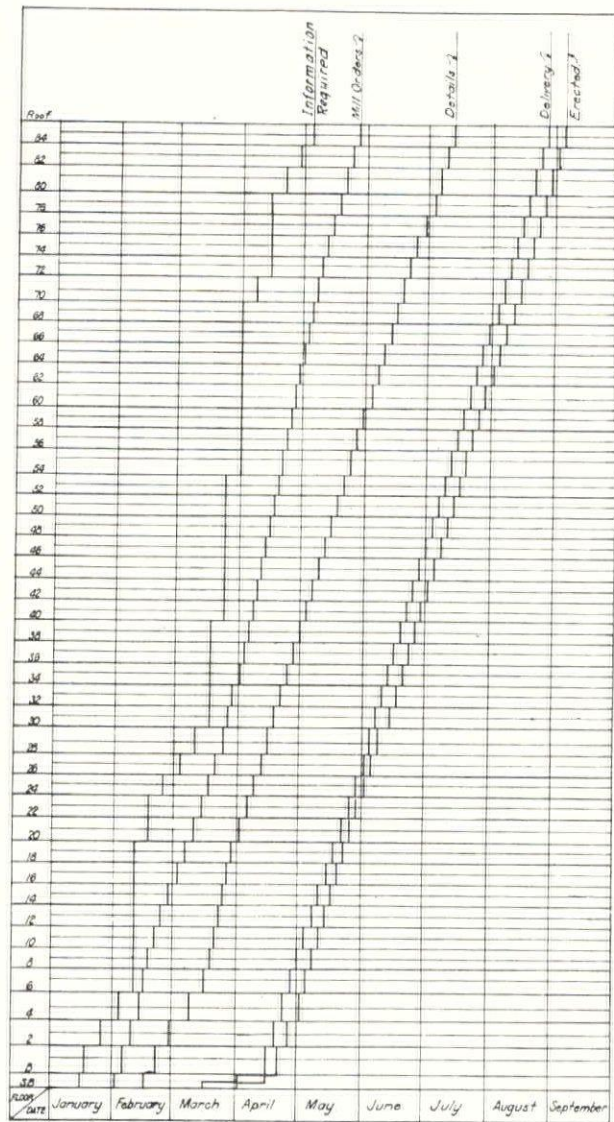
him and his allies in the name of Coöperation.

Specifications, if wisely prepared, express the consensus of opinion and experience of the architect, the builder, the engineers, and the owner. They govern the work in the field, not adversely to the builder in a contest between him and the owner, but instead as a record set up by the architect of the agreement between them. Banking arrangements, mortgage records, selling negotiations or leases may be based upon the architect's specifications, no longer a weapon of offense, but instead the basis of an amicable arrangement.

The execution of the work is a task requiring management of men and materials through the skill and resources of the builder and his sub-contractors working together in carrying out a schedule governing the advance and completion of the work. The preparation of this schedule must be based upon the collaboration of builder and architect, not alone as to its relation to the



Chart developed from that on the opposite page, by H. G. Balcom, Consulting Engineer, working with the architects, Shreve, Lamb & Harmon, to visualize the time-co-ordination required in connection with the designing, detailing and erection of the structural steel



work at the site but more particularly as to timing the preparation of information in the office of the architect well in advance of the need of it in the field. With such a schedule maintained, time is saved, confusion is avoided, expense is reduced for the owner as well as for the architect, and the "expediter" customarily appointed to harass the architect's office may be put to work calculating the bonus to be gained by completion in advance of the agreed date.

There is one other traditional task of the architect which may be done away with, and that is his job as policeman. There is no good reason why the builder should always be pointed out as the villain, nor is it true that the architect is always called upon to rescue the heroine. A building operation need not and should not be a tug-of-war, suspicion is not preferable to mutual confidence, and respect; sincerity and honesty may be attributes of the builder as well and not virtues deemed to be lodged only in the soul of

the designer.

\* \* \*

The group engaged in such an important operation should constitute a Board of Directors upon which should sit the owner supported by his bankers and real estate agents, the architect in company with his structural and mechanical engineers, and the builder whose subcontracting and material supply associates from time to time assist in the discussion of special problems.

It is under such direction that the Empire State Building is being designed and constructed. From the inception of the project the architects, Shreve, Lamb & Harmon, have worked closely with Former-Governor Alfred E. Smith, the president of the owner corporation, Empire State, Inc., and more directly with Robert C. Brown, vice-president and executive director of the owner's interests in this building. In the choice of the builders there was no competitive bidding, but Starrett Brothers were chosen by direct selec-



tion after a number of the more important general contractors had conferred with the Directors of Empire State, Inc., and the architects and lawyers sitting with them as their advisers in the several conferences. Consulting engineers have been selected by the architects, with the approval of the owners: Homer G. Balcom, designing the structural steel and foundations; Meyer, Strong & Jones for the heating and ventilating, the electrical work and the elevators; and F. J. Brutschy on the plumbing.

The interests of the mortgagee, in so far as they are related to the plans and specifications, are cared for by the office of D. Everett Waid, to whom documents governing the execution of the work are submitted for approval on behalf of the loaning company.

Inspection at the site is primarily the duty of the builders' representatives, aided by supervisory visits of the architects; but there is also a special inspection of steel maintained by the architects. There are a Clerk of the Works and his assistants representing the owners and bankers, and a representative of Mr. Waid's office acting for the Metropolitan Life Insurance Company.

Regularly, weekly and often several times a week, meetings are held at the architects' office dealing with the progress of the work, questions of design and construction, or policies of job management. Such a meeting of the owner, architects, builder and engineers, was held in November, 1929, when the sketches for the building were being set up. Demolition of buildings on the site was proceeding, and a program had to be prepared for placing foundations in February and setting steel in March, four months being allowed for the completion of architects' information, the preparation of steel designs by the engineers, the bidding and award of contract for the steel, and the fabrication, delivery, and placing of the first structural shapes. Only the most careful planning and thorough cooperation made this result possible.

It is intended to use on the exterior of the building a large quantity of chrome-nickel steel. Consideration of this construction feature involved the determination of the length and width of sheets which could be rolled and fabricated; the possibility of forming the sheet on the brake; the method of jointing and of bracing; the relation of the metal form to the exterior wall surfaces, the window heads, sills and jambs, and the spandrel; the means for attaching the metal form to the frame of the structure, as well as the finish and durability of the bright surface. Neither architects, builders nor subcontractors felt competent to deal with this complicated technical problem of construction without full consulta-

tion. Accordingly, after full preliminary discussion, an all-inclusive meeting was called, which was attended by representatives of the owner, the architects and builders, the subcontractors rolling the material, the metal workers who were to fabricate and those who were to erect it, and the inspectors who were to test all sheets at the several stages of preparation. This conference made possible decisions based on instant comparison of recommendations and the establishment of the responsibilities of all those involved. With the method of procedure set up and the tasks of each group defined, orderly and sound execution of the work became assured.

Decisions affecting the elevators required similar important meetings of the owner, architects, builders, and the engineers with the elevator manufacturers. A program never before attempted was under discussion,—a larger elevator installation, greater car sizes, heavier loads, higher speeds and longer travel, than any previously known had to be set up, designed and made possible of installation in a relatively short time. Steel design, foundations, hatchways, clearances and electric service were involved, and the coordination of every agency participating was essential to success. From the program developed through this series of conferences the Otis Elevator Company is now building and will install elevator equipment, which without the collaboration of the several groups in authority would not have been possible of completion in the time allotted for the execution of this work.

After the architects had completed their advanced preliminary drawings for the great building project, an outline specification was set up establishing the methods of construction and the selection and disposition of materials. This information was submitted to the builders, as well as to the owners, for detailed comment. Conclusions reached from this collaboration have governed the full development of the working documents, the letting of contracts, and the schedule controlling the execution of the work.

It is true in the building industry as elsewhere that "the sceptre falls to the hand that can hold it." Recognition of this principle does not belittle the architect or lessen his influence,—on the contrary, it brings him into a correct relation to those with whom he is working, places responsibility and authority where they belong, and strengthens the position of each man in the work for which he is responsible. Through such a relation the architect should do better work, inspire greater confidence and acquire greater prestige, not alone in his own profession, but—and this would seem of greater importance—in the building industry as a whole.



# DESIGNING MODERN OFFICE BUILDING

BY

ALBERT KAHN

ARCHITECT

THE office building of today is a typical development of the times. Its plan and design require familiarity with the demands of modern business for efficient, comfortable space capable of highly flexible sub-division. The average office space provided by many buildings of the past is no longer acceptable, as is proved by the large number of offices only a few years old, but already obsolete and deserted because of newer and better planned structures. It behooves the architect, therefore, to plan so as to meet the requirements of many years to come.

The problems involved in the solution of the modern office building are many and require not only careful consideration of plan and design, of construction, of mechanical equipment, and familiarity with land values, but also judgment on the part of the designers as to the desirability of location and the possible returns on the investment. In other words, the architect in charge is expected to be a sort of combination of trained designer, engineer, realtor, financier, and building manager.

**SITE.** The location has much to do with the success of an office building. Land with at least three exposures is preferable to that with only two, since this allows of a proportionately larger rentable floor area. Inside lots generally present a more difficult problem. The width of the property, especially, has an important bearing on its development. Prospective builders would therefore do well if before purchasing they would consult their architects and even have tentative sketches prepared to determine what percentage of rentable floor area is possible for the site.

Courts, where necessary, reduce the occupiable area and consequently the rentable space. In court buildings a rentable net area of 50 per cent of the lot area is rarely exceeded. On smaller lots, where courts are not required, this rentable area may be increased to more nearly 70 per cent. One thing definitely established is that the importance and rental value of a structure increase with its size. Tenants as a rule prefer offices in a large and outstanding building where great numbers are housed under one roof.

The exposure has much to do with the desirability of the site. North light is generally preferred by tenants, and next to this comes east

light. While as a rule the site is chosen because of its particular location, it is well to caution property owners about looking into soil conditions before purchasing, especially when several sites are under consideration. Excessive cost of foundation work may be saved thereby.

**PLAN.** In the planning of the office building, there are generally possible several solutions. Every effort will naturally be made to develop maximum rental area. At that, careful consideration must be given to the advisability of smaller but more desirable office spaces.

Modern practice tends toward shallower offices. Whereas, until recently, 26 to 28 feet was considered none too deep, offices of a maximum depth of 20 feet now prove to be in greater demand. Where offices face inner courts, they are best made not to exceed 16 feet in depth. As to their width, the generally accepted plan provides from 16 feet, 6 inches to 17 feet between centers of dividing partitions. This allows division of the space into two 8-foot offices. A very practical arrangement is a plan permitting widths of 16 feet, 6 inches alternating with 12-foot widths. This satisfies the large demand for small offices so common, especially in the best buildings.

In planning the corridors it is more economical to have them serve offices at both sides than offices only on one side. Corridors when fairly long should be not less than 7 feet in width. The entrance doors to offices should preferably be not opposite one another, but rather staggered, and placed not in the center of the office space but to one side. Office entrance doors should not be less than 3 feet, 4 inches wide, to permit of taking in desks and other furniture. Intercommunicating doors may be less in width. The side lights in corridors so generally used a few years ago are today done away with. It has been proved that they add but little light and that their extra initial cost and upkeep expense are unwarranted.

In many cases, it is found desirable to leave the office space quite clear of partitions, subdividing them later to meet the requirements of tenants. On the other hand, in some cases the space is divided and changes are made later if required. Many building managers believe the latter plan the better, in that even with the neces-



sary changes, the ultimate cost of taking care of tenants is less than that of subdividing later.

The occupancy of the ground and lower floors usually determines their plan. If the ground floor is to be divided into smaller spaces, a central office entrance may be used. If, on the other hand, a large banking or other institution is to occupy one of the lower floors, the office entrance may best be placed at one side. The center entrance usually means the location of elevators at the center of the building, which often proves an objection to the housing of a corporation requiring large and unobstructed space.

Buildings of large dimensions at the base, also those designed to conform to set-back requirements, frequently necessitate deeper areas in their lower stories. Such are often desirable for concerns where space for files, vaults, etc., is necessary and where they may be grouped in the center of the floors. In the Maccabees' Building in Detroit, for instance, the society occupies the four lower floors. It uses practically the entire area of the property. File and record rooms, vaults, reception rooms, etc., occupy the central space, while private offices facing the streets surround them. Above the fourth floor the building recedes for the typical office depth. The area of such deeper space should be carefully considered, for unless it can be used for specific purposes, it will be unrentable. Where shops are to occupy the lower floors, an adequate receiving room is essential and must be provided, either on the ground floor or in the basement. In locating the office windows, it is always best to have two per bay. This permits of easy subdivision.

**COLUMN SPACINGS.** On at least the typical office floors, columns are best placed in the corridor partitions. On the lower floors, it often proves advisable from a rental point of view to reduce the number of columns, even though this requires extra steel girders and more costly construction.

**HEIGHT OF BUILDING.** As for the heights of the respective floors, that for the lower stories must depend upon their occupancy. For the office floors proper, a clear height of 10 feet is ample. In many of the newer structures, even 9 feet, 6 inches has proved satisfactory. An extra floor is often made possible by this lesser height, especially when city codes limit the height of buildings. As to the economical limit for the height of buildings, this is a much mooted point. There is a certain advertising value in a building's being the highest structure of the town, though as a rule it remains the highest only until some one erects a taller building. A thoroughly practical decision can be arrived at only upon careful study of the problem and upon computation of costs and possible returns. The additional elevator space

required on all floors must not be lost sight of.

**MAIN ENTRANCE LOBBY.** Its design and location are of prime importance. Here there are established the quality and standards of the building, and its appeal and effect contribute in a large measure to the success of the building. It should be as spacious as the plan will permit and must bear a definite relation to the traffic.

Placing of shops off an arcaded form of corridor, especially when entrances are to be had from several streets, is often desirable, adding greatly to the rental returns of the building. The main corridor of the Fisher Building is 24 feet in width. It has shops along one wall, and on the opposite wall there are display windows for the use of the shops on the second and third floors. An important stairway to the second floor, and especially to the basement, is often desirable. This, however, is determined by the type of occupancy. In many structures, the stairways serve merely for intercommunication between floors, and they are treated as simply as possible.

**ELEVATORS.** Particularly important to the ultimate success of the building are the number, type and location of the elevators. Marked advances have been made in recent years in elevator machinery, safety appliances, door operating mechanism, etc. The best equipment is necessary in the modern building. The great height to which we build is made possible only through the development and perfection of the modern elevator, and to economize here is bound to prove a serious mistake. Determining the number of elevators required is a matter needing careful computation. Modern practice demands that the departing interval for each group be not greater than 25 seconds, this in some instances being reduced to 20 seconds. The character of occupancy must be considered in deciding on the required number of cars to provide such intervals, as must also be the height of the building, the loading and unloading time. No rule of square foot area can determine the number of cars required. Every building presents its own problem and must be independently analyzed.

The system of placing elevators in pockets or alcoves, grouping them for local as well as express service has proved very practical. A bank of six elevators is preferable to a bank of greater number. Naturally, elevators are best placed where they sacrifice the least amount of exterior wall space with outside light. Windows in elevator shafts are undesirable, nor need shafts be plastered or otherwise finished, because closed cars are now much used. It is generally conceded that no matter what may be the size of the building, elevators are best grouped rather than placed at different points. This does not mean that special groups for special purposes are not



to be placed where most convenient for the quarters they are to serve. Building managers as a rule prefer solid, rather than glazed doors for elevator entrances. One or more elevators arranged to stop at every floor must be provided for night and Sunday service, to assist in the moving of freight after regular working hours, and as an aid to the regular freight elevator.

In a 38-story office building recently designed for Detroit, an economical elevator scheme was developed. On the ground floor, six elevators are grouped on each side of a 22-foot lobby. On the upper floors, this 22-foot space is reduced to an 8-foot corridor, the rest being utilized for stairs, toilets and other utilities. This arrangement has made possible a remarkably large net rentable floor area. In buildings of great heights, elevator speeds up to 1000 feet per minute are common. Such speed necessitates the use of the most improved type of elevators, and closed cabs to reduce the unpleasantness of high speed travel.

**SERVICE ROOMS.** The number and location of toilet rooms must depend upon the plan arrangement adopted. They are preferable on every floor rather than concentrated on one or a few. This saves much intercommunicating elevator service. Often men's toilets are placed on two succeeding floors, with one women's toilet on every third floor. This means one women's toilet to two men's throughout the building. The number of fixtures required is determined by the codes in the respective cities and must in any event be adequate. Outside light is desirable though not essential in toilet rooms, since they should in any case be mechanically ventilated. Toilet rooms should never open off public stairways but off main corridors. In some recent office buildings, even the wash basins have been concentrated in rooms adjoining the toilet rooms, doing as much as possible without individual basins for the different offices. It would be unwise, however, not to make provision for supplying the latter.

It is unnecessary to dwell upon the need of a sufficient number of janitors' closets of adequate size and conveniently located on every floor, and meter closets, pipe shafts, ample space for vent stacks to provide for possible future requirements, janitors' locker and toilet rooms, liberal provision for store and supply rooms, carpenter shop, paint shop, barber shop, and other conveniences required for management of important structures.

**MECHANICAL EQUIPMENT.** The mechanical equipment of a building, such as heat, light, telephone system, ventilation, plumbing, etc., has so much to do with the success or failure of a building that it is needless to say that only the most competent engineering skill should be enlisted. Failures in mechanical equipment may mean constant upkeep and endless expense.

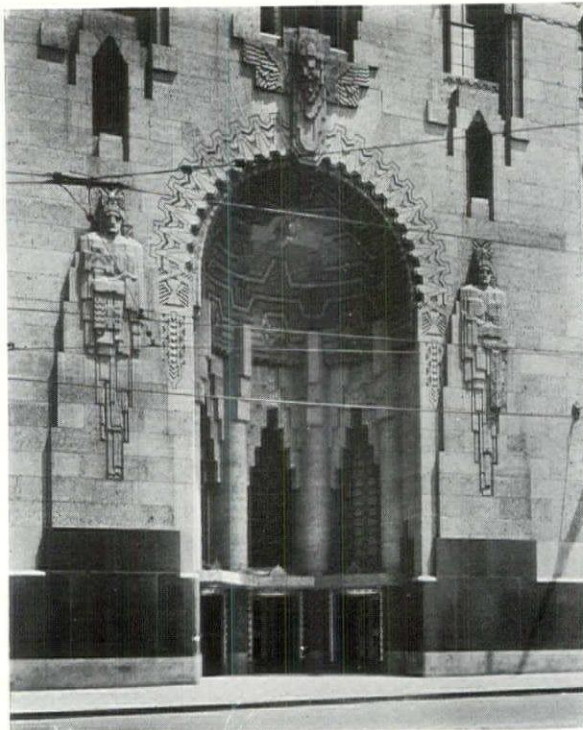
**FINISH.** Simplicity everywhere is essential. Only materials easy of maintenance should be used. This does not mean that the finish be without character. Indeed, the closest attention to design in such details as elevator cabs, signals, trim, hardware, office directories, signs, etc., will have a strong influence on the character of the occupancy of the building. A minimum of wood-work should be used. Most corridors should have marble wainscots, and these are best kept practically flush with the plaster above. Marble floors are practical for corridors and terrazzo is often used. For office floors either battleship linoleum, rubber or cork tile glued directly to the cement finish are probably the best to use. Careful attention must be paid to the finish of the toilet rooms. Marble or glass is practical for wainscotings and toilet stalls, and impervious tile for the floors.

**DESIGN.** The modern office building seems destined to produce a typical American architectural type. Its structural functions, honestly and directly expressed, must inevitably result in a distinctive architecture. The skyscraper, having no precedent, must needs establish its own. We stand upon the threshold of a new era. Unfortunately, with the abandoning of all adherence to classicism and precedent, there is a tendency to indulge in eccentricities. This is to be regretted. Good design, as ever, must be a matter of mass, proportion, and rhythm, and of simplicity, repose, good taste in the use and disposition of ornament, and the selection of materials. Deliberate striving for the bizarre and the unusual, merely to be different, is sad. Established canons may not be violated without producing anarchy in design. The use of the uncouth and the repulsive to obtain the sensational results inevitably in artistic failure. Now, more than ever, is needed a sensible restraint by the designer.

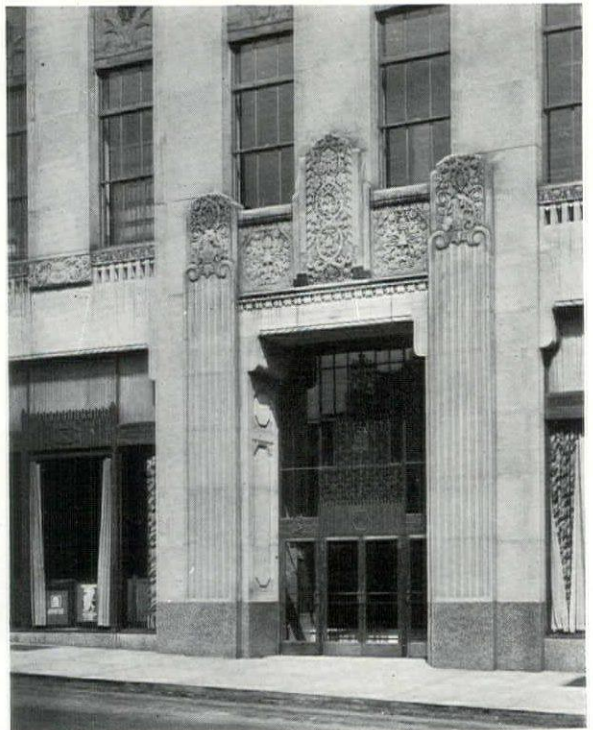
**IN GENERAL.** An article on the planning of the modern office building would be incomplete without calling attention to the desirability, in many cities at least, of providing garage space for the tenants' cars. By taking care of this need, some of the most recent structures have proved successful in renting space when others built at the same time have been slow in gaining tenants.

Another matter well worth bringing to the attention of the designer of the modern office building is the service rendered by the National Association of Building Owners and Managers. This is invaluable in procuring the best possible results. The society appoints a group of experienced men to carefully consider from all angles the architect's proposed plan. By their method there is obtained, not merely the opinion of one expert, but that of a number of men, each of whom expresses himself freely on essential points and in view of his particular experience.

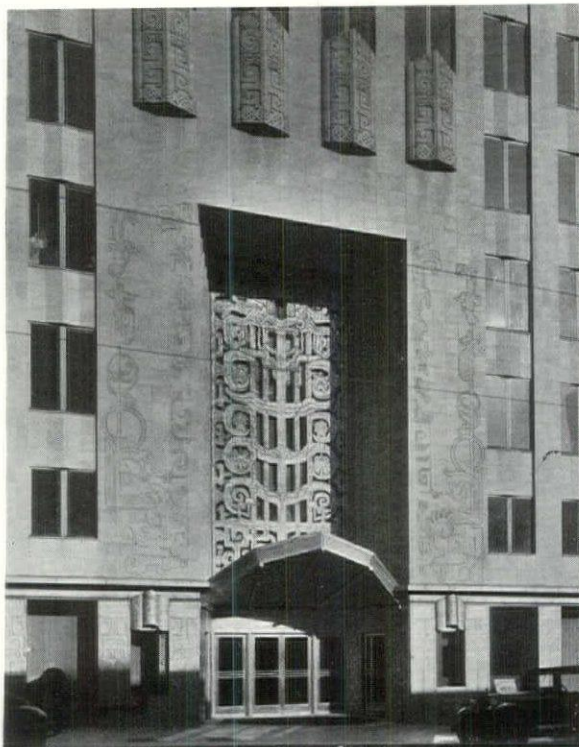




Griswold Street Entrance  
Union Trust Company Building, Detroit  
Smith, Hinchman & Grylls, Architects



Main Entrance  
Ohio Bell Telephone Company Building, Akron  
Mills, Rhines, Bellman & Nordhoff, Architects



Entrance in Stone and Metal  
Four-fifty Sutter Building, San Francisco  
S. R. Miller & T. L. Pflueger, Architects



Marble and Metal in Lobby  
The Integrity Building, Philadelphia  
Green & Lavelle, Architects



# DESIGN IN OFFICE BUILDINGS

BY

HARVEY WILEY CORBETT

CORBETT, HARRISON AND MAC MURRAY, ARCHITECTS  
NEW YORK

**I**N their lines, their masses, their proportions, many of the new office buildings are excellently designed. But much thought might well be devoted to the possibilities of developing new materials for walls, and to a wider and more coherent use of color. Color, of course, should not be applied in squares and bands (like an afterthought as it were); color should be employed as an inherent part of the building's design. Perhaps it may eventually prove more satisfactory to have buildings of a neutral shade by day, flooded with harmonizing hues by night. It is not at all inconceivable that the future may bring a substance for walls that admits sunlight but while permitting those on the inside to see out does not allow those on the outside to see in, a substance that by day may be of a hue which dirt will not seem to affect, and that by night will scintillate with colors projected by electric lamps.

Finally, the office building of the future, with one or more city squares for its base, may well be an office building only in part. These buildings

may carry to its logical conclusion our present tendency to distribute urban populations vertically. They would then be planned in layers. The present sidewalks would be raised above the street level, thus increasing the traffic capacity of the street and separating pedestrians from motors. From the sidewalk to the first set-back would be office space for business. The first set-back would have a constant cornice line which would be a second sidewalk; on this level, where people could move conveniently about on their errands, would be retail shops. Rising from this district would be a residence tower orientated to receive the maximum of sunshine for its inhabitants, and containing promenades and terraces amid fresh air and sunshine. The dark cores of the buildings would hold elevators and provisions for such forms of indoor recreation as theaters, gymnasiums, and swimming pools, for which artificial light suffices. In such buildings the residents would have concentrated for their convenience the facilities they need most.

## THE TREND OF OFFICE BUILDING DEVELOPMENT

BY

ATLEE B. AYRES

ATLEE B. AYRES, ROBERT M. AYRES, ARCHITECTS  
SAN ANTONIO

**O**NE of the most serious problems that have to be taken into consideration today with our multi-storied buildings, and one that requires much careful thought, is that of providing a satisfactory means of rapid exit from the building. Smoke-proof stairways and fire escapes are all right for six- and eight-story buildings, but for higher structures some other type of exit will have to be developed, so that people may reach the street level as quickly as possible. A press report that was published recently said that a test made in the Woolworth Building in New York regarding time required to descend from the top story of the building to the street level, clearly demonstrated the impracticability of stairs of any character being used to empty the building in case of panic. A satisfactory chute type of exit might be developed that would be feasible, which would get the occupants out of the building in a safer and more rapid manner.

Regarding the use of color on the exterior of our buildings, there is no reason why a certain

amount of bright, clear color, if used in harmonious combinations, could not be used in both the lower and the uppermost stories in a successful way in order to give more individuality to our designs. Color notes are very often lost by selecting some mixed colored pattern which is very pleasing at short range, but when it is in the building and seen from a distance, the color effect is lost. Therefore, when colors are used, they should be in bold, large, concentrated masses so that they will not lose the color effect. A practical method for deciding on the selection of colors is to have a cardboard panel prepared in color and placed at a high point to study the effect.

It is to be hoped that the past efforts toward originality in design, and the methods of borrowing from the past are evolving a new form of expression in the architecture of America. There is no country in the world today that has made such a wonderful stride in design and construction in buildings of every character as are seen in the United States.



# THE DEVELOPMENT OF THE OFFICE BUILDING SINCE 1924

BY

THOMAS E. TALLMADGE

TALLMADGE & WATSON, ARCHITECTS, CHICAGO

WE have had skyscrapers for 44 years,—so long that the Tacoma Building of sacred memory and many others wore the habiliments of the Romanesque Revival. Before 1924, the opinion of all of our European critics and of the majority of the citizenry was that the skyscraper was hideous; at best it was regarded as a commercial necessity, a working part of the vast mechanism of American business. The taste of McKim, the grandeur of Burnham did little for them, and the pleadings and the sarcasm of Louis Sullivan fell on deaf and scornful ears. One discouraging feature was the fiasco that the Beaux Arts men made of the skyscraper. *Les diplomes* were young, they were well educated, and they cer-

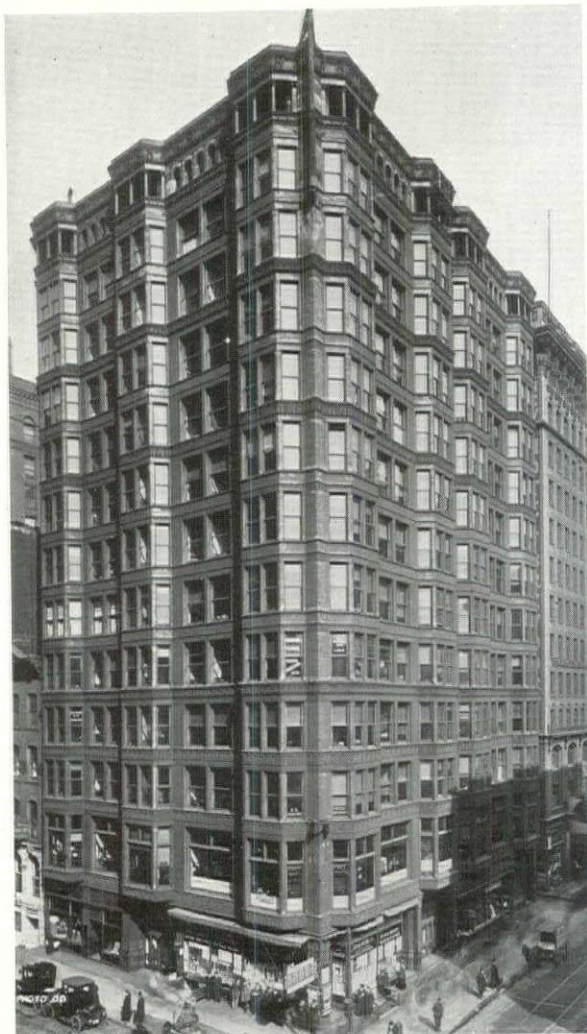
tainly were not lacking in self assurance; but all the cartouches and all the consoles in the ateliers couldn't redeem the skyscraper. Something might perhaps be done with the Gothic, we thought, but after all, as Burnham said, "you can't improve on the Romans." To the New York Brahmins, the evolution of new forms or new ornament to meet this new condition was a joke, the uncouth ravings of the wild and woolly West.

Events came, much too rapidly. They were, first, the World War. That destroyed our illusions and our reverence (especially for dogma). Second, the New York Zoning Law of 1916 gave us the setbacks; and, third, the *Chicago Tribune* competition of 1922, with its gift of the Saarinen second prize design, presented us with a symposium of the world's best thought and an inspired solution. The Decorative Arts Exposition of 1925 cannot be ignored. For better or worse, a wealth of new detail which we had not the time, patience and ingenuity to evolve, was laid at our doors.

Architecture today is in the same position as painting in the sixteenth century. It is an integral part of modern life. Its cathedrals are its skyscrapers. The ecstasy of an Abbe Suger standing in his new choir of St. Denis is akin to the pride of the magnate or thrill of the stenographer as they raise their eyes from the maelstrom of the street to those unbelievable heights scaled by man's genius, and paraphrase the prophet by saying, "What hath man wrought!"

The re-birth of the skyscraper came in the complete abolition of the cornice and excrescent detail. Classic columns, chased out of New York's thoroughfares, are reported to have taken a final refuge on the top story of the New York Central Building, where they hang by the skin of their acanthus leaves. The unprecedented forms that the skyscraper has taken are so lovely, as witness in the proposed Empire State Building in New York, that we have no reason or desire to look immediately for further change.

This seems to indicate that the skyscraper of the immediate future will discard solidity for lightness and sobriety for gaiety. Instead of the rocky cliff pressing on the earth, it will be the sunbeam or the rainbow, hardly touching the ground. Beautiful in its color and strength, in the rays of the mid-day sun, with nightfall it will be a disembodied spirit, glowing and flashing in the flooded light of its myriad reflectors.



Architectural Photo Co.

Tacoma Building, Chicago, Ill.  
Holabird & Roche, Architects



# THE TREND OF MODERN COMMERCIAL ARCHITECTURE

BY

H. J. B. HOSKINS

OF HOLABIRD & ROOT, ARCHITECTS, CHICAGO

**M**ATERIALS and methods of application offer a field for intensive study, and the increasing number of new discoveries has to be met with changing ideas as to their use. It is more than likely that the building trades as we know them today will become changed from their present form to a considerable degree. Since the introduction of steel there has been a slow but persistent tendency toward the elimination of the work of the masonry trades, at least above ground. This will undoubtedly continue, and will probably include plastering and other items.

Buildings will tend to become lighter in construction. They will be fabricated in shops with parts delivered ready to be assembled in place rather than built. Floor slabs having sheet steel decks with any finish desired on top, reinforced and fireproofed below, and built-in conduits and other utilities may be delivered in sections, hoisted and welded in place. Possibly this idea may be applied to enclosing walls through the use of unit slabs, containing windows, conduits, steam piping and all the mechanical requirements arranged for standardized service, completely finished inside and out.

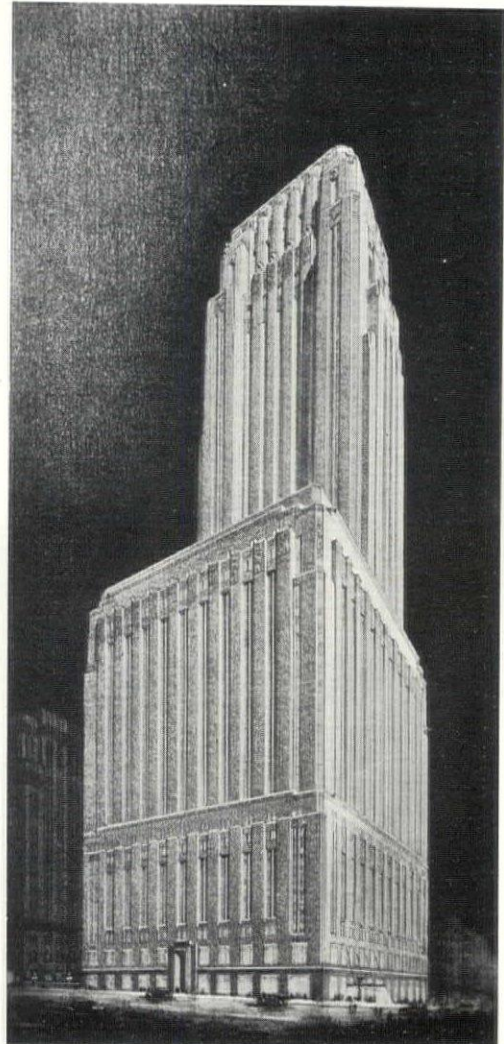
An exterior may be of rustless metal, possessing possibly a porcelain enamel finish, or a sprayed-on coat of paint material yet to be discovered. The inside of these wall slabs would

in all probability be finished to match the interior sectional partitions and present surfaces of wood veneer, or paint of varying characteristics and beauty, eliminating the troublesome problem of what to do with wet plaster. The fireproofing of steelwork may be entirely of asbestos block, or a similar substance applied over rust-proof paint. These considerations may permit of the erection of structures free from the influence of weather conditions, capable of precise fabrication and assembling within the limits of the most exacting of time schedules.



First Section as Built

Michigan Square Building, Chicago, Holabird & Root, Architects



Photos Henry Fuermann & Sons

Perspective of Proposed Structure



## VERTICAL OR HORIZONTAL DESIGN?

BY  
JOHN MEAD HOWELLS  
NEW YORK

**I**N designing a skyscraper I believe in a composition of verticals, because by "skyscraper" I mean a building several times as high as it is wide. But I also believe in a composition of horizontal bands for long, low stores or apartment houses, as they are built in Holland and Germany.

For a tall building the simple composition of verticals, which some like to call modernistic, seems to me "indicated," as the doctors say, for the design of steel cage buildings. It is the simplest and most straightforward clothing in masonry of the steel cage itself, for several reasons.

First, the verticals are accentuated just as in the steel cage. The vertical members persist. The emphasis is definitely on them, while the horizontal members are built in between them.

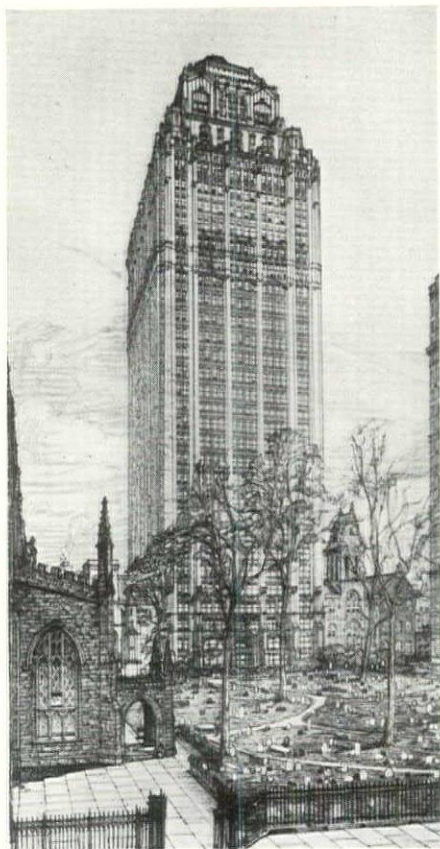
Second, the grouping of vertical lines holds the windows in place naturally in the composition, instead of resorting to the old fashion of piercing a flat wall with windows, as a waffle iron is pierced with squares.

Third, the verticals can terminate naturally against the sky, as they reach their various zoning levels, in the same way that a growth of pine

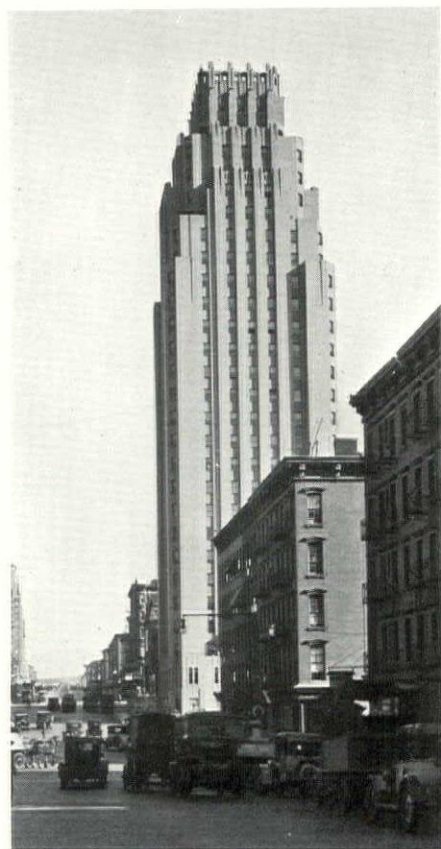
trees or a palisade or cliff ends against the sky.

How unnatural was the old straining for horizontal bands and for heavy cornices far up in the air where they could serve no purpose other than that of obstructing the light! How fortunate to leave behind us the belief that a vertical skyscraper must somehow be made to look like a horizontal Farnese Palace! It is as impossible as the problem of that charming woman in Miss Hyatt's book, who wrote to the paper: "I am a small brunette. What shall I eat, and what exercises shall I take to make me appear a large blonde?" Also, it is a pleasure in itself to design in this simple new manner, which is not yet a "style" nor yet out of a book.

I have believed for many years in designing tall buildings without horizontals, as is shown by the accompanying view of Howells & Stokes' Trinity Tower of 1913. The Panhellenic Tower of 1928 shows the vertical idea better developed, although not an office building, and the *Daily News* Building just completed on 42nd Street, by Raymond M. Hood and myself, is an extreme case of verticality reduced to a simple expression, shown on Plate 139, page 791.



Trinity Tower, New York, 1913. Howells & Stokes, Architects



Panhellenic Tower, New York, 1928. John Mead Howells, Architect



# THE ATTITUDE TOWARD THE DESIGN

BY

IRVING K. POND

POND & POND, MARTIN AND LLOYD, ARCHITECTS  
CHICAGO

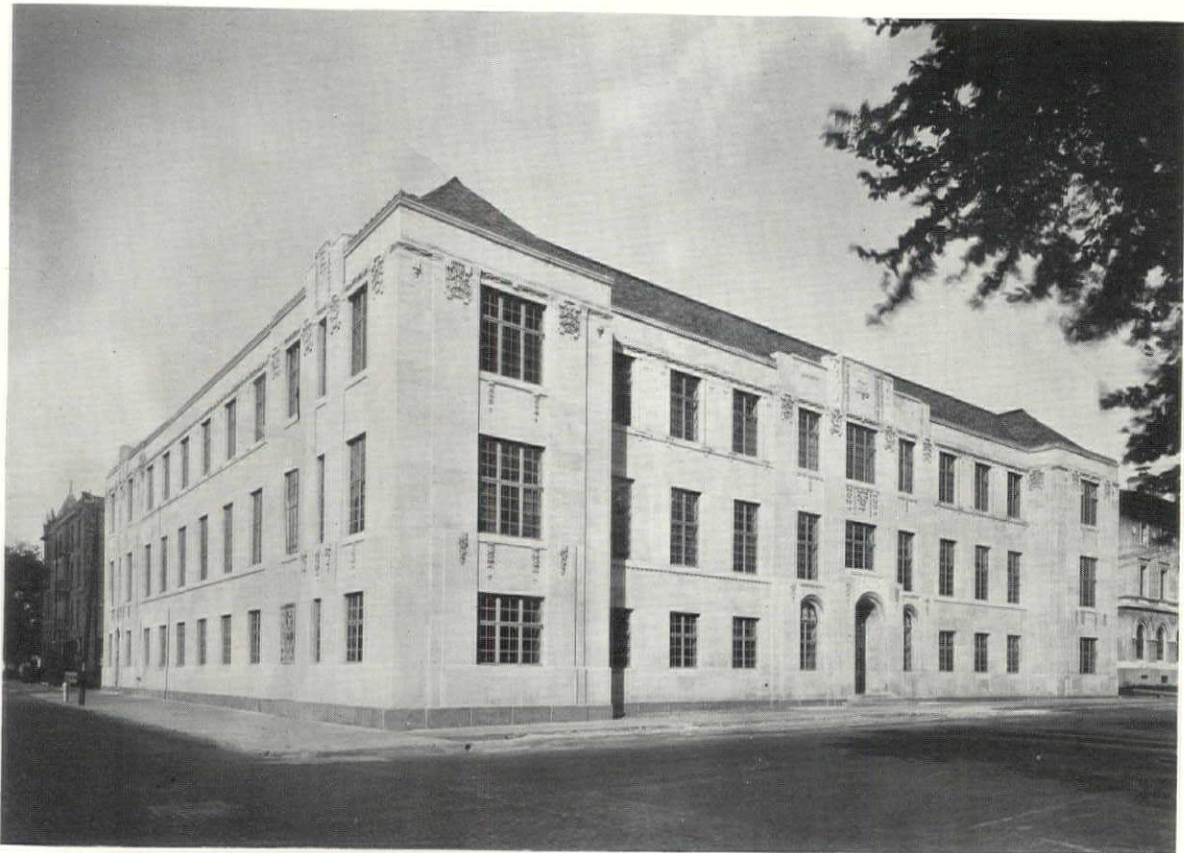
THE appreciation of art calls for the exercise of certain faculties of the mind; for repose, for contemplation, for a sympathetic study of the parts and their synthetic up-building into the whole. The appreciation of art depends upon a leisurely human attitude toward life and environment such as is not customarily associated with business. There is an art side to business as there is to science and mathematics.

There is at present a tendency toward over-elaboration in office building design, a tending to ignore the charm of dignified simplicity and to overlook its psychological effect, this perhaps more internally than externally, but evidenced throughout. It is of no especial advantage to the individual tenant of a building rented for numerous businesses or types of business or professions to enter his particular office space through an elaborately designed public vestibule, lobby and elevator car. The over-elaboration of the public spaces, if noted, would tend to bring the under-

elaborated individual space into violent contrast.

The economic phase is in evidence here. Standards of living are getting higher, and this only in the money sense. This rapid pace is not bettering our morals nor enhancing our love of beauty or our appreciation of art which is a love of beauty symbolized and translated into material forms. The rapid pace is causing us to strive to earn more to expend upon that which is intrinsically worthless.

Design which transcends urbanity is not only undesirable but shocking to the social sense. Each one owes it to society to make the product of his labor compatible with society's truest aims, its highest ideals. But he vulgarizes society who indulges in the bizarre and over-wrought. The commonplace and the conventional will not meet society's truest aims. Newness and variety tempered with restraint and guided by wisdom will touch a sympathetic chord in a well ordered social system and will go far toward moulding it.



The Royal Neighbors of America Supreme Office Building, Rock Island, Ill.  
Pond & Pond, Martin and Lloyd, Architects



# THE BASIS OF DESIGN PROGRESS

BY

EDWIN HAWLEY HEWITT

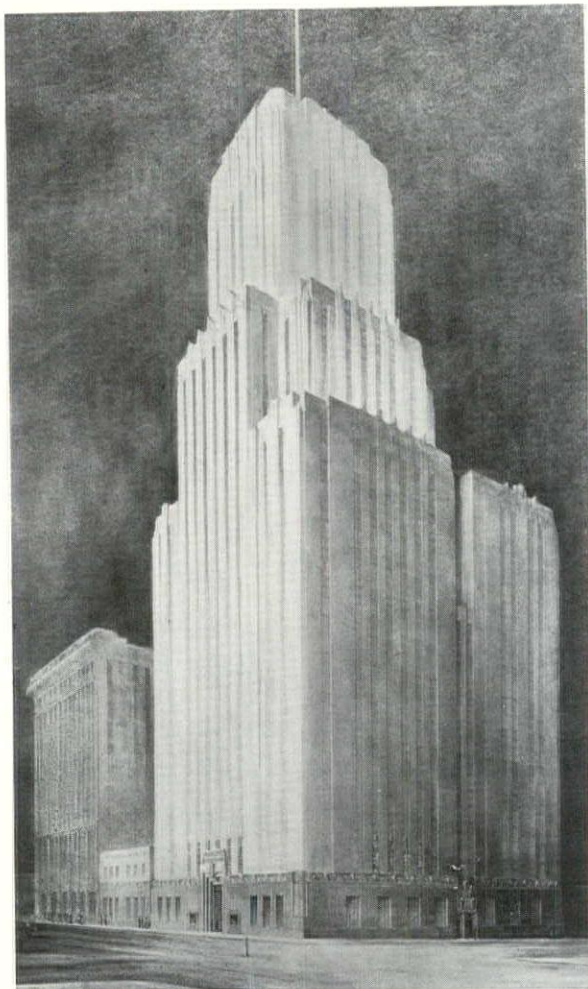
HEWITT & BROWN, ARCHITECTS, INC., MINNEAPOLIS

SURELY the public is becoming trained or educated to appreciate form, color and line. There is evidence on every hand that such is the case. To be sure, the public has its blind side. It is altogether too complacent about many other ugly sides of our civic development. There has been constant stimulation to research, and the inventive abilities of the American people have provided ways and means of rendering these buildings safer, the capital investment more stable, and the structures more beautiful. It has become a real and a most important task to the architect to follow up conscientiously the result of all these researches and investigations, so bewildering in number,—new uses of electricity in power and lighting; new uses for glass, and better manufacture; new alloys of metal,—improvements all along the line.

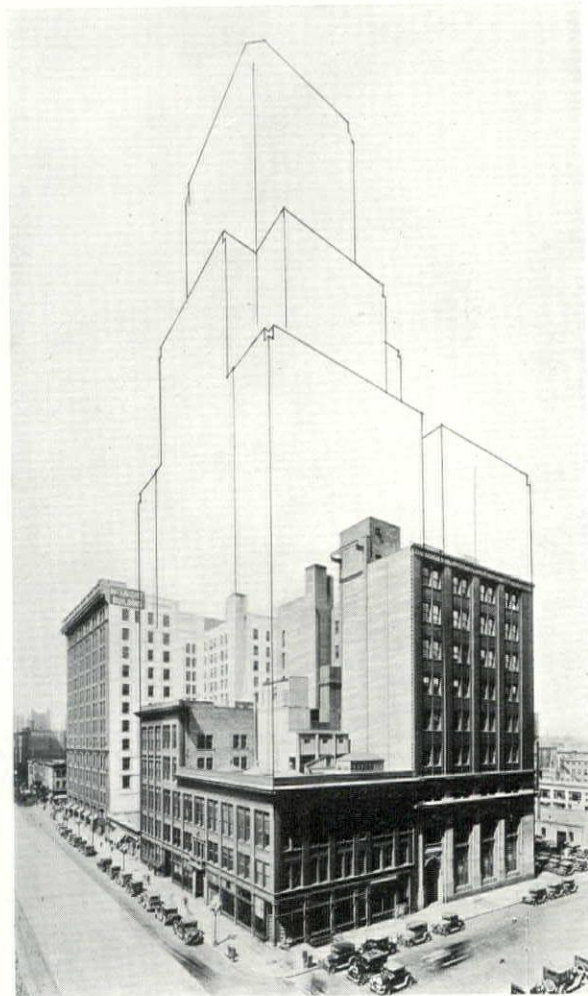
Continued progress will depend not only on the ability of our architects to think clearly;

they must have the saving common sense to make haste slowly, while consolidating and maturing all along the line. The sheer mass and monumental quality inherent in the bulk and height of these buildings have endless stimulation for designers.

I have left to the last a reference to the plan, which obviously is basic. The architect starts to plan as soon as he becomes aware of the economic conditions to be met, the site to be handled, the use to which the building will be put. What I mean by the plan, however, is more comprehensive than this. The plan will really determine the scope of his ideas, and whether it will permit him to realize the full possibilities of his design. In other words, let the architect so plan and compose his building that it is consistent throughout, and not an assemblage of ill-related parts. Totality of impression can be achieved only by complete planning from the inside out and not vice versa.



Photos A. E. Kairies



Northwestern Bell Telephone Co., Minneapolis  
Hewitt & Brown, Architects



# CIVILIZED ARCHITECTURE

BY

ELY JACQUES KAHN

THE FIRM OF ELY JACQUES KAHN, ARCHITECTS  
NEW YORK

THE architectural characteristics which are indicative of our time are the rapid development within a few years of the plan, character and quality of large buildings. In general, these are found in the greater usability of the plan and its adaptability to other and profitable changes in occupancy; in improved and more suitable general service which is conducive to the health and comfort of the occupants, the most important of which is adequate elevator equipment; and in the use of better, more durable and attractive structural materials such as impervious, self-cleaning brick, polished granite, stone, and rare marbles. Larger rather than small buildings are inevitable in large urban centers,—they are more economical. The invention of a non-explosive motor fuel will allow the parking of all motor cars within the building, and provisions will be made for handling all freight and merchandise within buildings, removing the present sidewalk and street obstruction and traffic congestion. Real

property will be assembled in large areas of one or more city blocks for large building units. These will be more uniform in appearance and economical in service. A keen competition and the demands of financiers will result in increased efficiency and adaptability of plan, a high standard of both external and internal appearance, and attractive lobbies and public spaces.

It is inevitable that architecture, which to the public consists principally of external appearance, will also keep step with the progress and change of plan and structure. Design is a pure derivative of function. Fenestration, depth of daylighted floor areas, courts, zoning requirements and other economic factors will control the design. After a survey of contemporary architecture throughout the country, it is obvious that this is the accepted basis of design,—it cannot be otherwise and possess the elements of progress and change. It is inconceivable that purely academic adaptations can longer be applied.

## THE MODERN OFFICE BUILDING

BY

TIMOTHY L. PFLUEGER

J. R. MILLER, T. L. PFLUEGER, ARCHITECTS  
SAN FRANCISCO

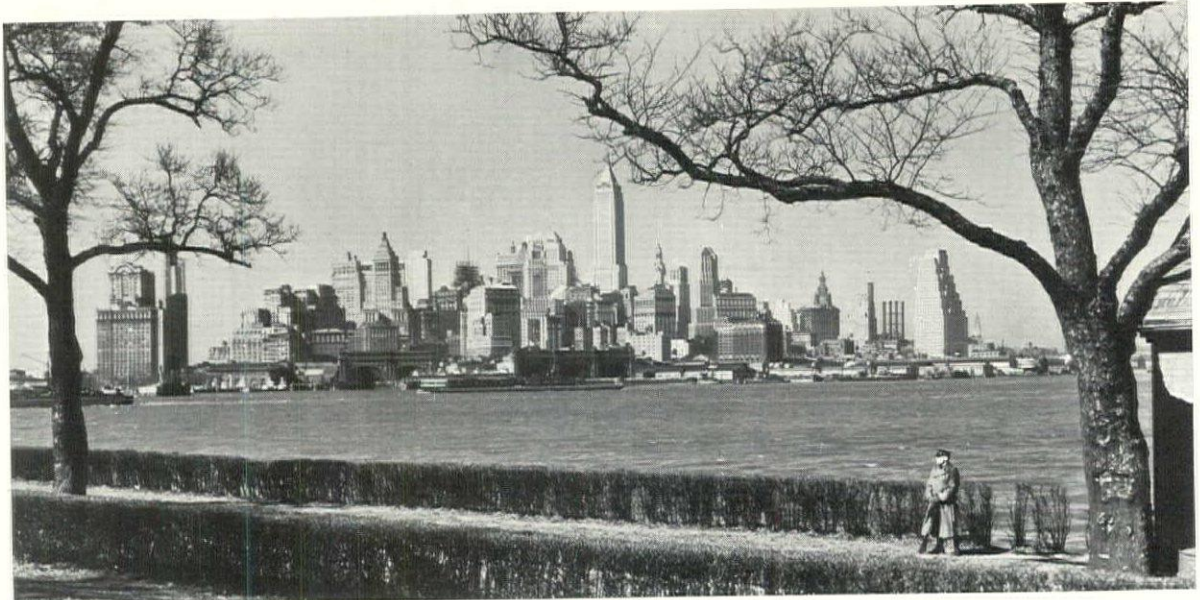
THE modern office building is either an investment for revenue in rental alone or it is built to house and advertise a business, in which latter case the owner often concedes a decrease in revenue for special architectural appeal. In either case the problem is practically the same. No intended contribution to beauty in design can live if it is based on a sacrifice in the enjoyment or usefulness of the interior. We no longer start out by selecting a dress of antiquated and inappropriate style with which to clothe our modern frames of steel, we still persist in using the same masonry devices or forms, and merely treat their surfaces in the "modern manner."

Until the steel men, by adding the necessary elements of stiffness, fireproofing, anti-corrosiveness and pleasing surface finish, give us steel which will allow us to put up buildings as battle-ships are built, we must be content to use masonry

walls and floors in conjunction with steel.

We should build our structures as homogeneously as possible, making the walls an integral part with the steel frame, not a "dead," inactive load or encumbrance, but a living resistant to earthquake and wind stresses. Our materials interior or exterior, should be integral in the structure,—surface treatment of the structural mass rather than loose applications of finish,—a living skin, as it were, over the flesh and bones, not clothes, whose styles change rapidly and must be frequently renewed and expensively maintained. We buy our surface materials only for their skin. The most suitable masonry facings from the standpoint of cleanliness and maintenance are those having a glossy surface, at present either ceramic or polished stone. But we are beginning to recognize glass as an asset, and to develop a mass in which the glass takes form.





Erving Galloway

## THE SPIRES OF GOTHAM

BY

KENNETH M. MURCHISON

THE one thing in the mind of every foreigner on his first visit to our shores is New York's skyline. They rave over it, they hurl carefully worked-up rhetoric in its direction, they beat their breasts and exclaim that there is nothing in the world like it! All of which makes Chicago exceedingly wroth. Chicago is sore anyhow, because it's not on the seacoast and therefore can't get a first-hand impression.

Outside of a few hotels uptown, all our lofty spires are designed for commercial uses, for the garnisheeing of money from the masses and for the accommodation of the frenzied business men who want to be either in the Wall Street district or in the Grand Central zone.

There was a time when the Standard Oil Building and the Bankers Trust Company edifices were outstanding ones. Now the Bank of the Manhattan Trust Company rears its seventy-odd stories a few furlongs further aloft than anything else downtown and only a short time ago a new one was announced for Wall Street, a little pee-wee to contain one hundred and five stories. We will believe this Grimm's Fairy Tale when we see it up, for it is projected for the corner of straight Wall and crooked Pearl Street, down in the district where the smell of roasting coffee permeates the noonday traffic and where tarred rope may be readily bought; where lousy mariners sign up ships' articles for out Australia

way and where the sugar brokers bewail the low price of that commodity down in the Antilles.

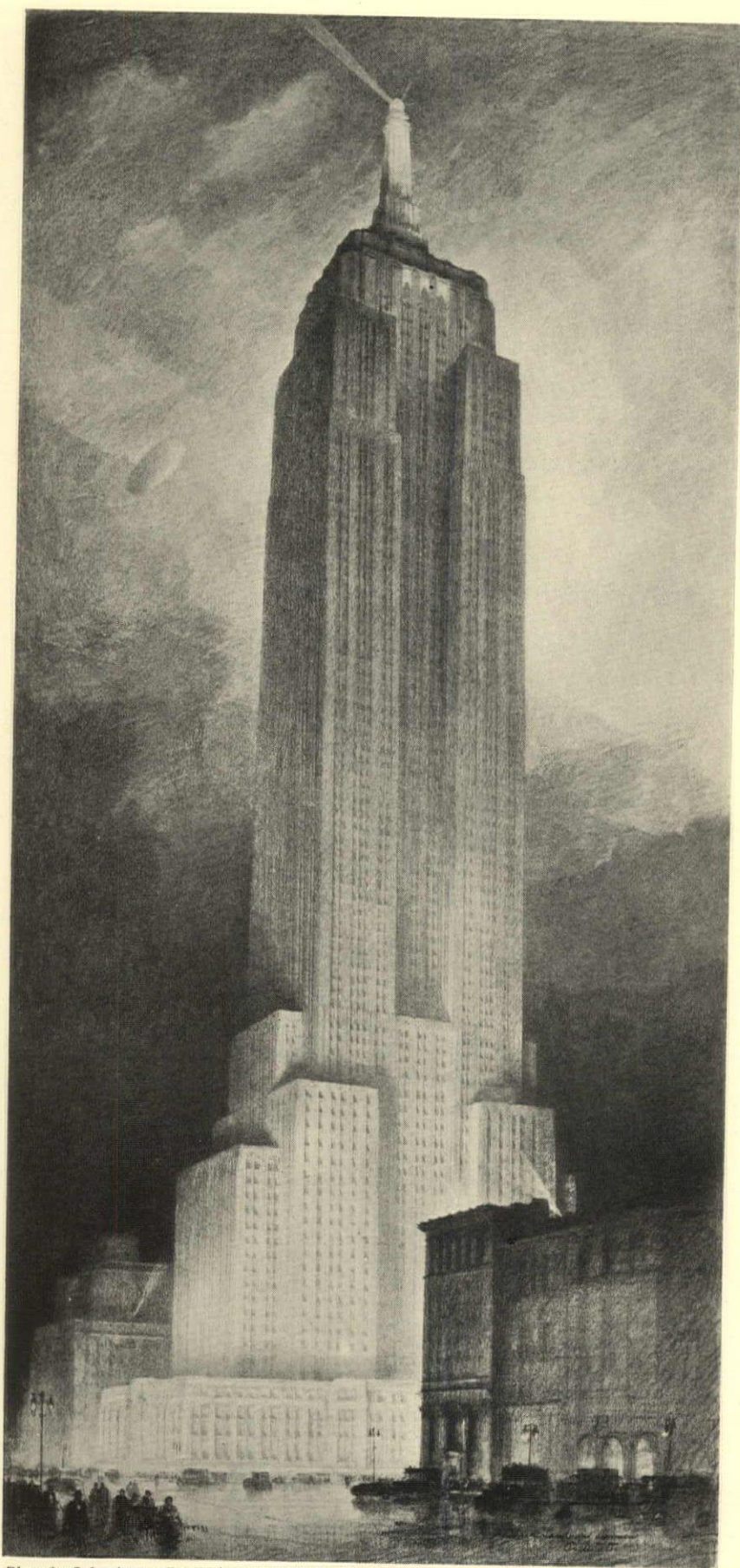
What is the matter with our office buildings? Nothing, my dear sir, absolutely nothing. They are coming along in fine shape and soon we will have a good one. They are getting more window space and less ornament; more ventilation and less dirt; more elevators at a reasonably fast speed and more rents and less vacancies.

It does not seem to me that the elevator people have made the progress they should have made. True, they can go faster, but so can a mine hoist. The cars are flossier but so are Simmons beds. They operate themselves by push buttons but they have been doing that in Paris for years (and at about 25 per cent of New York prices, too). No great genius has come out, however, with something revolutionary in the way of an entirely new system of vertical transportation. No doubt many have tried a vertical moving sidewalk but as no one ever put over a success in a horizontal moving sidewalk they have all given up the vertical idea without a struggle.

Two or three cars in one shaft has often been suggested but we understand that the Otis Company does not want to try it out in real life. In one of the new Wall Street projects the architects stated that they were going to try out a double-decked car, although to my mind it would

*(Concluded on page 878)*

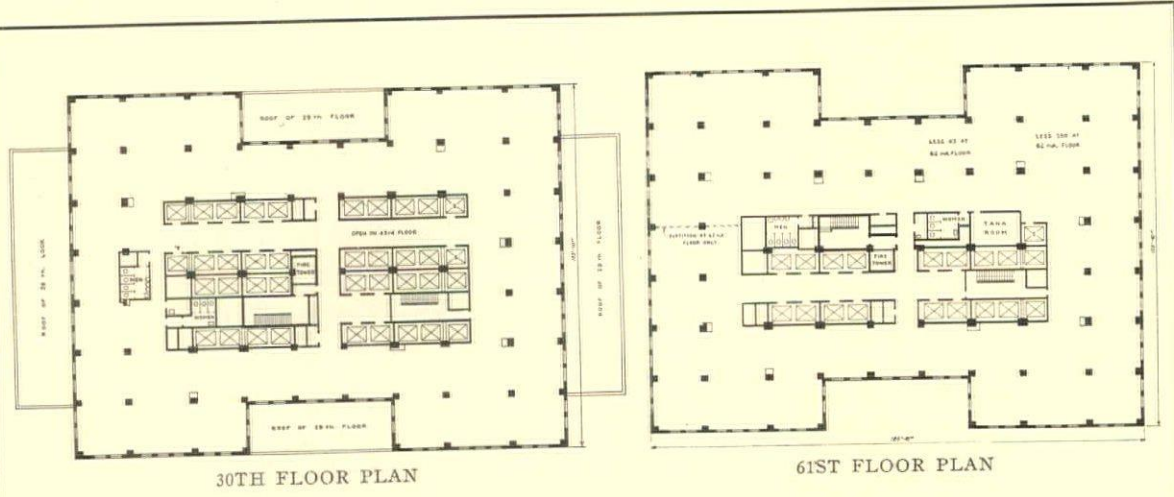




EMPIRE STATE BUILDING, NEW YORK. SHREVE, LAMB & HARMON, ARCHS.

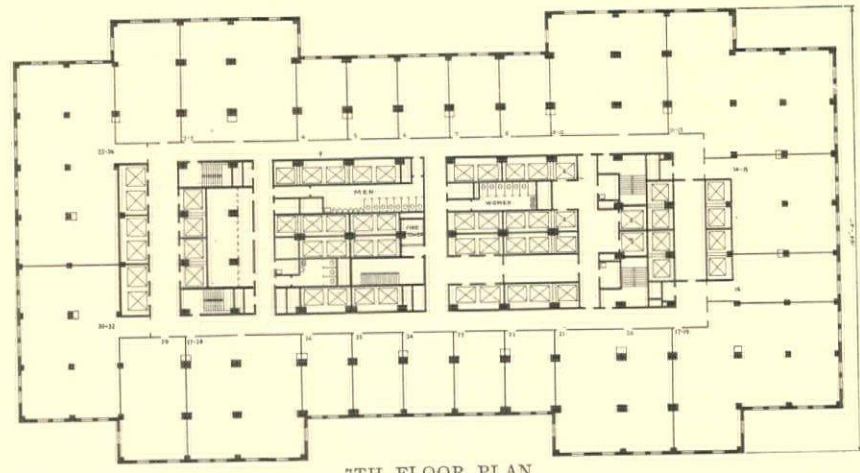
*Photo by Juley from a Rendering by Hugh Ferriss*



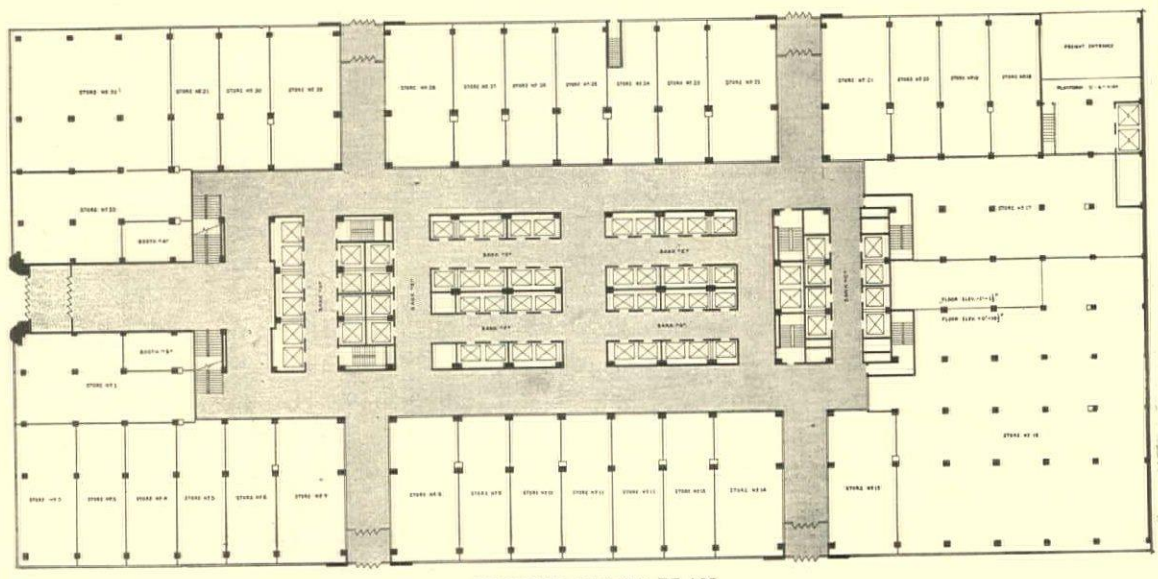


30TH FLOOR PLAN

61ST FLOOR PLAN



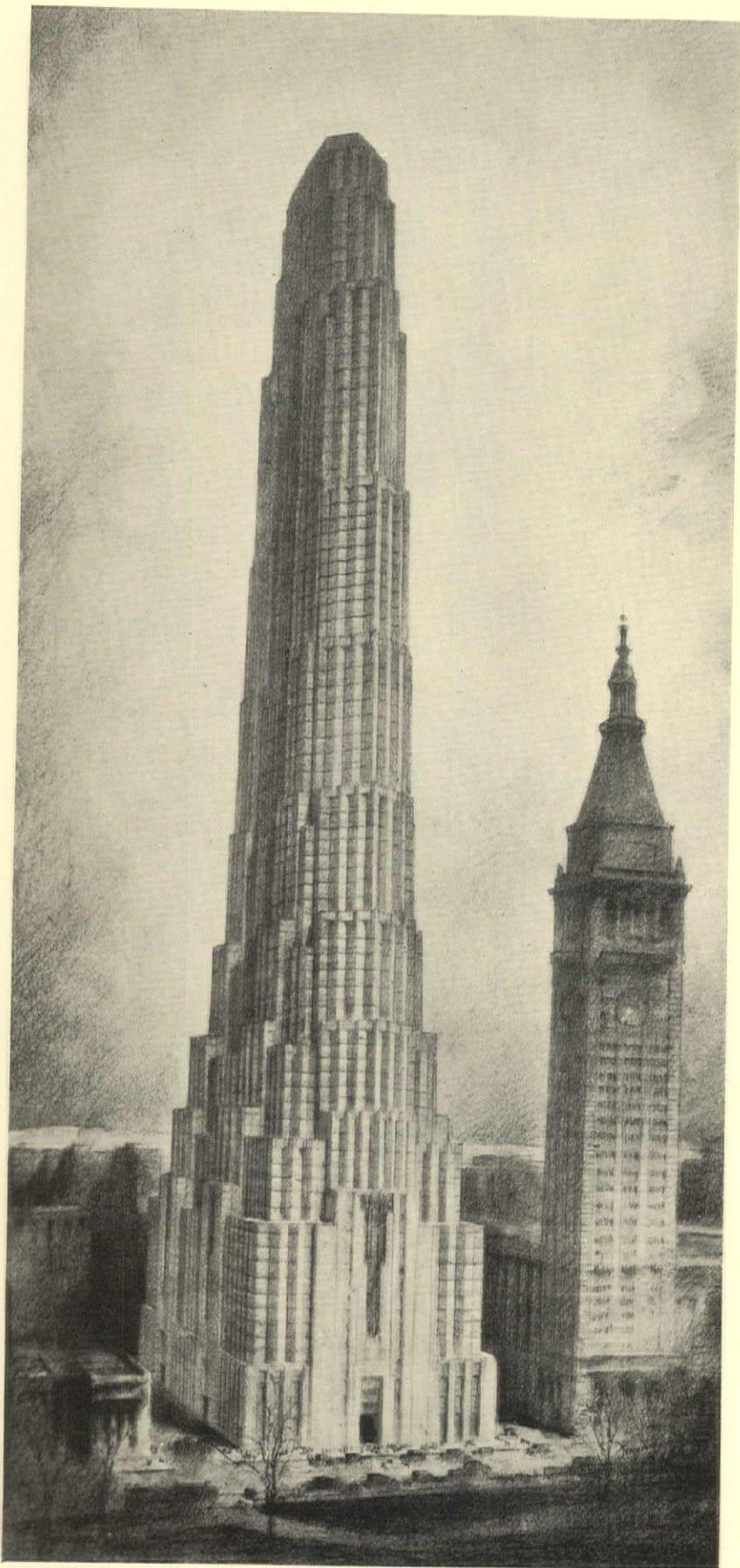
7TH FLOOR PLAN



GROUND FLOOR PLAN

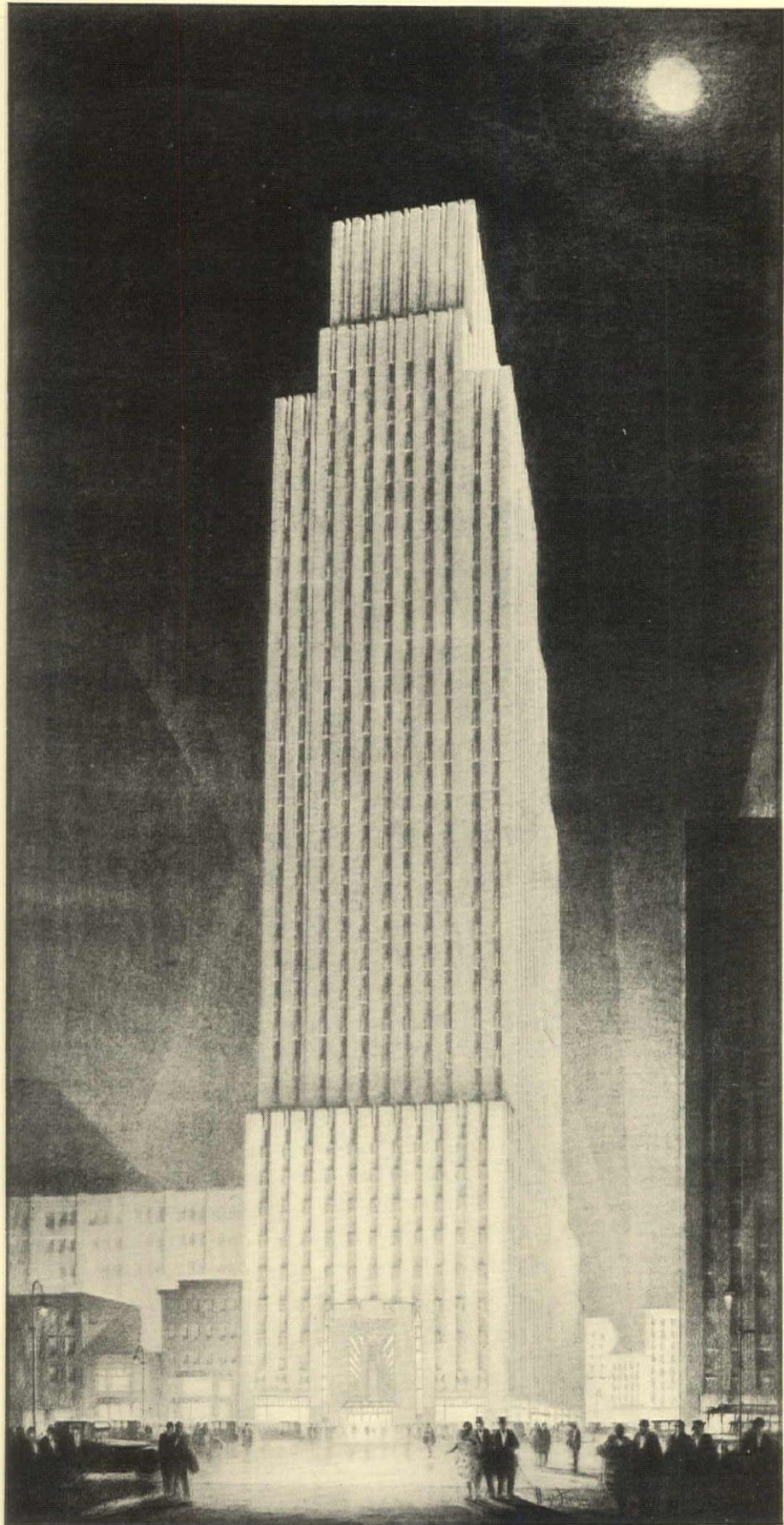
EMPIRE STATE BUILDING, NEW YORK  
 SHREVE, LAMB & HARMON, ARCHITECTS





PRELIMINARY SKETCH  
OF PROPOSED BUILDING,  
NEW YORK. D. EVERETT  
WAID & HARVEY WILEY  
CORBETT, ARCHITECTS

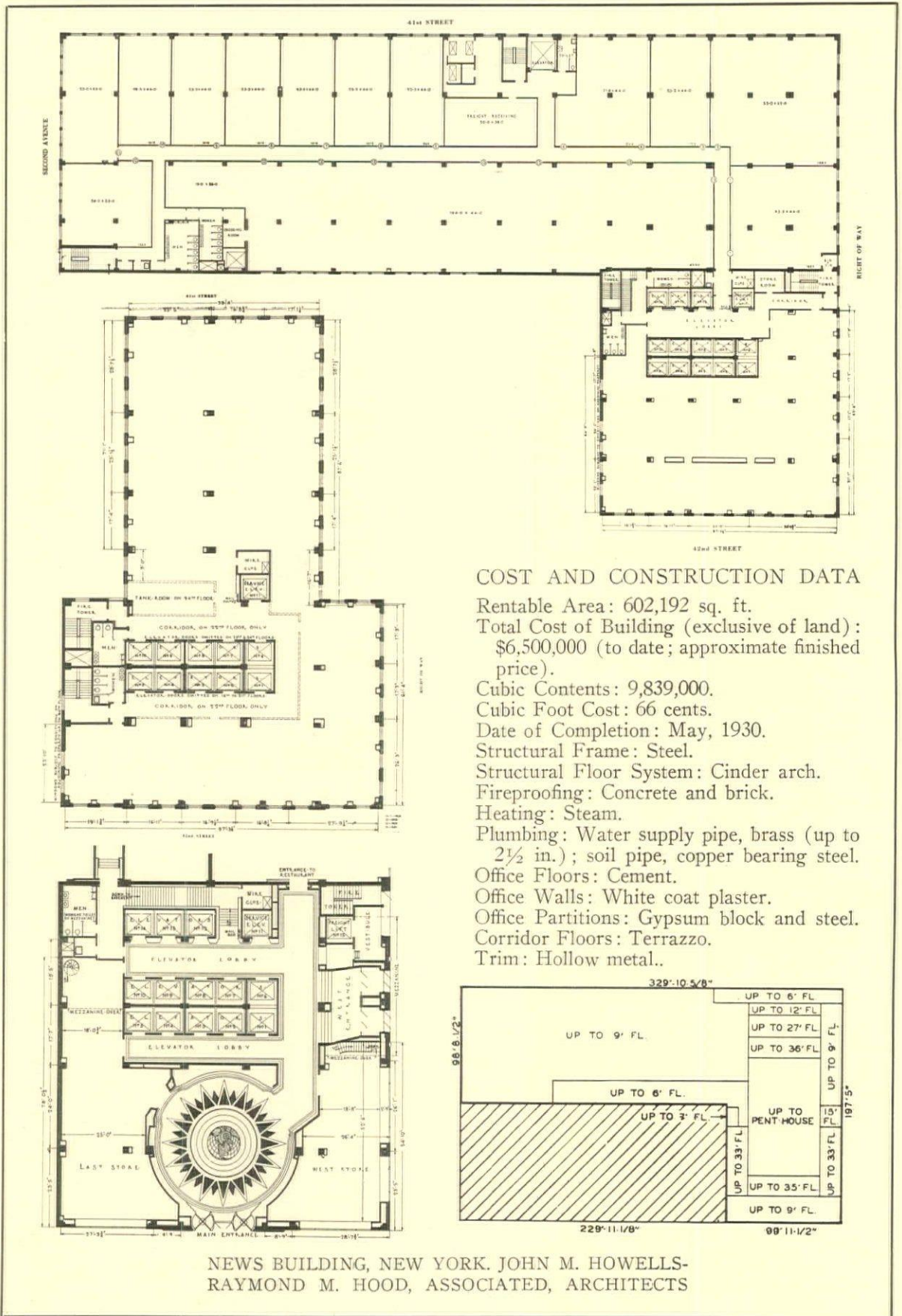




NEWS BUILDING,  
NEW YORK. JOHN  
M. HOWELLS, RAY-  
MOND M. HOOD,  
ASSOCIATED, AR-  
CHITECTS

*Photo by Dryer from a Rendering by Hugh Ferriss*



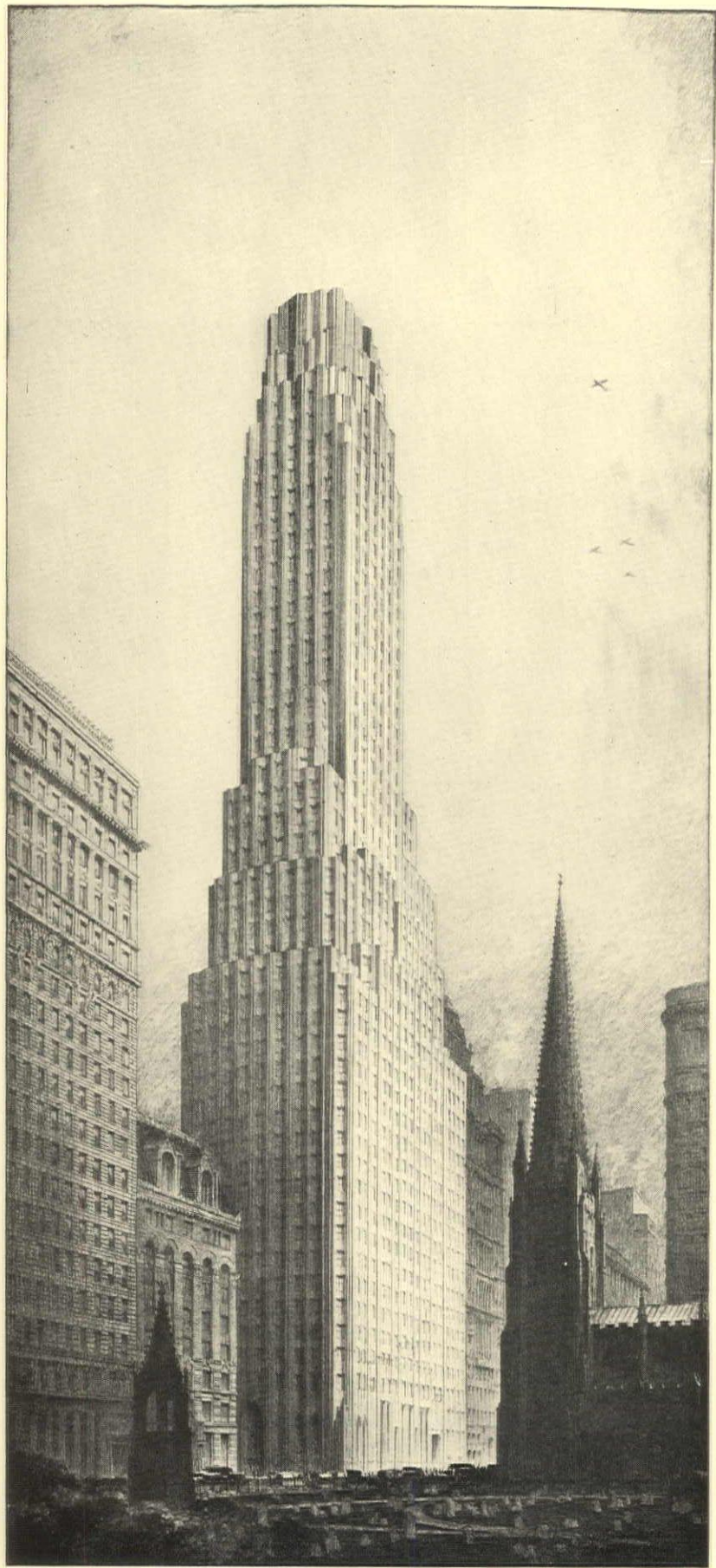


**COST AND CONSTRUCTION DATA**

Rentable Area: 602,192 sq. ft.  
 Total Cost of Building (exclusive of land):  
 \$6,500,000 (to date; approximate finished price).  
 Cubic Contents: 9,839,000.  
 Cubic Foot Cost: 66 cents.  
 Date of Completion: May, 1930.  
 Structural Frame: Steel.  
 Structural Floor System: Cinder arch.  
 Fireproofing: Concrete and brick.  
 Heating: Steam.  
 Plumbing: Water supply pipe, brass (up to 2½ in.); soil pipe, copper bearing steel.  
 Office Floors: Cement.  
 Office Walls: White coat plaster.  
 Office Partitions: Gypsum block and steel.  
 Corridor Floors: Terrazzo.  
 Trim: Hollow metal.

NEWS BUILDING, NEW YORK. JOHN M. HOWELLS-  
 RAYMOND M. HOOD, ASSOCIATED, ARCHITECTS

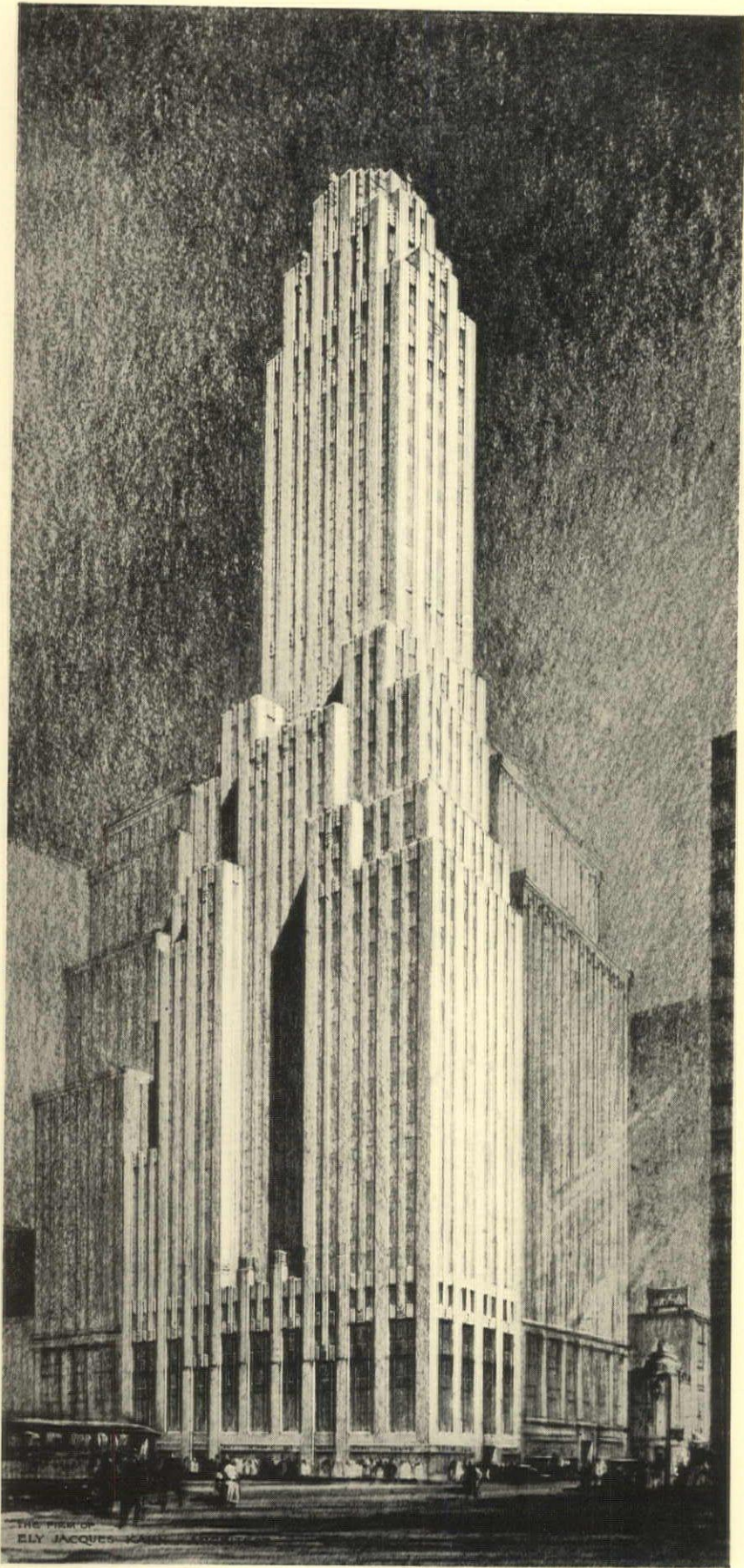




BUILDING FOR IRVING  
TRUST CO., NEW YORK.  
VOORHEES, GMELIN &  
WALKER, ARCHITECTS

*Photo by Palmer Shannon from a Rendering by Chester B. Price*





BUILDING AT SOUTH-EAST CORNER OF BROADWAY AND 41ST STREET. FIRM OF ELY JACQUES KAHN, ARCHS.

*Photo by Palmer Shannon from the Architects' Rendering*



### CONSTRUCTION DATA

Rentable Area: 237,945 sq. ft.— { Office space, 229,865 sq. ft.  
Store space, 8,080 sq. ft.

Cubic Contents: 4,278,390 ft.

Date of Completion: May, 1931.

Structural Frame: Steel.

Structural Floor System: { 4 in. Cinder concrete arches } —between beams.  
3 in. Fill

Fireproofing: Cinder concrete, clay block, and brick.

Heating: Moderator.

Plumbing: Brass water supply pipe, galvanized wrought iron soil pipe.

Ventilation: Supply and exhaust.

Elevator Type: Signal control.

Lighting Type: Semi-indirect.

Radiator Type: Wall-hung.

Office Floors: Cement.

Office Walls: Gypsum and hard white plaster.

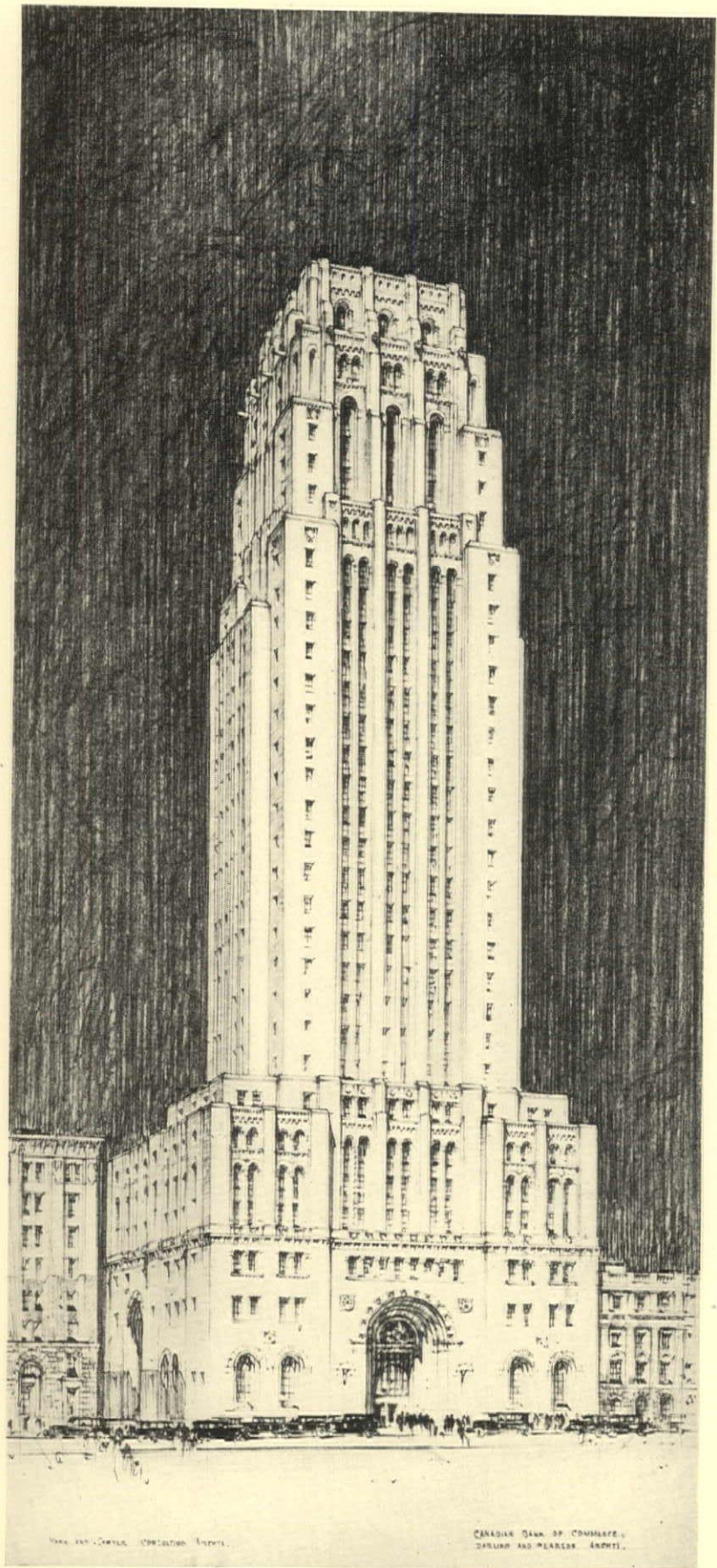
Corridor Floors: Terrazzo.

Windows: Stock steel.

Trim: Steel.

BUILDING AT SOUTHEAST  
CORNER OF BROADWAY AND  
41ST STREET. FIRM OF ELY  
JACQUES KAHN, ARCHITECT

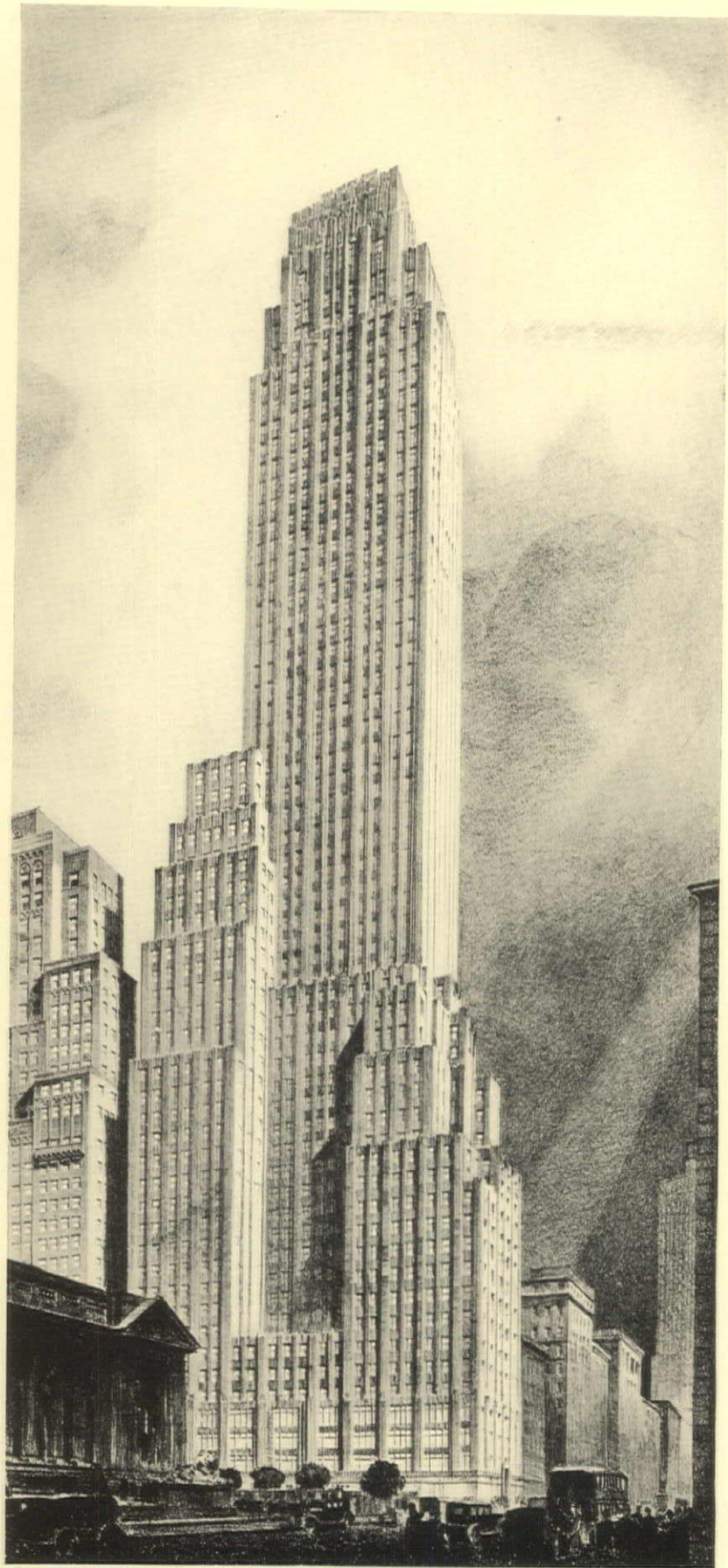




CANADIAN BANK OF  
COMMERCE, TORONTO.  
DARLING & PEARSON,  
ARCHITECTS; YORK &  
SAWYER, CONSULTING  
ARCHITECTS

Photo by Palmer Shannon

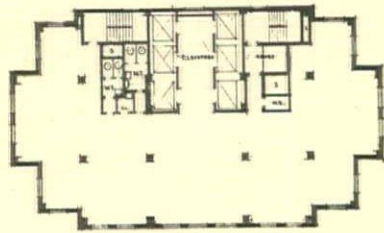




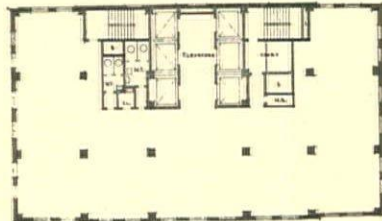
BUILDING AT 500 FIFTH AVENUE, NEW YORK. SHREVE, LAMB & HARMON, ARCHITECTS. H. R. ALLEN, ASSOCIATED

*Photo by Juley from a Rendering by J. Floyd Yewell*

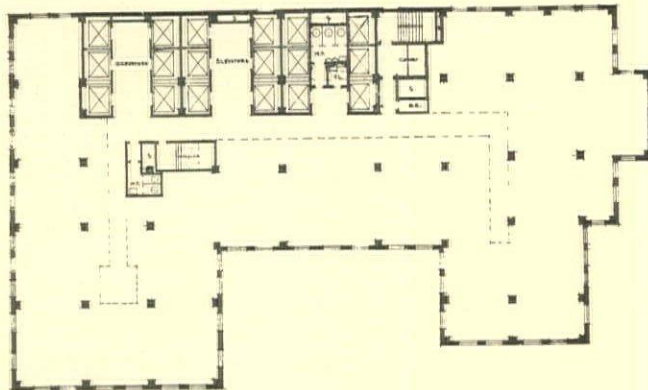




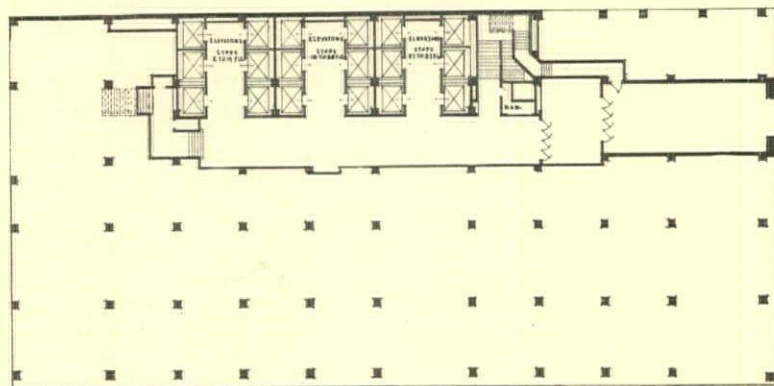
55TH FLOOR



43RD TO 54TH FLOORS



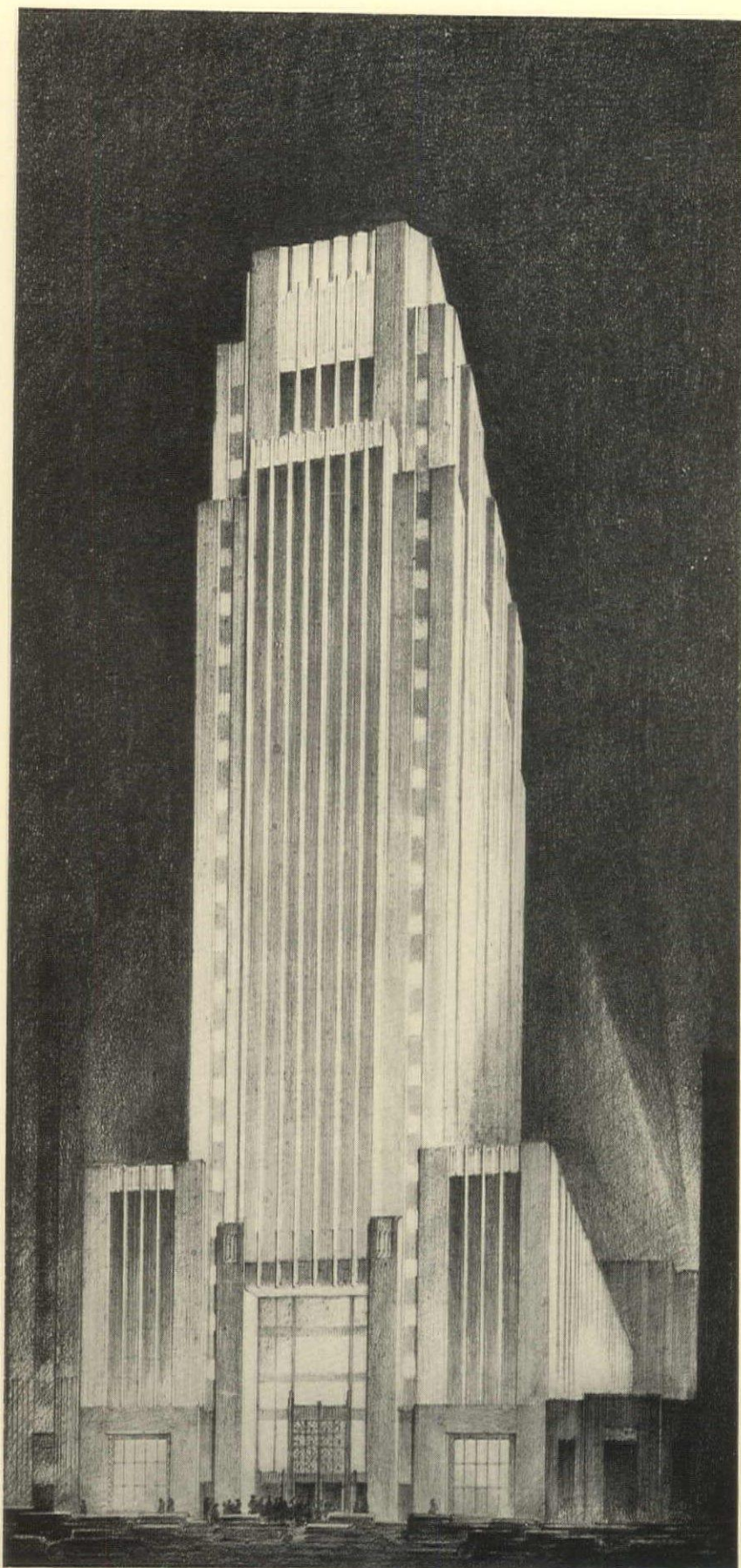
18TH AND 19TH FLOORS



FIRST FLOOR PLAN

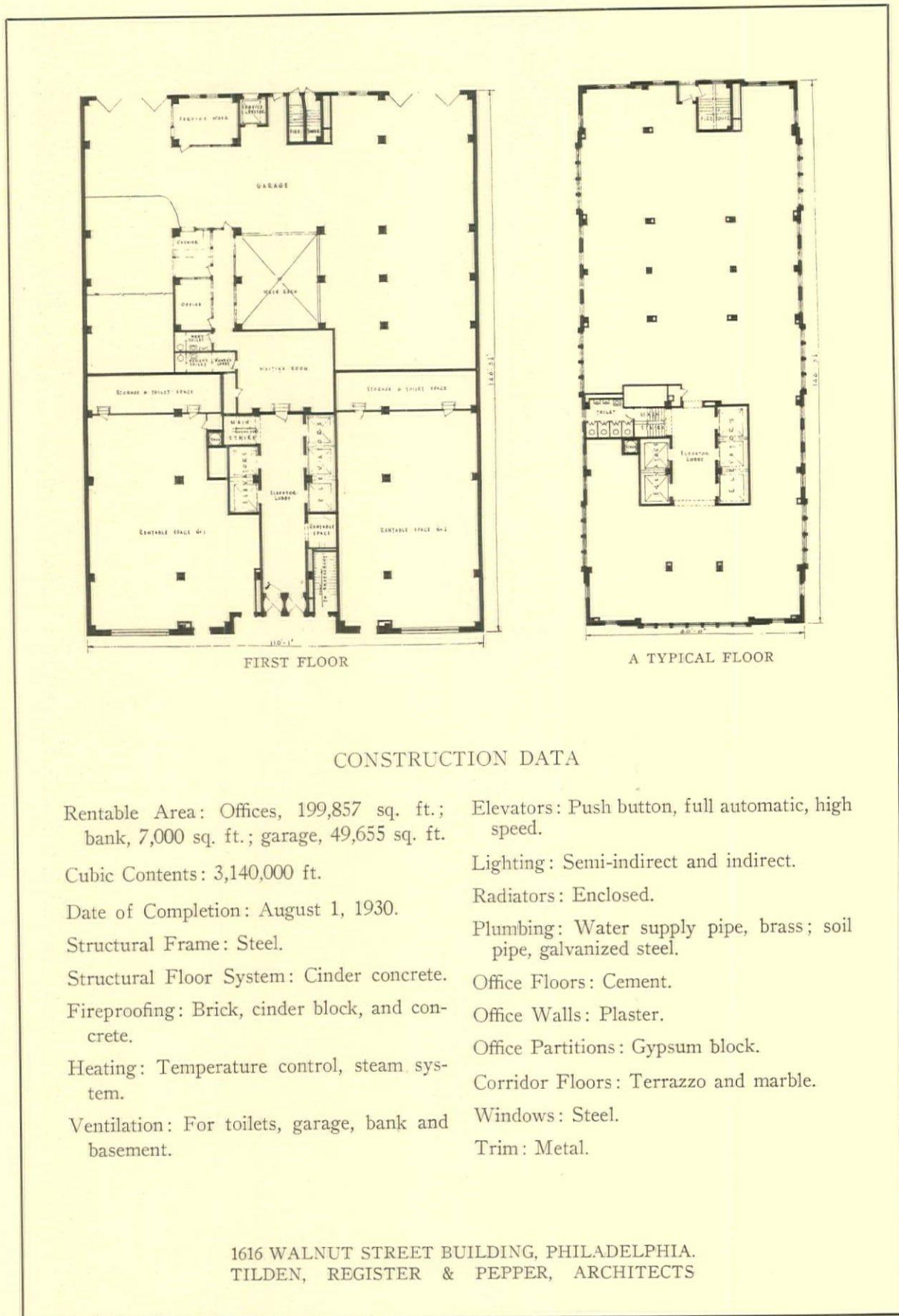
BUILDING AT 500 FIFTH AVENUE, NEW YORK.  
SHREVE, LAMB & HARMON, ARCHITECTS.  
H. R. ALLEN, ASSOCIATED





1616 WALNUT STREET  
BUILDING, PHILADEL-  
PHIA. TILDEN, REGIS-  
TER & PEPPER, ARCHS.





CONSTRUCTION DATA

- Rentable Area: Offices, 199,857 sq. ft.; bank, 7,000 sq. ft.; garage, 49,655 sq. ft.
- Cubic Contents: 3,140,000 ft.
- Date of Completion: August 1, 1930.
- Structural Frame: Steel.
- Structural Floor System: Cinder concrete.
- Fireproofing: Brick, cinder block, and concrete.
- Heating: Temperature control, steam system.
- Ventilation: For toilets, garage, bank and basement.
- Elevators: Push button, full automatic, high speed.
- Lighting: Semi-indirect and indirect.
- Radiators: Enclosed.
- Plumbing: Water supply pipe, brass; soil pipe, galvanized steel.
- Office Floors: Cement.
- Office Walls: Plaster.
- Office Partitions: Gypsum block.
- Corridor Floors: Terrazzo and marble.
- Windows: Steel.
- Trim: Metal.

1616 WALNUT STREET BUILDING, PHILADELPHIA.  
 TILDEN, REGISTER & PEPPER, ARCHITECTS





SHELL BUILDING, SAN FRANCISCO. GEORGE W. KELHAM, ARCHITECT

*Photo Gabriel Moulin*



#### COST AND CONSTRUCTION DATA

Rentable Area: 162,000 sq. ft.; Stores, 5,500 sq. ft.

Cubic Contents: 4,085,000 ft.

Cubic Foot Cost: 78 cents.

Date of Completion: April 20, 1930.

Structural Floor System: Steel beams, concrete slabs.

Fireproofing: Concrete and brick.

Heating: High-pressure boilers.

Ventilation: Toilet rooms only.

Elevators: Signal control.

Lighting: Indirect.

Radiator: Wall type.

Plumbing: Brass pipe; water supply pipe, brass; soil pipe, cast iron.

Office Floors: Linoleum.

Office Walls: Plaster, painted.

Office Partitions: Portable wood; also terra cotta tile.

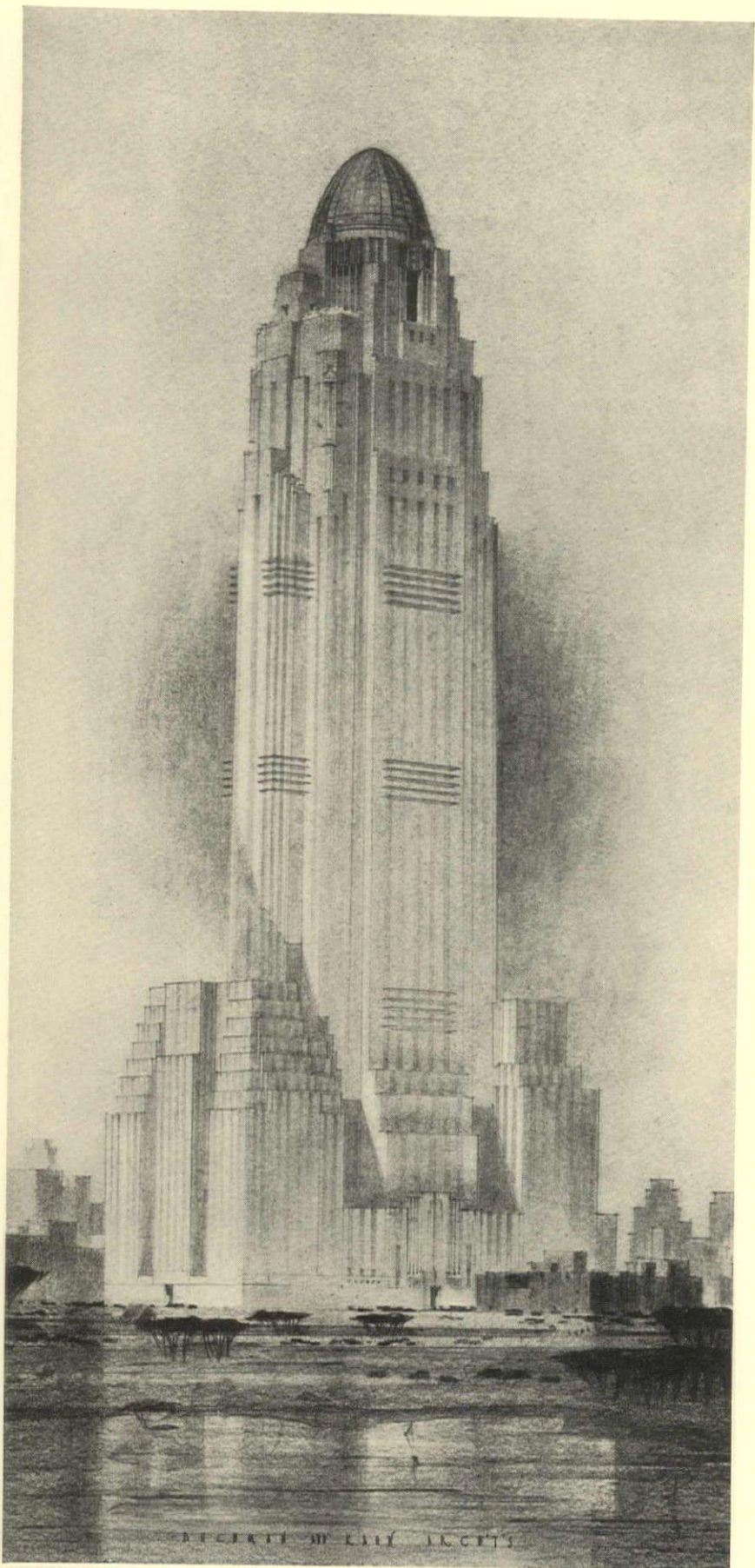
Corridor Floors: Rubber tile.

Windows: Double-hung steel.

Trim: Wood (mahogany).

SHELL BUILDING, SAN FRANCISCO.  
GEORGE W. KELHAM, ARCHITECT





SKETCH FOR PROPOSED  
BUILDING, NEW YORK.  
FIRM OF ELY JACQUES  
KAHN, ARCHITECTS

*Photo by Palmer Shannon*





*Photo by Palmer Shannon from a Rendering by Chester B. Price*

WESTERN UNION BUILDING, NEW YORK.  
VOORHEES, GMELIN & WALKER, ARCHITECTS





*Photo by Palmer Shannon from a Rendering by Schell Lewis*

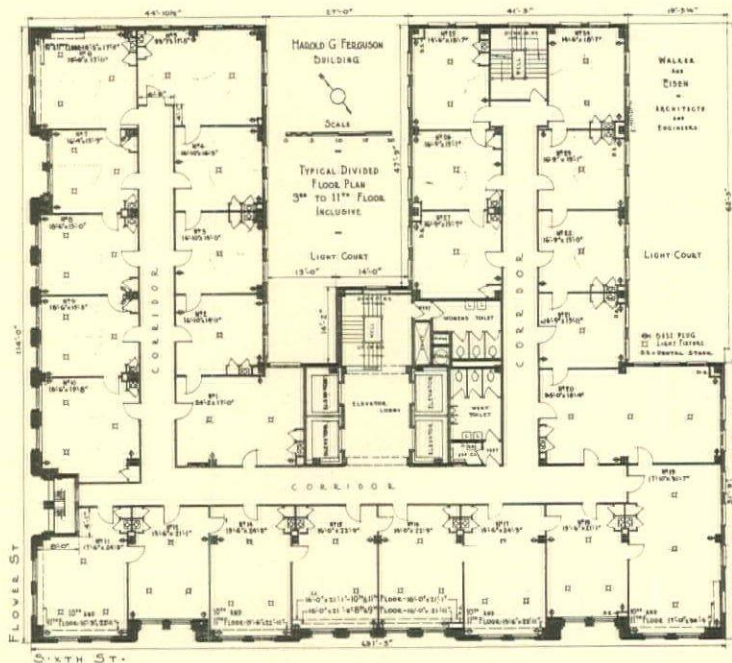
INDEMNITY BUILDING, NEW YORK.  
FIRM OF ELY JACQUES KAHN, ARCHITECTS



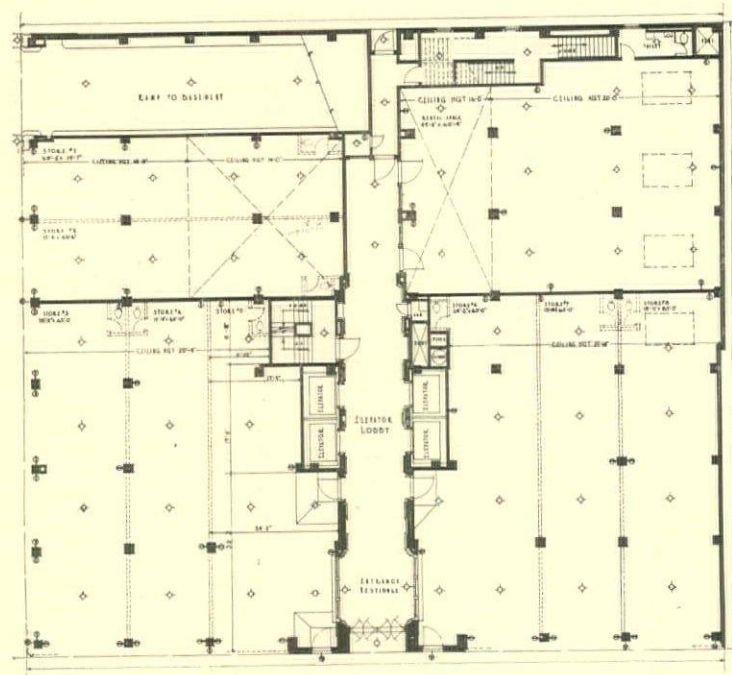


HAROLD G. FERGUSON BUILDING, LOS ANGELES.  
WALKER & EISEN, ARCHITECTS





A TYPICAL FLOOR



GROUND FLOOR

HAROLD G. FERGUSON BUILDING, LOS ANGELES.  
WALKER & EISEN, ARCHITECTS

### COST AND CONSTRUCTION DATA

Rentable Area: 109,667 sq. ft.

Total Cost of Building (exclusive of land): \$1,286,000.

Cubic Contents: 2,268,000 cu. ft.

Cubic Foot Cost: \$.57.

Structural Frame: Structural steel.

Fireproofing (material): Concrete.

Structural Floor System: Concrete (steel joists).

Heating: Low pressure steam.

Ventilation Equipment: None.

Elevator Type: Variable voltage, 600 ft. per second speed.

Lighting Type: Semi-indirect.

Radiator Type: Wall hung.

Plumbing: Wrought iron water supply pipe, cast iron soil pipe.

Office Floors: Concrete.

Corridor Floors: Rubber marble.

Office Walls: Plaster.

Office Partitions: Clay tile.

Windows: Steel double-hung.

Trim: Philippine mahogany.

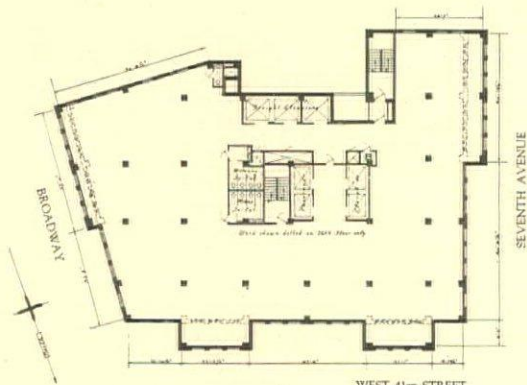




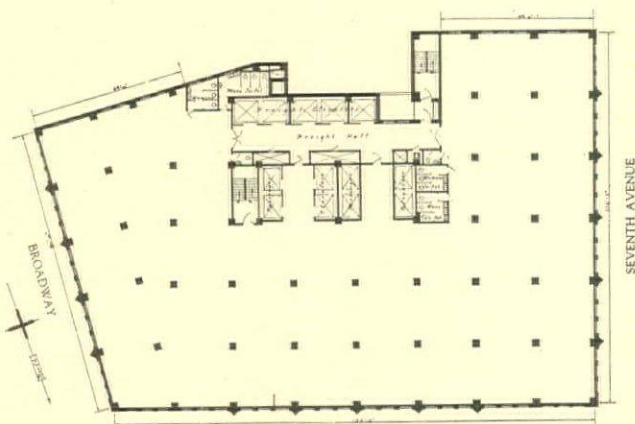
*Photo by Palmer Shannon from a Rendering by Schell Lewis*

BRICKEN BUILDING, NEW YORK.  
FIRM OF ELY JACQUES KAHN, ARCHITECTS

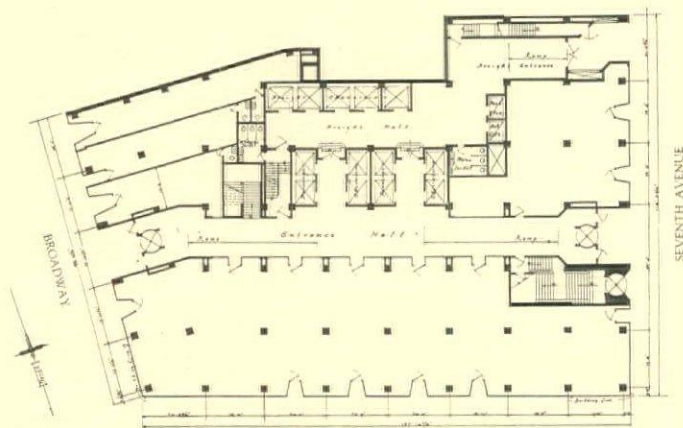




WEST 41st STREET  
24TH, 25TH AND 26TH FLOORS



WEST 41st STREET  
5TH TO 16TH FLOORS



WEST 41st STREET  
GROUND FLOOR

### COST AND CONSTRUCTION DATA

Rentable Area: 364,995 sq. ft.

Office space, 354,095 sq. ft.

Store space, 10,900 sq. ft.

Cubic Contents: 5,906,305 ft.

Date of Completion: January, 1930.

Structural Frame: Steel.

Structural Floor System:

4 in. cinder concrete arches  
3 in. fill

between beams.

Fireproofing: Cinder concrete, brick and clay blocks.

Heating: Vacuum.

Plumbing: Brass water supply pipe, galvanized wrought iron soil pipe.

Ventilation: Supply and exhaust.

Elevator Type: Car switch, hand-operated gates and doors.

Lighting Type: Semi-indirect.

Radiator Type: Cast iron, leg type.

Office Floors: Cement.

Office Walls: Hard white plaster and gypsum.

Corridor Floors: Terrazzo.

Windows: Steel casement and sash.

Trim: Steel.

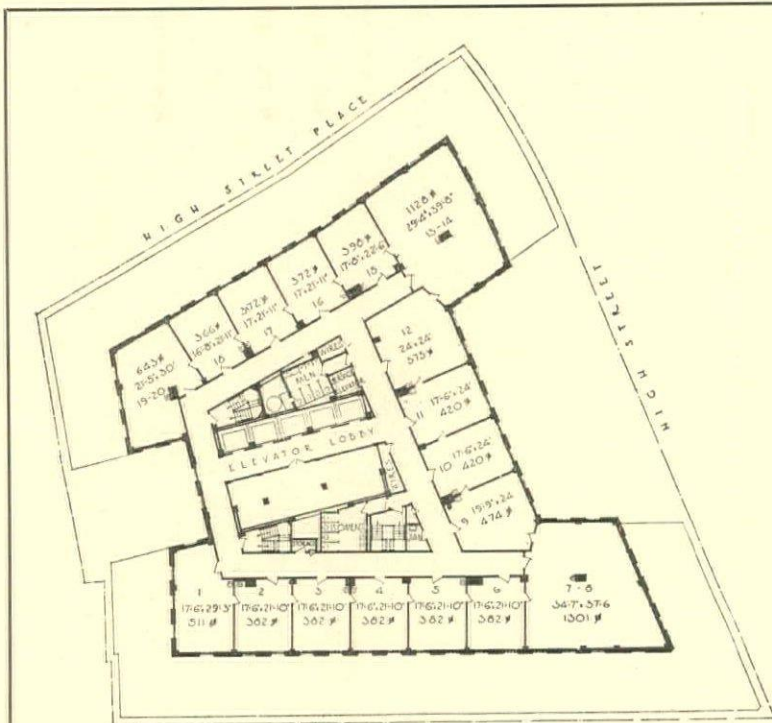
BRICKEN BUILDING, NEW YORK.  
FIRM OF ELY JACQUES KAHN, ARCHITECTS



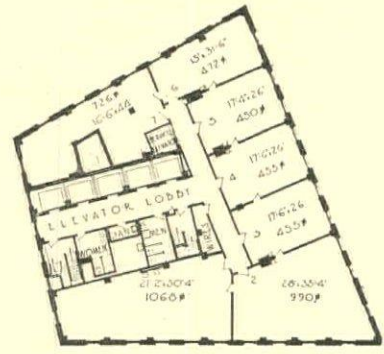


140 FEDERAL ST. BUILDING, BOSTON.  
PARKER, THOMAS & RICE, ARCHITECTS.  
HENRY BAILEY ALDEN, ASSOCIATED

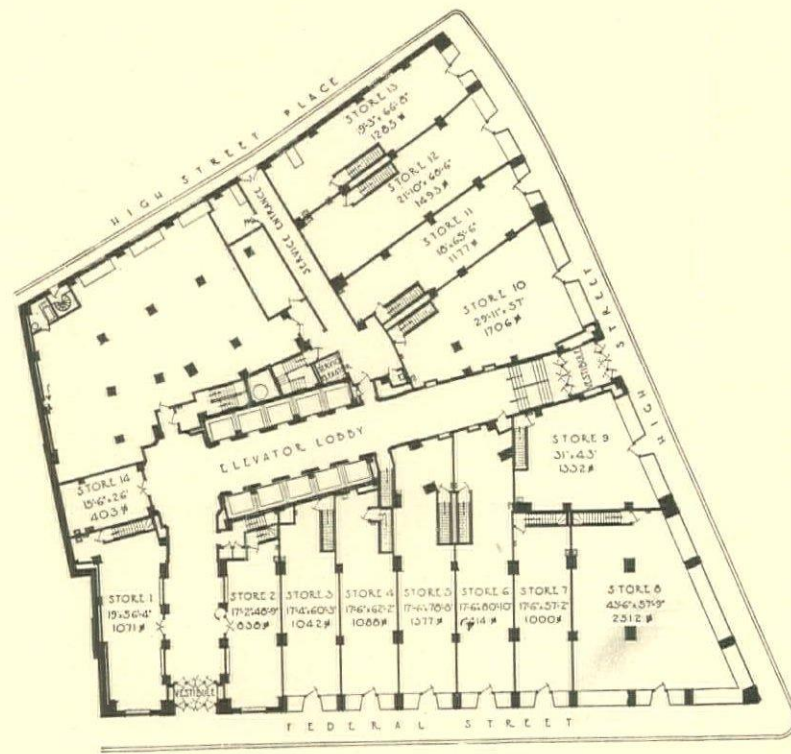




13TH FLOOR



16TH FLOOR



FIRST FLOOR

CONSTRUCTION DATA

Rentable Area : Lofts, 285,170 sq. ft.; Stores, 34,210 sq. ft.

Cubic Contents : 5,380,000 ft.

Date of Completion : February 1, 1930.

Structural Frame : Steel.

Structural Floor System : Concrete joist, tile fill.

Fireproofing : Terra cotta.

Heating : Steam, zoned system, coal fuel.

Ventilation : Partly mechanical.

Elevators : Signal control.

Lighting : Direct.

Radiators : Cast iron exposed; copper concealed.

Plumbing : Water supply pipe, brass; soil pipe, cast iron.

Corridor Floors : First floor, marble; upper floors, terrazzo and rubber tile.

Trim : Wood for doors; plaster reveals in windows.

140 FEDERAL ST. BUILDING, BOSTON.  
PARKER, THOMAS & RICE, ARCHITECTS.  
HENRY BAILEY ALDEN, ASSOCIATED





MARKET STREET NATIONAL BANK BUILDING,  
PHILADELPHIA. RITTER & SHAY, ARCHITECTS







# THE DESIGN OF OFFICE BUILDINGS

BY

ARTHUR LOOMIS HARMON

LET us understand each other. Mr. Harmon is writing this article in Mr. Lamb's absence from his office. He is out in the drafting room, designing office buildings.

When the "design" of a modern office building is mentioned, the lay mind thinks of the exterior, and so does the architect as a rule. That is natural. The interior is a honeycomb, the plan is not apparent; the use is obvious and not appealing. The exterior can be seen as a whole,—often the scale is tremendous and the height romantic. The reaction in the mind is direct and appreciable. The reasons for this exterior, however, are many and conflicting. They are not only confusing to the man on the street but are apart from his reaction. To the designer they are at once the causes of his opportunity and the limitations imposed upon his realization of it.

Conscience, self respect and self preservation demand that we meet the useful, economic and structural requirements. Unless these are met squarely, æsthetic values may be false. When these are met the building may be said to be organic or to be described in words to that effect,—several words probably. At any rate, æsthetic values may predominate. The next problem is to satisfy the eye without offending the intelligence. Interest lies largely in buildings' height.

We must mention briefly the forces producing an office building and the limitations imposed by them and the structure. They are all a part of the design. There is probably no building in which the organism, if adhered to, is so inherent a part of the æsthetic possibilities,—that should simplify everything. All you have to do in theory is to be truthful, and beauty is achieved. But will the eye of sinful man be pleased with the result? When pretty girls have a hard time to find husbands, I am sure it will.

The development of steel construction in conjunction with the modern elevator; the modern city and its demand for spaces to transact business in congested areas; the need for light and air; these are the chief forces. What are the limitations which mould the form? In bulk they are the shape of the property, the lighting of internal areas, the zoning regulations of various cities, and the demand that the rentable area bear a proper relation to the total cubage to produce a paying investment. In height buildings are limited by the area of the property; the economic

consideration involved in the cost of steel; particularly the relation of height to base governing the wind bracing; and the economic and physical limitations in height for elevators. Until more than one elevator travels successfully in one shaft, there is in a large building with central elevators, a cone of elevators and utilities crowding the office spaces at the base of the tower and leaving dark spaces at the top in the point of the cone.

In New York particularly the zoning regulations which allow an area for the tower of 25 per cent of the total plot area, with the setback limitations, fix a maximum tower area at the base of the tower at about the 30th floor for large buildings. Depth of office spaces is another consideration. Certain types of buildings may permit interior spaces for loft use at great distance from the light, but for strictly office use a depth of from 25 to 30 feet is more or less a standard.

One of the most difficult masses is that in which every possible foot is demanded within the zoning envelope up to the point at which the tower commences,—say 30 floors,—and then 20 or 30 floors of straight shaft of tower are superimposed. This is one of the characteristic forms of the New York group. An interesting contrast in this respect is that made by comparing the first plans made for the old Waldorf-Astoria site for an earlier group of owners, who believed great loft spaces to be the economic demand, with the plans for the present Empire State Building. The first is a series of courts, pavilions and setbacks. In the second the mass is cut down at the base and appears on the higher floors. Five floors cover the entire property, forming a platform below 75 floors of the shaft (with some increase at the base to get outside the cone of elevators and utilities) of well lighted office space. It is an indication of what may be looked for in the acquisition of large areas permitting large tower areas and great heights.

Having gotten by these troubles, it would seem as though the designer might begin to have some latitude. Not yet, however. Office spaces must be laid out so as to permit of the greatest latitude to future tenants in locating offices. A 9-foot wide office is considered most desirable by the greatest number of tenants, so that the column spacing is determined at around 18 feet, and the fenestration becomes a series of windows, each from 4 feet to 5 feet wide and from 6 feet to 7 feet high,



about 9 feet on centers. Breaks in the wall face interfere with renting. Deep reveals are not advisable for the same reason. At intermediate setbacks window lintels must still be kept high and parapets low.

Too much cannot be piled on the top as, economically, it may become a drag on the rest of the building unless charged off to advertising. All of the conditions mentioned are elements in the design and, insofar as they have been neglected, the designer is ignorant or unfaithful, not only to his client but "to his Art." So far the designer has had to "woo his Art," not only in the presence of a committee but, worse, as one of them, and not the most important member. The owner, the real estate man, the structural engineer, and the elevator expert all are important, and it is obvious that the jade has flirted abominably, not only with the rich owner and the fascinating real estate man, but even with the elevator boy. You might think that he could now expect a long, cozy tete-a-tete over the drafting board, but not at all. When he gets there he finds the mechanical engineers waiting to talk to her about the plans. So that the ardent wooer may expect to see his mistress receiving presents from the plumber and holding hands with the contractor in some part of the building where he least expects it. The contractor talks about money, not only in materials and construction, but about that form most aggravating to a designer,—Time! In a large operation the carrying charges run into thousands of dollars a day, and from this stage, if not before, the Time motif runs through everything.

Time in choice of materials, time in types of construction, time in the "wooing of his Art," but none whatever in which to go back and change. "The moving finger writes and, having writ, moves on." The designer has not much more time to consider the exterior trappings of the form than we have to mention them briefly.

One of the first ideas to bother him is the impossibility (at present at least) of expressing in the exterior the steel construction of the building. If he did, it would not now, at least, please the eye nor satisfy the mind; later perhaps it will. Still there is the urge to be consistent. Another modern condition in shopping districts is the fact that on the ground floor a maximum of show window width is required. A massive wall must be carried on a sheet of glass, and the mind accustomed to think of walls resting on the ground demands the illusion of support. Where the wall above is set back of the street line, this sheet may be in advance, permitting the wall to appear to descend behind it. It may be only an illusion, but who lives happily without them?

In considering the exterior materials, the steel skeleton must first be covered, wall panels must

be filled with some material,—watertight and insulating against heat and cold. Requirements of the building bureau must be met. Masonry to date best fulfills all requirements, but the eye must cease to regard it as an expression of a solid bearing wall and rather as a covering only. Metal and glass are being considered but have not yet been tried and much less tested by time. Development of new rustless materials, aluminum and chrome steel offer new opportunities. In the Empire State Building not only are the spandrels to be of gray aluminum but the glass is to be set out beyond the wall face between projecting polished chrome steel mullions on the theory that a reveal of convincing depth back from the wall face is impossible. The effect will be that of a continuous wall face with applied mullions. Structurally it is honest. This system of construction will be discussed fully in *THE ARCHITECTURAL FORUM* in the near future. The wall as a series of vertical piers seems the most satisfactory solution to date,—not because that necessarily expresses the structure more accurately but because in its simplicity and accent of height where height predominates, it comes nearer to satisfying the eye. The *Daily News* Building on 42nd Street by Howells and Hood is an excellent illustration.

Wherever an architecture has been evolved, it has gradually clothed itself in certain conventions of construction and form and mannerisms of ornamentation which, when fully developed, constitute a style. It is an organism and can no more be invented than can a language. It is, of course, possible to imagine a style in which use is the sole criterion,—but only if all effort to temper usage to a certain gratification of the senses through the eye is abandoned,—a style with no illusions whatever,—which God forbid! The modern office building requires a new vocabulary and, given sufficient time, will have its style. In the meantime old words lose their magic, and words no gentleman architect would have thought of using 20 years ago are being bandied about with cheerful nonchalance.

We are now in the midst of the great experiment. It may be admitted that the experimenter who essays something new and untried, though it be "wild," is contributing to the final result,—that is if one is an optimist on the survival of the fittest theory. The pioneer must have the courage of his convictions. If he is right, he is forgotten in the mass of similar work which follows; but if wrong, he is likely to be remembered.

At any rate we, the heirs of all the ages, are now busy trying to determine which of the stocks of our inheritance have today a marketable value. It is painfully evident that we cannot subsist solely on this inheritance, and that we will have to produce something for ourselves.



# OFFICE BUILDINGS NOW AND THEN

BY

CHARLES G. LORING

THE small office building is usually the step-child of the family, but on occasions it is the Cinderella.

Just below that technical classification is the village block, named after the local magnate, and built without an elevator to save those golden twins,—first cost and running expenses. The height is limited to the power of personal uplift,—say three flights of stairs. At the other extreme tower the giants of the metropolis, supreme embodiment of mechanistic America. The very lowliness of the village block allows a nice adaptation of native historical styles, the Atlantic and Pacific Colonial, Georgian and Mission; the very loftiness of the skyscraper stimulates untrammelled aspiration, but with the medium-sized office building the architect is challenged to recast the obvious and refine the hackneyed to revive public interest.

The offices of our grandfathers were without steel frames and files, without elevators and radiators, without telephones,—and without skirts. In those days gentlemen of the old school still wore shawls in cold weather and went home to dinner at three o'clock, while the clerks in the counting rooms stood at high desks with sloping tops and tied up the correspondence in red tape. The evolution of the office building has been almost as abrupt as that of the automobile, and the transmutations of its facade as fantastic as those in women's dresses.

The Chicago Chapter of the Institute of Architects reports that in the 13-story Tacoma Building, torn down at 40 years of age, the structural steel and floor construction were found to be still sound. The accelerated evolution is not from inherent weakness; it is the migrating zone and shifting land value which condemn to demolition the office building which was once a residence and also the offices built up to the limit of a restriction ordinance which has since been relaxed.

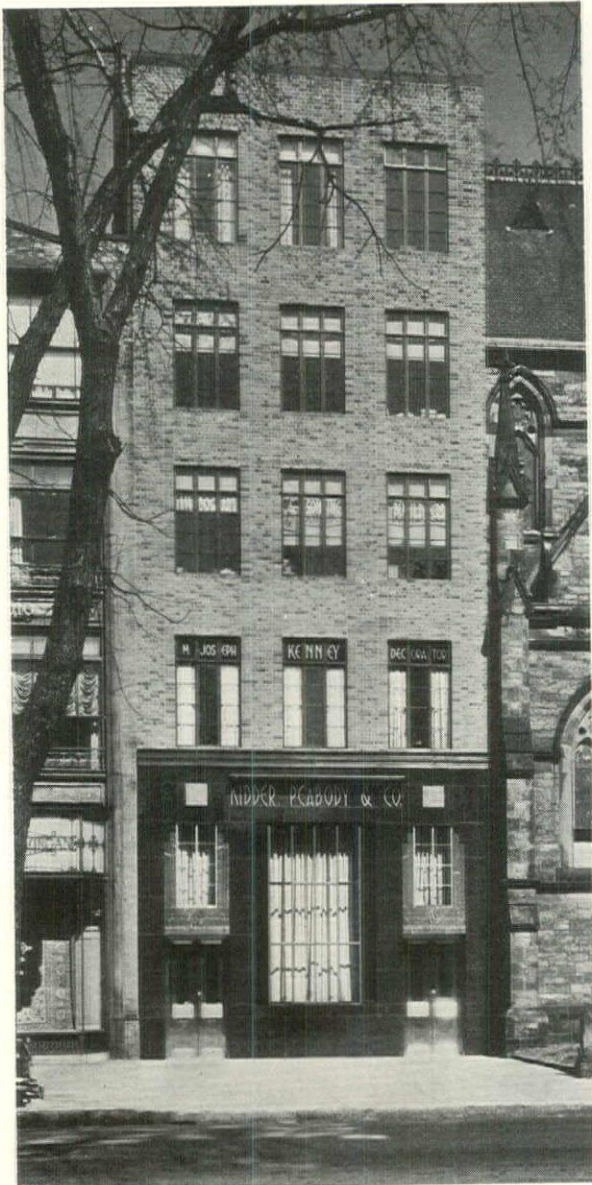
The number of office buildings is organized for such a disciplined and standardized objective all across the continent that the typical external expresses the hive of identical cells based on the geometry of the steel and has little relation to local materials, local traditions, or local climates. With minor office plants, economical planning is not an abstract general principle, as it is where the lot has light on three or more sides. It requires

the ingenious exploitation of a constricted site. Narrow fronts, dead party walls and restrictive ordinances mean that the little fellow must be satisfied with the best under the circumstances, not necessarily with the ideal. In the large building where there are many units on a front the most efficient,—say 10 feet for the single desk and double that for the executive, may be easily approximated, but when the frontage is narrow the unit may have to be cut to 8 or expanded to 12 feet in width.

Sometimes the keynote of the facade is set by a banking house or by a restaurant or by a swagger salesroom on the street floor, but the salient features are national and not the prerogative of any one state. Despite the revivals, like the quaint design by Little & Russell for the Lopez Building, where shops dominate the offices above, the most potent preoccupation today is to be modernish. Public buildings, which represent the welding of tradition and custom in our political and social forms of civilization, may well be conservative in design; our laws and our systems of education have not been created like those of the Soviet Republic since the World War. In the spending of public moneys the designer must sink his individuality in that of the community,—the community which even in the new lands has brought its past with it. In commercial structures, on the contrary, brilliant eccentricity often is the hall mark of success as in the American Radiator Building in New York, by Raymond M. Hood, where both the black shafts, tipped with gold, of the exterior and the unique basement showroom frescoed with American fire myths proclaim what are the company's wares.

Quite naturally this new development, which is to coalesce into a national architecture and which comes from Yucatan, Scandinavia, Epstein and Le Corbusier, has reached its first objective in commercial buildings. Offices and salesrooms and banks desire publicity; the owners are spending their own money, and the project is not often intended for posterity. The conspicuous contemporary style is architecture with a difference,—almost with a vengeance. The dogma is still heterodox and although the varied elements cannot yet be synthesized in one definition, the characteristics are emerging clearly. There are enough typical forms of mass and silhouette, of incorporated and applied ornament for the bystander



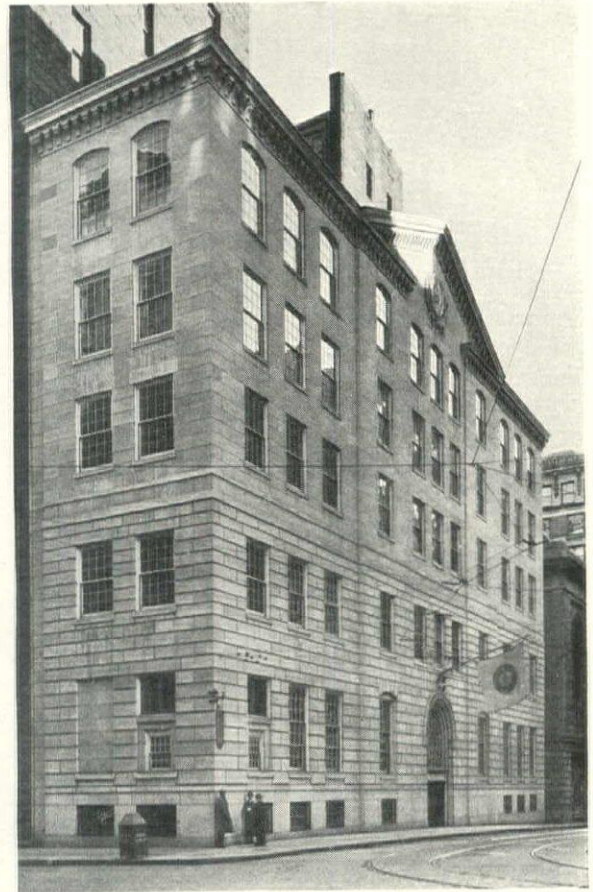


Paul J. Weber

to be able to say of a new structure that it is or is not "Modern."

There is the *architectural* Modernist style which has come to us when we were in a receptive frame of mind, from Denmark and Finland, countries far removed from Greece and Italy; a principle of masses rather than of style or ornament. The vision has crystallized into basaltic crags, and the perspectives of it are rendered in northern murk. But it is organic; the masonry shell adheres to the steel skeleton; it is vibrant with the thrust of the dynamo, it welcomes mass production and over-tops the craftsman.

Then there is the *decorative* Modernist style of thin planes and surfaces; lighting fixtures in fragile spirals of glass, blended with tinkley joss house details; furniture in triangles, suggesting those structurally significant intersecting lines of the folded paper cockhat.



(Above) State Street Trust Building, Boston,  
Parker, Thomas & Rice, Architects

(Left) Kidder Peabody Building, Boston,  
Strickland, Blodget & Law, Architects

In the syndicated journal of a chain of department stores, entitled "Modes and Manners," appears this critique: "Of course nobody thinks of disputing any more the established facts of the twentieth century period. But, in the general enthusiasm, the adjective 'modern' is being quite seriously overworked. It is being used in connection with everything that breaks with tradition, whether in the way that is significant or in the way that is quite meaningless. And the result is that we bewildered moderns, looking this way and that, are more than a little uncertain as to what is authentic and what is negligible in this exciting present-day scheme. The new period that has evolved out of these brave confusions is inspired by originality and freedom from tradition."

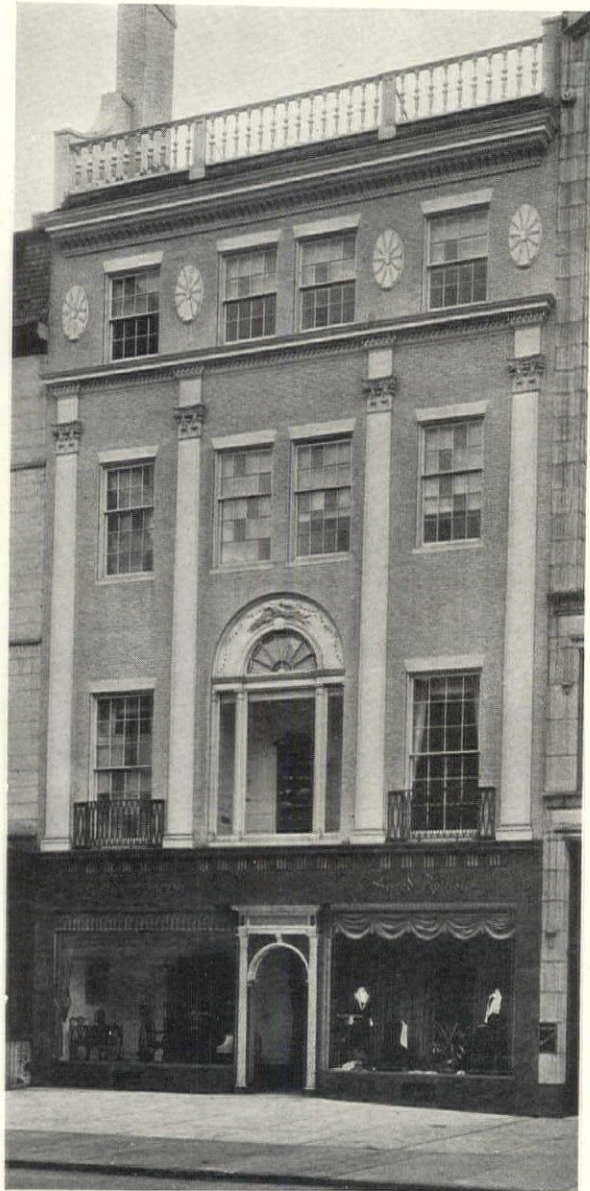
The illustration, entitled the "Dawn of the 20th Century," shows on the left one of the early endeavors to represent steel construction





Paul J. Weber

(Above) Rolls-Royce Building, Boston,  
S. Bruce Elwell, Robert M. Blackall, Architects



(Right) Building for A. F. Goodwin, Boston,  
Little & Russell, Architects

encased in fireproof material with the maximum glass surface for the occupants. So far the logic of the Beaux Arts was admirable, but the decorative crescendo swept the architect into artistic and financial extravagance and a literal and metaphorical false front. The building to the right, which shouts aloud the renting agent's demand for bay windows, has anticipated by 25 years the crystal corners and glazed bands and overhangs which are absolutely what the smart young buildings are wearing this spring.

Two designs which are dated but not addressed, which will be known as belonging to the Hoover period rather than to the Boston School and which face each other across Newbury Street, Boston, now in the throes of transformation from domesticity to commercialism, are the Kidder-Peabody and the Rolls-Royce buildings. The first, designed by Strickland, Blodgett &

Law, has two stories of black Wisconsin granite with red French griotte marble over the doors of polished steel. The raised letters are of chromium. The sash is red to match the marble, and over both the name and the doors there are floodlights. The upper four stories are of old Virginia red brick, soft and pleasing in color and texture. The design is certainly contemporary, almost Modernistic,—with a big capital M,—but it is founded on the accepted Georgian proportions.

The Rolls-Royce building, by S. Bruce Elwell and Robert M. Blackall, is a solution of the demand for maximum of rental space and maximum of light on an inside lot. Here again, the tempo of the composition is set to harmonize with the two-story salesroom below. To allow the entrance of large cars, the show window has one movable sheet of plate glass, the mechanism allowing it to be lowered into the basement. The





Paul J. Weber

"Dawn of the 20th Century"  
Boylston and Berkeley Streets, Boston

enframing is of dark marble and, above, the six stories of offices are enclosed in light yellow artificial stone with golden tile panels between the windows. The conventionalized leaf ornament of the nineteen-twenties is subordinated to the warmth and richness of the color patina so symbolic of the principal tenant.

Size, shape or shade may further the client's quest of publicity. Of the dynasty of the all-highest, the Singer, Metropolitan, Woolworth and the Chrysler tower has, each in turn, won the golden fleece. The *Chicago Tribune* gained world-wide celebrity through the competition for its home offices and,—incidentally,—the design placed second in the competition inaugurated an office building cult from the Great Lakes to the Rio Grande. The American Radiator Building in New York carries the logic of its wares into the realms of fantasy, and stands a monument of propaganda. Sometimes the ultra-conservative is as effective publicity as startling novelty. The office building by Parker, Thomas & Rice above the State Street Trust is Boston pure and simple; it personifies "the old reliable."

But the pedant has no truly classic precedents for his task, and Raymond M. Hood wrote some years ago in *THE ARCHITECTURAL FORUM*: "An office building is no more a slavish copy of the Chateau of Blois merely because a little Francis I ornament is applied to it than an elephant with

a yard of lace thrown over his back is a copy of a French manikin in a Paquin dress. Style and surface ornament are only the hooks on which critics hang their wares, and in reality, are they not a very minor and unessential part of the problem?"

To Ruskin's seven lamps of architecture an eighth should be added for the big or little office building and the floodlight. The dim and flaring torches of the middle ages had their superb wrought iron sconces on the exteriors of Renaissance palaces. A multitude of glass cups with floating wicks were used like captive glow worms on the Italian piazzas and in the gardens of Vauxhall. Rows of flickering open gas burners were used on theaters a hundred years ago. At the Chicago World's Fair, the proletariat thrilled when electricity extended the possibilities and buildings were outlined with brilliant unshaded bulbs which followed the architectural lines but which did not reveal the surfaces,—or else a single distant searchlight blinded one facade. The next step was the use of hidden projectors set close to the object. The entire structure is transfigured; the visible walls which rise above the black gulf seem translucent; brilliant new high lights are silhouetted against fathomless black; and the daylight colors are intensified by contrast with the outer darkness. Street fronts become iridescent cloth of gold or snowy crags beneath wheeling northern lights; tower tops become jewel caskets of incandescent tracery or crystallized beacon fires, all as mirage-like as the "stately pleasure dome" of Kubla Khan. And on misty nights or snowy, the shaft of welded beams from the floodlights carries the architecture up and into the aurora borealis.

In appraising office design, where whole new buildings and new facades and new fragments are crystallizing morning by morning, each expressing the impact of new forces, some criterion must be established, some gauge of worth. Shall it be beauty? No, for with contemporary creations the observer's habit of mind has too many preconceptions, and after all, "What is Art?" Novelty? No, for in the very nature of things a masonry structure cannot remain a novelty. Sincerity? Why not?

What was the architect's objective when he made the design? Did he use period forms because they seemed just the symbols needed? Was he impelled to modify old forms to fit new needs or new materials, or was he driven by the itch for novelty? Did he evolve a new pattern to harmonize with,—but not to imitate,—the airplane, the subway, the grain elevators, the traffic lights, the radio of these United States, or did he turn to Yucatan and to the Congo to escape an over-familiarity with Rome?



# SKYSCRAPER GARAGES AND CONGESTION

BY

HARVEY WILEY CORBETT

WHETHER or not our metropolitan office buildings should be equipped with garages is a question that can be satisfactorily determined only when it is considered from the viewpoint of city planning. Indeed, when thinking of any innovation that concerns the use or the size of even a single building in our already congested urban centers, the architect must be to some degree governed by its effect on the city and the city's growth. This is particularly true when the innovation is of such far-reaching consequence as that of incorporating garages in our skyscrapers.

Obviously, in giving an office building a garage, two fundamental requirements would have to be fulfilled,—(1) it would have to increase convenience for all concerned; (2) it would have to be a profitable investment for the owner of the building. Possibly I have reversed the order in which the architect would have to think of these requirements, but certainly in the problem before us the success of the second would depend upon that of the first. At all events, the architect would have to find means of satisfying both. He would have to ask himself: What is going to be the result of my bright idea on traffic? On owners of automobiles who take them to their work? On pedestrians? How is the garage going to affect the value of the space the building represents? Is it going to pay a satisfactory return on the money invested? Let us consider these elements, then, in something of this order, and it may be we shall decide that the place for a garage is not in an office building at all, but somewhere else.

Suppose we had garages in our principal skyscrapers, how would our cities be affected? Unless we had a new system of streets as well, it is safe to say that we would all be looking back at traffic as we know it now, and regarding it with all the fondness with which some among us think of heavy cornices and classic columns. Consider, for a moment, what it would mean in downtown Manhattan, or the Loop district of Chicago, or anywhere near 42nd Street, New York, if at morning, noon and night we had a stream of motorists as well as pedestrians entering and leaving the tall buildings.

Some of our largest buildings are said to accommodate approximately 30,000 persons. Without actually counting noses, it is of course impossible to be precise, but, estimating roughly, those consulted have thought 1,000 as a reasonable number to take for the occupants of such a building who would ride to work in their own

cars, and there is scant likelihood of this figure not being large enough. That leaves 29,000 persons, just in the building in which the garage is located, not counting those in neighboring buildings, who would be seriously inconvenienced twice a day, and to a less extent at noon, and all for the benefit of 1,000 persons who might ride to work in their own cars.

But would these 1,000 owners and daily users of automobiles really benefit by having a garage in the same building as their offices? The terrific congestion at morning and at night would certainly delay them, and could hardly be expected to improve their tempers during the hours following. It is inconceivable that our present streets and traffic system could absorb in the time necessary (let alone desirable) an additional stream of 1,000 automobiles from any given point in the heart of one of the already congested districts. And if they could it is not to be believed that men from choice would twice daily become part of the slowly, periodically advancing stream.

Nevertheless, assuming that all these factors could be satisfactorily adjusted, would installing a garage in a modern office building be a profitable investment? The primary reason for having skyscrapers is to concentrate the business population. By increasing the number of stories one increases the amount of salable space above a given area of land. Space is space, and ever since last fall dollars have been very much dollars. Rentable space must yield a satisfactory return above its production cost. Men must have non-rentable elevators and public halls by which to reach their offices. Similarly, automobiles would require runways and other means of access to their garages. Again it is safe to say that the space occupied by a car in its garage plus the accessory space necessary to get it there would equal that of a normal office, but that financially the return on the space devoted to the automobile would be far less than that on the space given over to the office. Yet, without burrowing into the ground (in itself an expensive method), the installation of a garage in an office building would inevitably displace a proportionate number of offices.

Before suggesting a possible means of relating garages to office buildings, it might be well to consider briefly the advantageous uses to which automobiles are put by office workers in connection with their business. These are principally two,—arriving at and returning from their work. A third, that of moving about relatively short dis-



tances during the day, is mainly the result of our present lack of convenient facilities for pedestrians. If pedestrians could move about undelayed by vehicular traffic and undisturbed by rain, many taxicabs and private cars would disappear from the congested districts of our cities. Motors in these districts would then serve their proper purposes,—transportation of merchandise and the carrying of passengers on urgent errands. Traffic would be speeded up, and walking would resume its normal function as a thoroughly satisfactory method of moving from one place to another.

In considering the correlation of office buildings and garages, the architect must, as has been shown, from the point of view of both the city and his imaginary client, think first in terms of space. A man walking occupies at most 10 square feet. An automobile occupies 100 square feet standing still and 400 when in movement. Decidedly, for both city and investor, the best location for the garage is where the additional space occupied by the automobile can best be spared. Moreover, in the interest of both users and non-users of private automobiles and, subsequently, that of the garage, the architect's problem becomes one of so adjusting the motor and pedestrian traffic that each suffers the minimum of inconvenience. There can be no doubt that ultimately the only satisfactory solution of the traffic problem will prove to be complete separation of pedestrians and motors. It is toward this goal, therefore, that the architect of the correlated office building and garage should strive. The solution of the problem thus becomes a matter of separating the office building and garage by a not inconvenient distance, and connecting them by walkways along which the owners of automobiles can move freely, undelayed by motor traffic.

This plan would leave the giant office buildings entirely free for what they are intended,—concentrated business centers where as many people as possible, without sacrificing necessary light and air, are brought into close contact with one another. Under it the garage would not be required to pay the cost of valuable space in a highly valuable business center, but would have a position on less valuable land at the edge of the business district. The garage itself might serve one office building or several; it might be a tall building or it might be constructed in whole or in part underground, although the second method would of course be less economical; no matter what form it took, however, the city planner would connect it by covered walkways with the building or the district that it served. The garage, too, would preferably be located at a point adjacent to a big motor traffic avenue up or down which the users of the garage could proceed rapidly, unhampered by pedestrians.

Under such an arrangement, the theory of zoning cities horizontally would be carried out more logically with respect to traffic, and traffic as every architect and certainly every pedestrian knows, is a prime evil in every large city today. The concentrated business zone would be left free for business. Covered walkways would, in fact, obviate not only the automobiles belonging to occupants of the office buildings, but many taxicabs as well. We have noted that the principal use of private cars is in getting to and from business. Taxicabs are chiefly used in bad weather; it is on rainy days that one has difficulty in finding an empty cab and that the worst traffic jams occur; in fair weather the greater part of the business population walks. Give pedestrians protection against rain, and against delays at street crossings, and they will remain pedestrians from choice. Congestion is relieved, traffic is speeded up, convenience is increased all at the same time.

Elsewhere in this issue of *THE ARCHITECTURAL FORUM*, I have indicated the possibility of cities of the future being zoned vertically instead of horizontally as at present. This simply means that urban populations would be distributed according to function in layers in huge buildings rising from bases that occupy at least a city square, rather than being distributed in patches throughout the urban areas as they are today. It is, in short, one method of achieving maximum convenience while satisfying the increasing demand for concentration. Should cities ever be so planned, arcaded walkways would inevitably be an integral part of the design; only instead of there being but one system there would of necessity be several on different levels (for the different classes of pedestrian traffic,—business, shopping, pleasure), and those on corresponding levels of neighboring buildings would be connected by bridges above the avenues and cross streets. In such cities, motor traffic too might be divided into classes, and the bottom level here would be completely free for services. The proposed scheme for connecting garages with office buildings would lend itself to fuller and even more satisfactory development in such a plan. The incorporating of a garage in one of the unit buildings, on the other hand, would produce even more hopeless confusion than it would in our existing cities.

The task confronting the modern architect is that of thinking of his own buildings, and his own ideas for them, in relation to the city as a whole and to its future development. And with regard to the second part of this task, it should not be forgotten that the question for discussion tomorrow may not be how to provide office buildings with garages, but how best to establish landing stages, mooring masts, and aviation beacons on the towers of tall buildings.

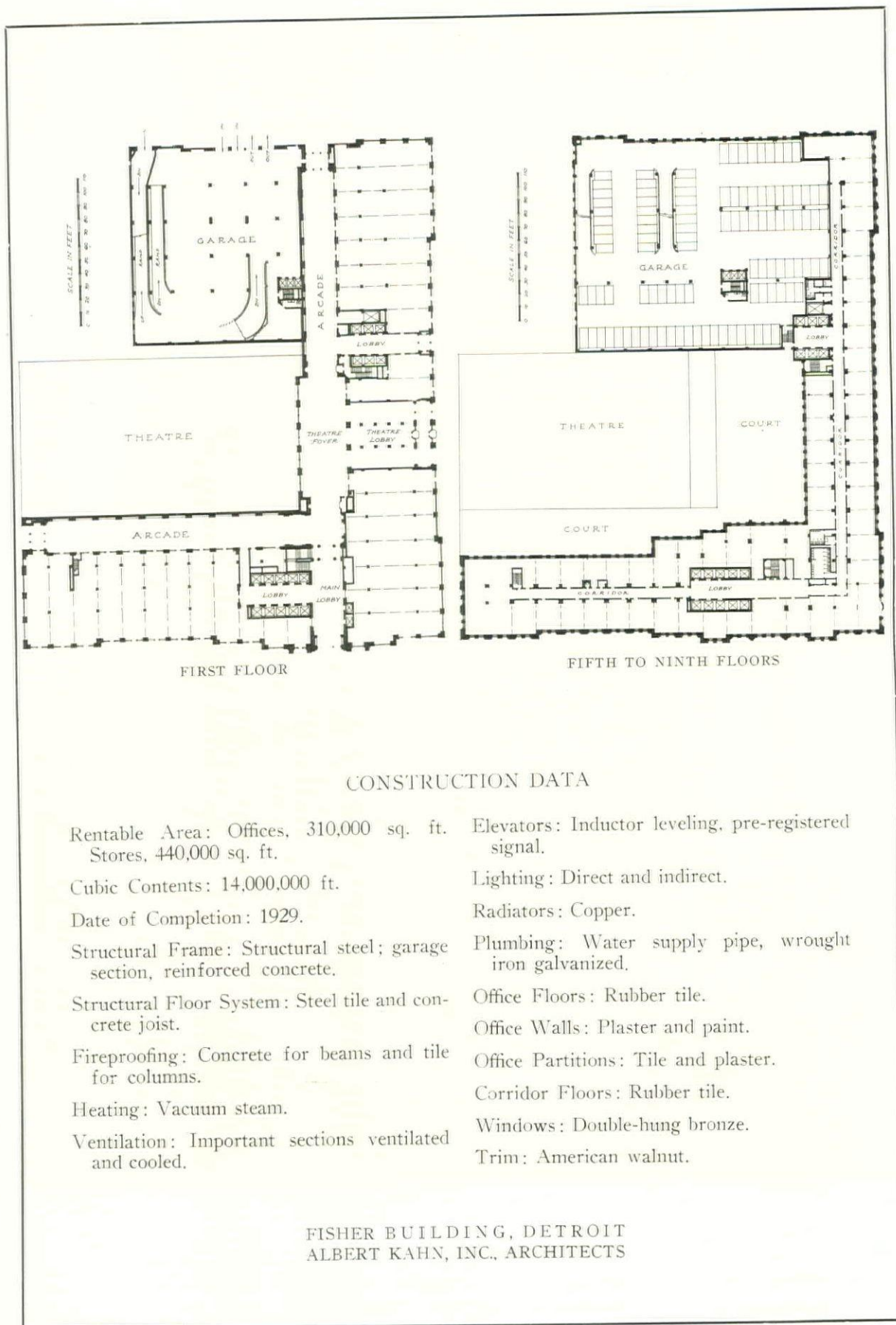




*Drix Duryea*

FISHER BUILDING, DETROIT.  
ALBERT KAHN, INC., ARCHITECTS





### CONSTRUCTION DATA

- |  |   |
|--|---|
| Rentable Area: Offices, 310,000 sq. ft.                                  | Elevators: Inductor leveling, pre-registered signal.  |
| Stores, 440,000 sq. ft.  | Lighting: Direct and indirect.                        |
| Cubic Contents: 14,000,000 ft.   | Radiators: Copper.                                    |
| Date of Completion: 1929.  | Plumbing: Water supply pipe, wrought iron galvanized. |
| Structural Frame: Structural steel; garage section, reinforced concrete. | Office Floors: Rubber tile.                           |
| Structural Floor System: Steel tile and concrete joist.                  | Office Walls: Plaster and paint.                      |
| Fireproofing: Concrete for beams and tile for columns.                   | Office Partitions: Tile and plaster.                  |
| Heating: Vacuum steam.   | Corridor Floors: Rubber tile.                         |
| Ventilation: Important sections ventilated and cooled.                   | Windows: Double-hung bronze.                          |
|  | Trim: American walnut.                                |

FISHER BUILDING, DETROIT  
ALBERT KAHN, INC., ARCHITECTS

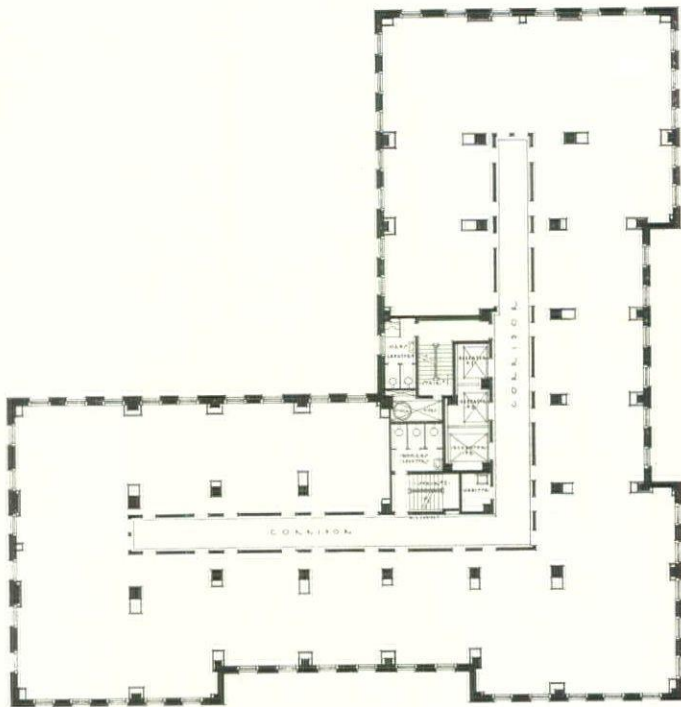




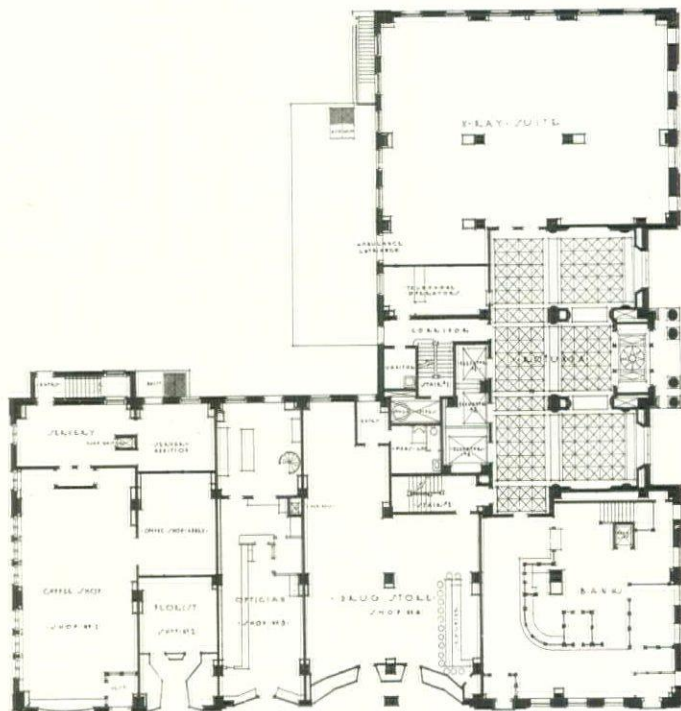
*Pringle & Booth*

MEDICAL ARTS BUILDING, TORONTO  
MARANI & LAWSON, ARCHITECTS





A TYPICAL FLOOR



GROUND FLOOR

### COST AND CONSTRUCTION DATA

- Rentable Area: 83,000 sq. ft.—  
office space, 77,037 sq. ft.;  
store space, 5,963 sq. ft.
- Total Cost of Building: \$900,000  
(exclusive of land).
- Date of Completion: October 1st,  
1929.
- Cubic Contents: 1,555,000 cu. ft.
- Cubic Foot Cost: \$.60.
- Structural Frame: Reinforced  
concrete.
- Structural Floor System: Con-  
crete joists, tin pan.
- Heating: Differential vacuum.
- Ventilation: exhaust.
- Elevator Type: 500 ft. manual  
micro leveling.
- Lighting Type: Direct.
- Radiator Type: Cast iron.
- Plumbing: Water Supply Pipe—  
hot water, brass; cold water,  
G. W. I.; cast iron soil pipe.
- Office Floors: Linoleum.
- Corridor Floors: Linoleum.
- Office Partitions: Movable.
- Office Walls: Plaster painted.
- Trim: Birch.
- Windows: Double hung wood,  
weather-stripped.

MEDICAL ARTS BUILDING, TORONTO. MARANI & LAWSON,  
ARCHITECTS. ANGLIN-NORCROSS, LIMITED, GENERAL CONTRACTOR

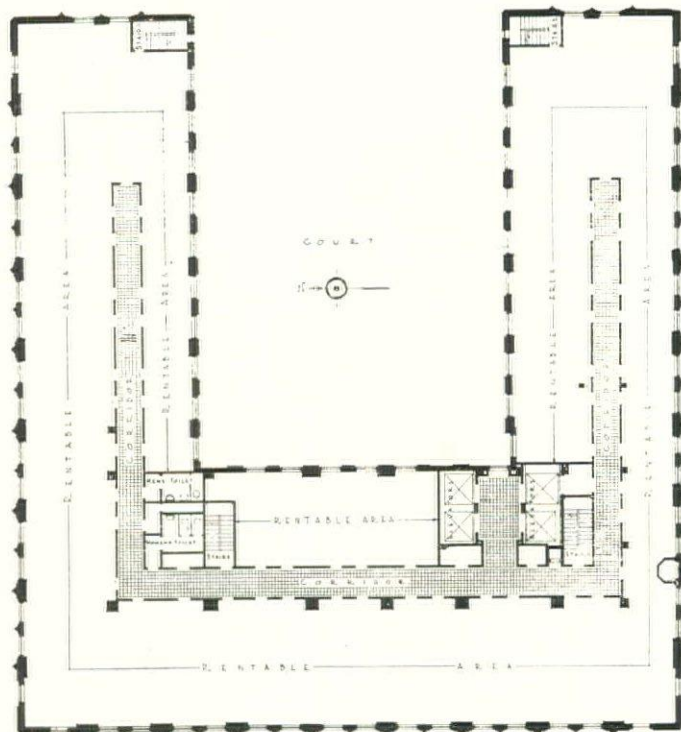




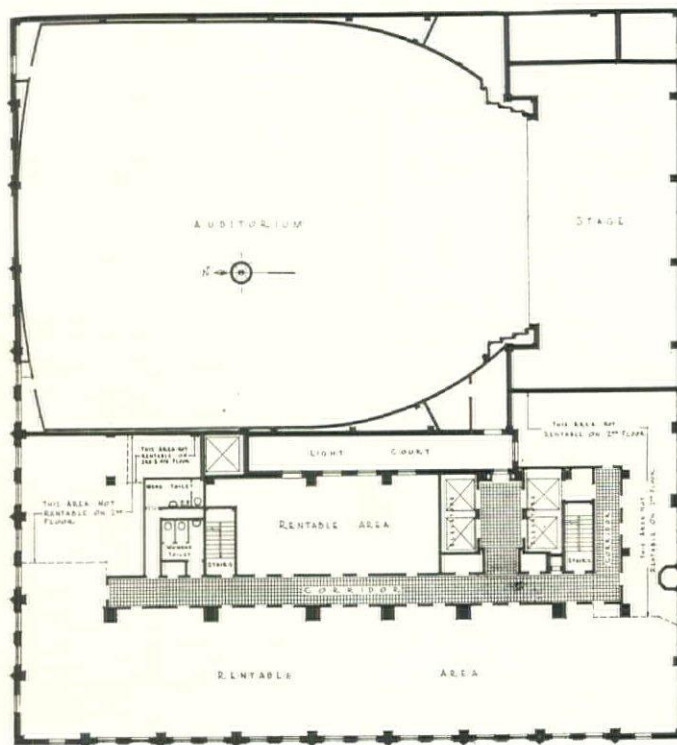
Macdonald

STUART BUILDING, LINCOLN, NEB.  
DAVIS & WILSON, ARCHITECTS





7TH TO 10TH FLOORS



2ND TO 6TH FLOORS

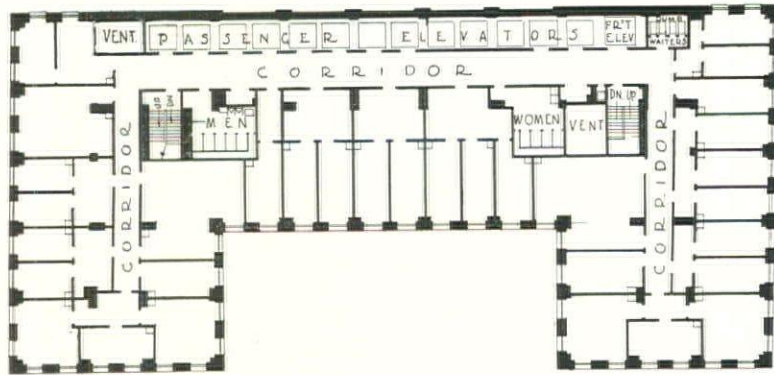
STUART BUILDING, LINCOLN, NEB.  
DAVIS & WILSON, ARCHITECTS



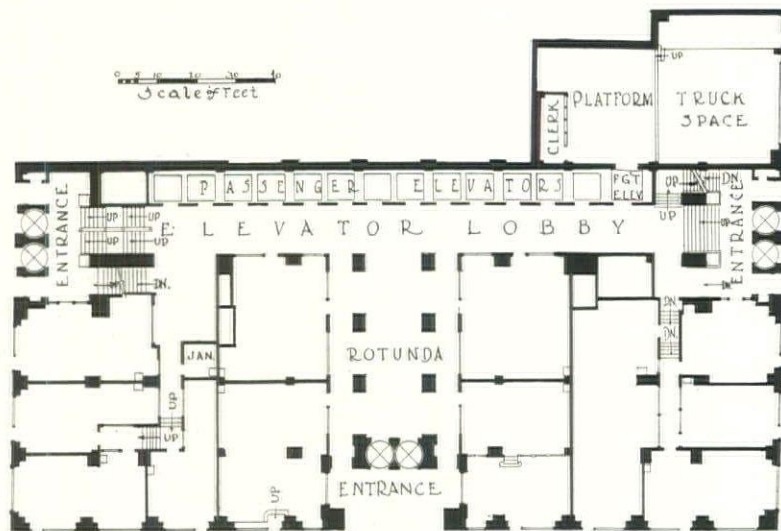


KOPPERS BUILDING, PITTSBURGH. GRAHAM,  
ANDERSON, PROBST & WHITE, ARCHITECTS





11TH TO 20TH FLOORS



FIRST FLOOR

KOPPERS BUILDING, PITTSBURGH.  
 GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

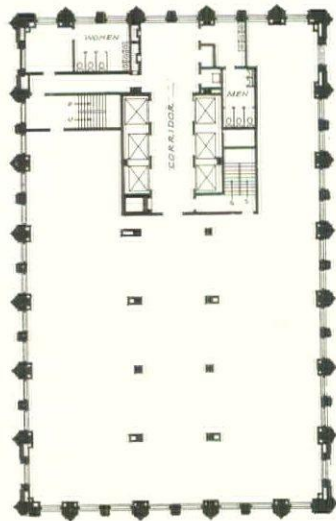




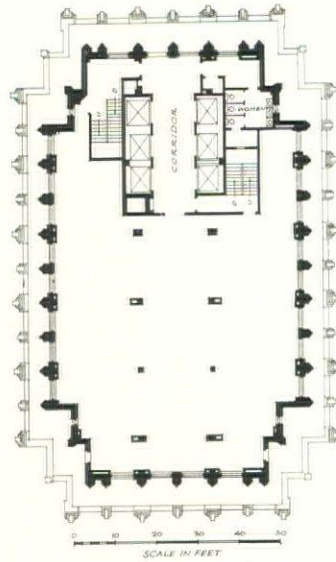
BUILDING FOR PENNSYLVANIA POWER & LIGHT CO., ALLENTOWN. HELMLE & CORBETT, ARCHITECTS

*Sigurd Fischer*

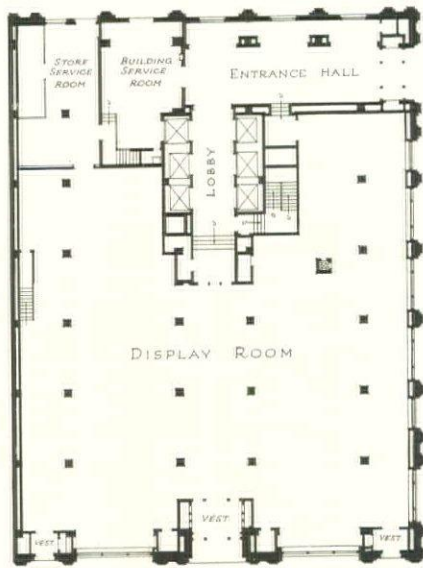




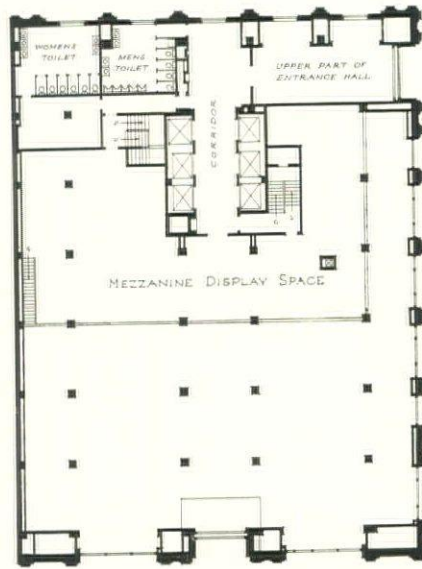
4TH TO 16TH FLOORS



21ST TO 22ND FLOORS



FIRST FLOOR



MEZZANINE

CONSTRUCTION DATA

Date of Completion: 1927.  
 Structural Frame: Steel.  
 Structural Floor System: Cinder arches.  
 Fireproofing: Terra cotta block.  
 Heating: Steam.  
 Plumbing: Soil pipe, cast iron.

Office Floors: Linoleum.  
 Office Walls: Painted.  
 Office Partitions: Wood.  
 Corridor Floors: Terrazzo.  
 Windows: Double-hung.  
 Trim: Steel.

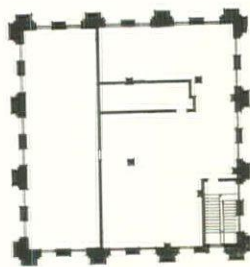
BUILDING FOR PENNSYLVANIA POWER & LIGHT  
 CO., ALLENTOWN. HELMLE & CORBETT, ARCHITECTS



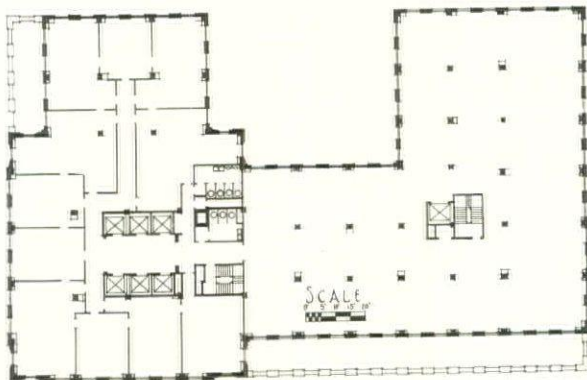


BUILDING FOR THE R. J. REYNOLDS  
TOBACCO CO., WINSTON-SALEM, N. C.  
SHREVE & LAMB, ARCHITECTS

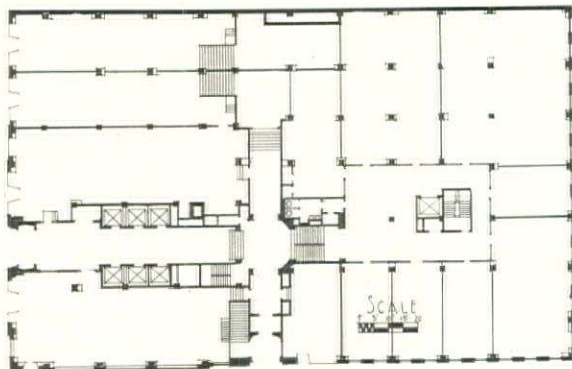




PENT HOUSE



A TYPICAL FLOOR



GROUND FLOOR

### CONSTRUCTION DATA

Rentable Area: 232,458 sq. ft. — office space, 197,410 sq. ft.; store space, 17,833 sq. ft.

Cubic Contents: 3,939,841 cu. ft.

Date of Completion: March, 1929

Structural Frame: Steel skeleton

Structural Floor System: Tin-pan reinforced concrete

Fireproofing (material): Concrete on beams and girders, hollow tile on columns

Heating: Vapor modulation

Ventilation: Mechanical ventilation of toilets, restaurant, barber shop, etc.

Elevator Type: Electric, with full signal control

Lighting Type: Electric

Radiator Type: Cast iron

Plumbing: Brass water supply pipe, cast iron soil pipe

Office Floors: Terrazzo

Corridor Floors: Terrazzo

Office Walls: Hollow tile

Office Partitions: Wood

Windows: Metal

Trim: Hollow metal

BUILDING FOR THE R. J. REYNOLDS  
TOBACCO CO., WINSTON-SALEM, N. C.  
SHREVE & LAMB, ARCHITECTS

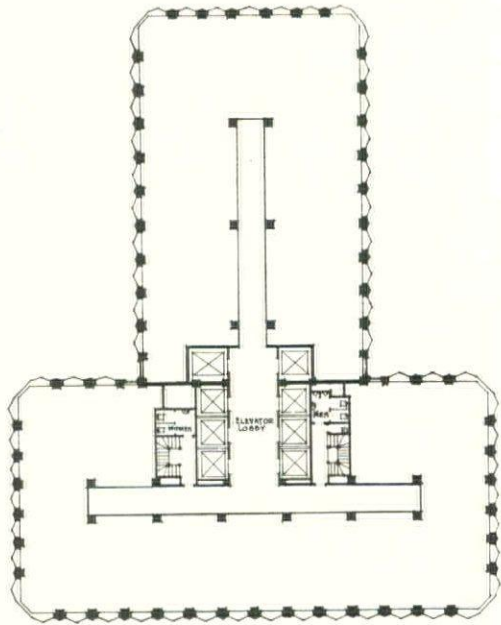




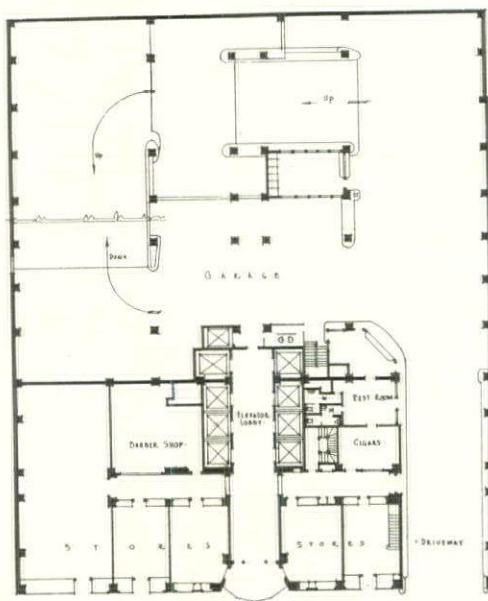
*Moulin*

FOUR-FIFTY SUTTER BUILDING, SAN FRANCISCO  
J. R. MILLER & T. L. PFLUEGER, ARCHITECTS

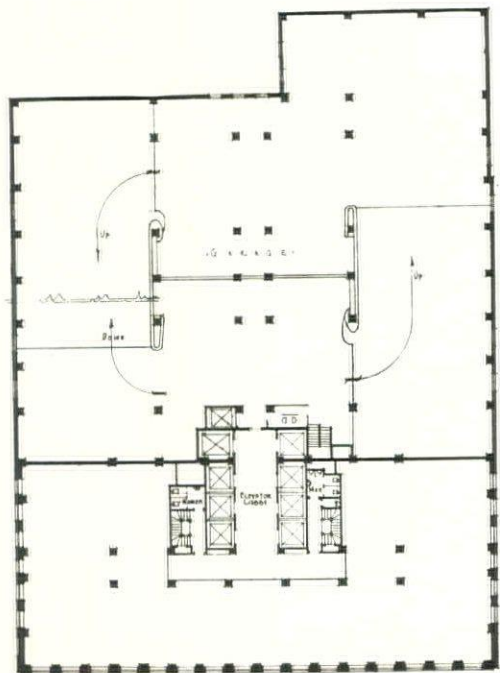




SCALE OF FEET  
0 5 10 20 30 40  
A TYPICAL PROFESSIONAL FLOOR



SCALE OF FEET  
0 5 10 20 30 40  
GROUND FLOOR



SCALE OF FEET  
0 5 10 20 30 40  
A TYPICAL COMMERCIAL OFFICE AND GARAGE FLOOR

FOUR-FIFTY SUTTER BUILDING, SAN FRANCISCO.  
J. R. MILLER & T. L. PFLUEGER, ARCHITECTS

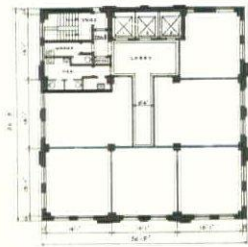




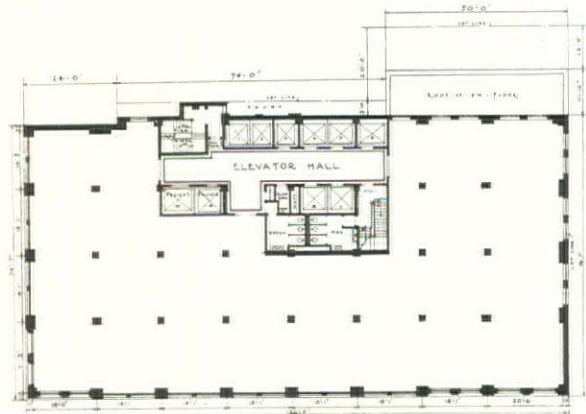
FULLER BUILDING,  
NEW YORK. WALKER &  
GILLETTE, ARCHITECTS

*Sigurd Fischer*

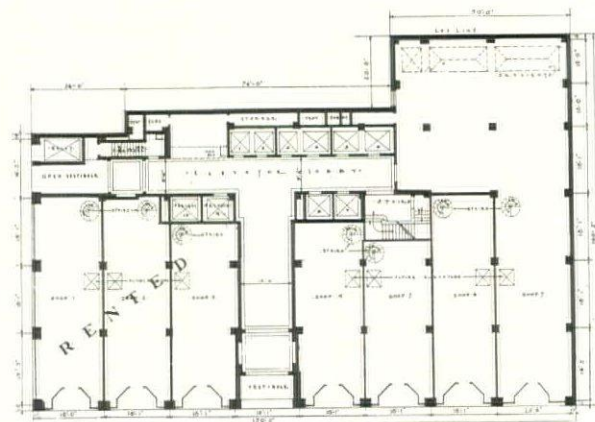




22ND TO 26TH FLOORS



9TH AND 10TH FLOORS



FIRST FLOOR

CONSTRUCTION DATA

Rentable Area: 209,492 sq. ft.  
 Cubic Centers: 3,752,168 ft.  
 Date of Completion: September 7, 1929.  
 Structural Frame: Steel.  
 Structural Floor System: Short span cinder up to and including 22nd floor; long span two-way floor block system above.  
 Fireproofing: Terra cotta.  
 Heating: Two-pipe vacuum steam.  
 Ventilation: Mechanical for toilet rooms and interior spaces.  
 Elevators: Full signal control, gearless traction.

Lighting: Alternating current supplied to all outlets through rigid conduit, low-tension systems through steel underfloor duct.  
 Radiators: Copper.  
 Plumbing: Water supply pipe, brass; soil pipe, cast iron underground, genuine galvanized wrought iron above ground.  
 Office Floors: Cement.  
 Office Walls: White plaster, painted.  
 Office Partitions: Steel and glass.  
 Corridor Floors: Marble and terrazzo.  
 Trim: Hollow metal.

FULLER BUILDING, NEW YORK.  
 WALKER & GILLETTE, ARCHITECTS

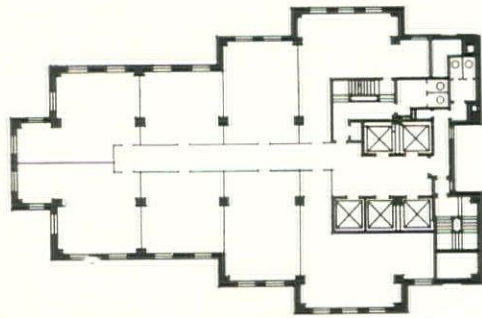




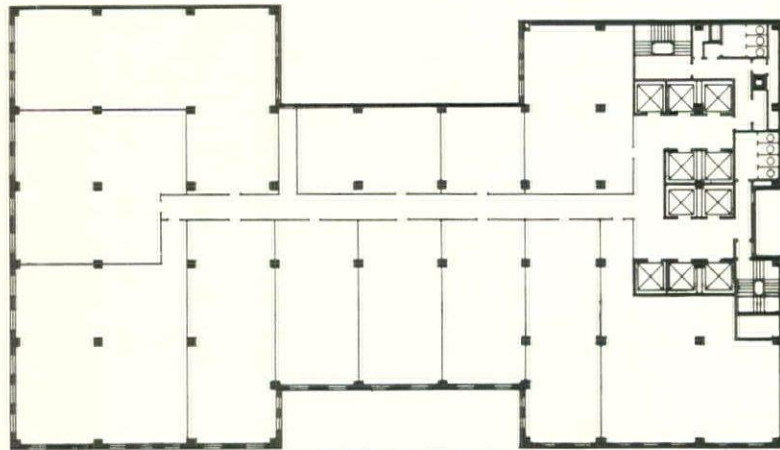
LEFCOURT - NATIONAL  
BUILDING, NEW YORK  
SHREVE & LAMB,  
ARCHITECTS

*Sigurd Fischer*

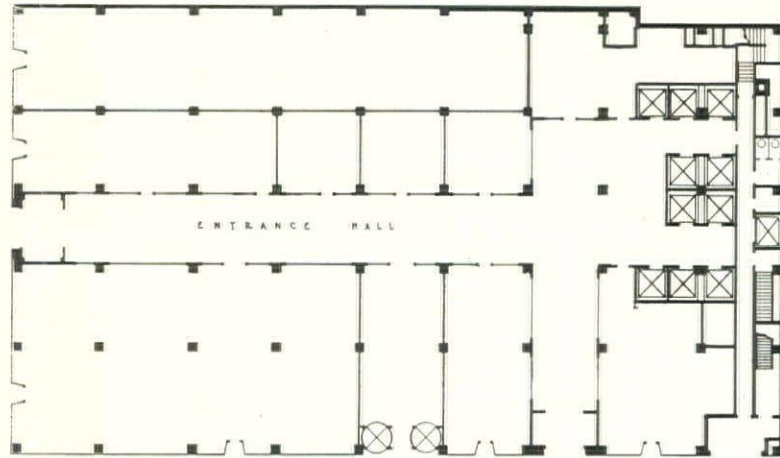




TOWER FLOOR



A TYPICAL FLOOR



GROUND FLOOR

CONSTRUCTION DATA

Rentable Area: Offices, 354,900 sq. ft.;  
 Stores, 36,690 sq. ft.  
 Cubic Contents: 5,311,000 ft.  
 Date of Completion: April, 1929.  
 Structural Frame: Steel.  
 Structural Floor System: Reinforced cinder  
 concrete.  
 Fireproofing: Columns, brick and hollow  
 tile; floor, steel and cinder concrete.

Elevators: Full signal control.  
 Office Floors: Cement.  
 Office Walls: Plaster.  
 Office Partitions: Plaster.  
 Corridor Floors: Terrazzo.  
 Windows: Steel.  
 Trim: Steel.

LEFCOURT-NATIONAL BUILDING, NEW YORK  
 SHREVE & LAMB, ARCHITECTS

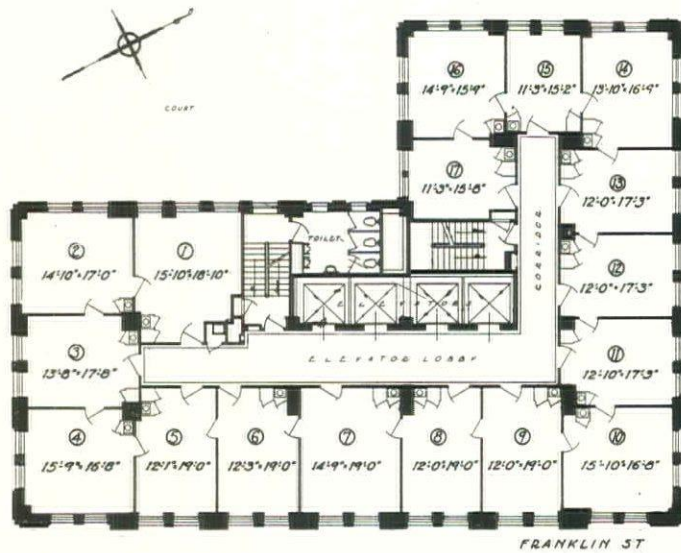




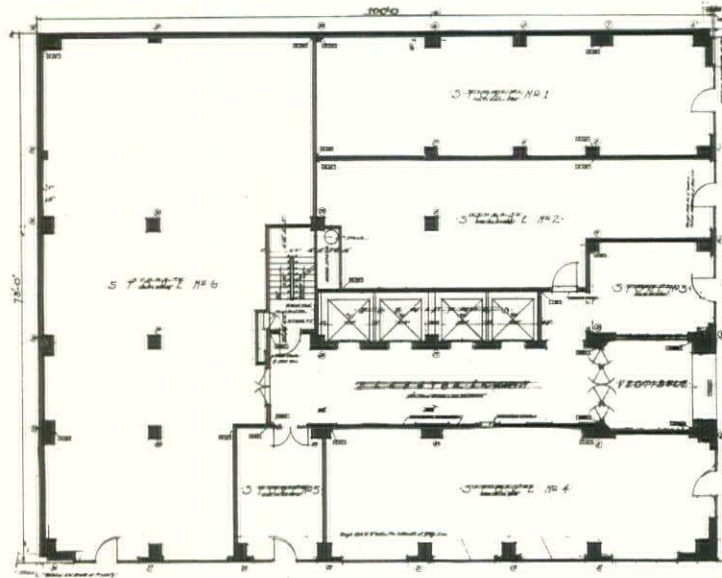
*Cohen*

FINANCIAL CENTER BUILDING, OAKLAND, CAL.  
REED & CORLETT, ARCHITECTS





A TYPICAL FLOOR



GROUND FLOOR

COST AND CONSTRUCTION DATA

Rentable Area: 60,200 sq. ft.—office space,  
 54,000 sq. ft.; store space, 6,200 sq. ft.  
 Cubic Contents: 1,300,000 cu. ft.  
 Cubic Foot Cost: \$.59.  
 Total Cost of Building (exclusive of land):  
 \$770,000.  
 Date of Completion: February 17, 1930.  
 Structural frame: Steel.  
 Fireproofing (material): Concrete.  
 Structural Floor System: Concrete.  
 Heating: Two pipe vacuum.  
 Lighting Type: Enclosing.

Ventilation: Exhaust for toilets.  
 Radiator Type: Wall-hung cast iron.  
 Elevator Type: 600 F.P.M. self-leveling.  
 Plumbing: Iron water supply pipe, cast iron  
 and iron soil pipe.  
 Office Floors: Linoleum.  
 Corridor Floors: Marble.  
 Office Walls: Stippled paint on hard wall  
 plaster.  
 Office Partitions: T. C. tile.  
 Windows: Double-hung, wood and metal.  
 Trim: Philippine mahogany.

FINANCIAL CENTER BUILDING, OAKLAND, CAL.  
 REED & CORLETT, ARCHITECTS

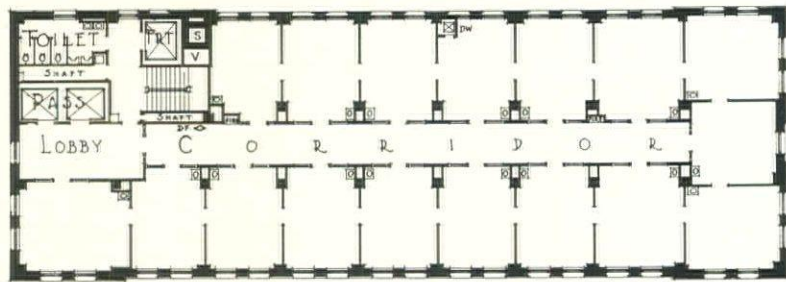




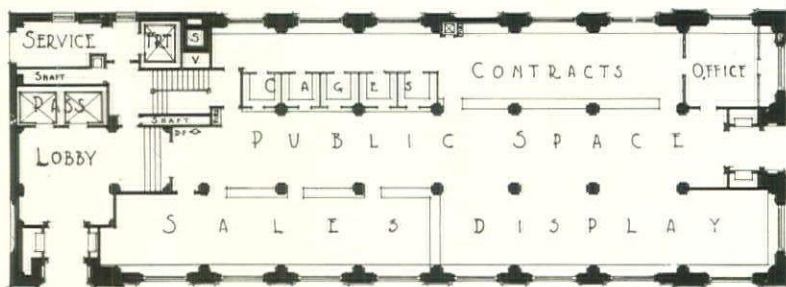
*Howards*

OKLAHOMA NATURAL GAS  
BUILDING, TULSA.  
A. M. ATKINSON, ARCHITECT





A TYPICAL FLOOR



SCALE 1" = 10'

GROUND FLOOR

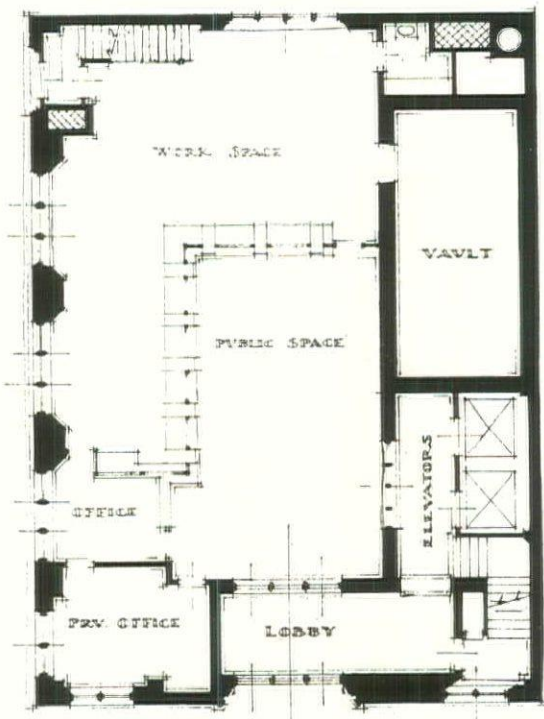
OKLAHOMA NATURAL GAS  
BUILDING, TULSA.  
A. M. ATKINSON, ARCHITECT



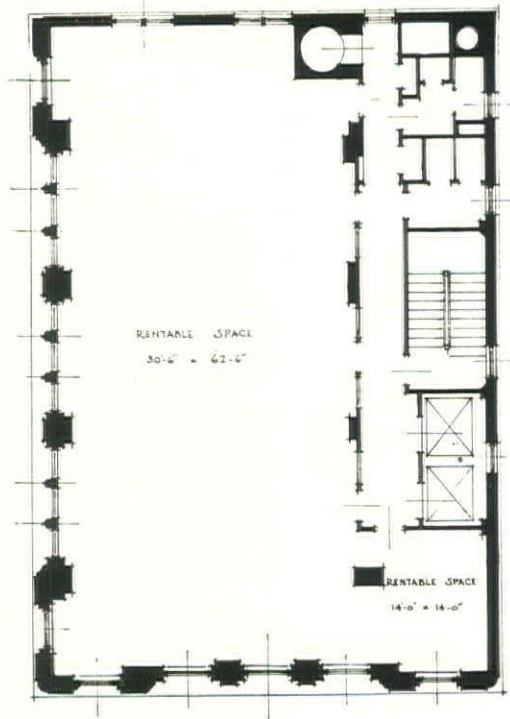


BUILDING AND LOAN  
ASSOCIATION BUILD-  
ING, SOUTH BEND, IND.  
AUSTIN & SHAMBLEAU,  
ARCHITECTS





BANKING ROOM FLOOR



TYPICAL FLOOR

#### COST AND CONSTRUCTION DATA

Rentable Area: 24,850 sq. ft.—office space, 20,000 sq. ft.; bank space, 4,850 sq. ft.

Total Cost of Building, exclusive of land: \$460,000.

Date of Completion: January 15, 1930.

Cubic Contents: 490,000 cu. ft.

Cubic Foot Cost: \$.94.

Structural Frame: Steel.

Fireproofing Material: Concrete and hollow tile.

Structural Floor System: Steel girders encased in concrete, and with concrete and pan floor spans.

Heating: Vacuum, dual central city plant, thermostatic control.

Lighting Type: Outside flood light; ceiling, electric.

Ventilation; Fan in basement for banking rooms only.

Radiator Type: Concealed in banking space, wall-hung slim type in offices.

Elevator Type: Full electric gearless type, automatic electric control.

Plumbing: Wrought iron water supply pipe, wrought iron soil pipe.

Office Floors: Cork tile.

Corridor Floors: Marble, first floor; terrazzo above.

Office Walls: Plastered.

Office Partitions; Gypsum tile.

Windows: Hollow metal.

Trim: Walnut, banking rooms; figured red gum in offices.

BUILDING AND LOAN  
ASSOCIATION BUILDING,  
SOUTH BEND, INDIANA.  
AUSTIN & SHAMBLEAU,  
ARCHITECTS

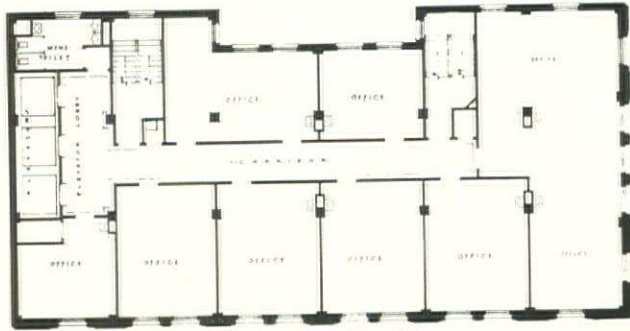




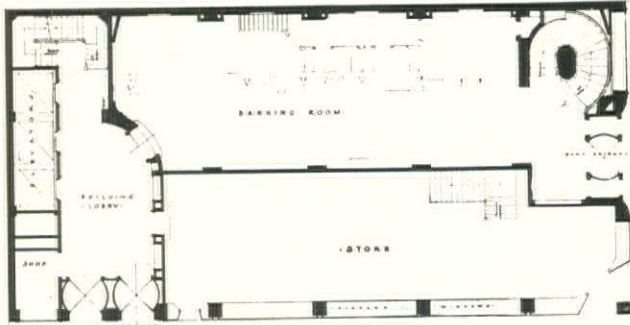
*Youngstown Art Engraving Co.*

CENTRAL SAVINGS AND LOAN CO.  
BUILDING, YOUNGSTOWN, OHIO.  
MORRIS W. SCHEIBEL, ARCHITECT.  
R. M. JOHNSON, ASSOCIATED

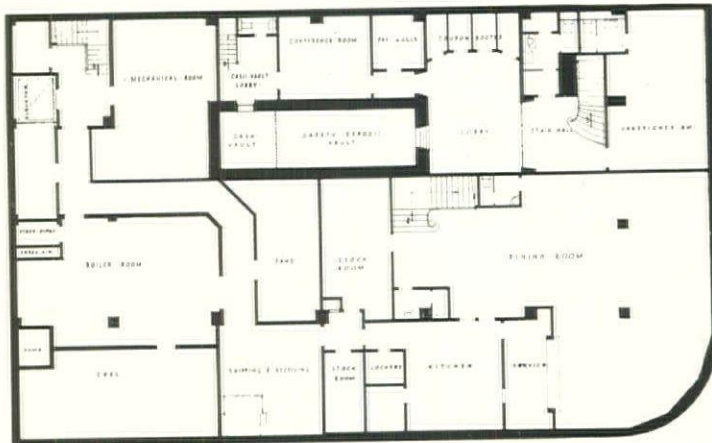




A TYPICAL FLOOR



FIRST FLOOR



BASEMENT FLOOR

COST AND CONSTRUCTION DATA

Rentable Area: 74 per cent.  
 Total Cost of Building, (exclusive of land) : \$1,000,000.  
 Cubic Contents: 1,200,000 cu. ft.  
 Date of Completion: December 20, 1929.  
 Structural Frame: Steel, and hollow tile fireproofing.  
 Fireproofing (material): 2-in. concrete.  
 Structural Floor System: 3/4-in. lath and 2 1/2-in. concrete slab; open truss steel joists.  
 Heating: Steam, and municipal heat.  
 Lighting Type: Direct in offices.

Ventilation: Mechanical in basement and banking rooms only.  
 Radiator Type: American.  
 Elevator Type: Signal control.  
 Plumbing: Galvanized water supply pipe, steel soil pipe.  
 Office Floors: Cement.  
 Corridor Floors and Walls: Travertine stone, entire height.  
 Office Walls: Sand finished, painted.  
 Office Partitions: Wood.  
 Windows: Steel double-hung and wood pivoted.  
 Trim: Philippine mahogany.

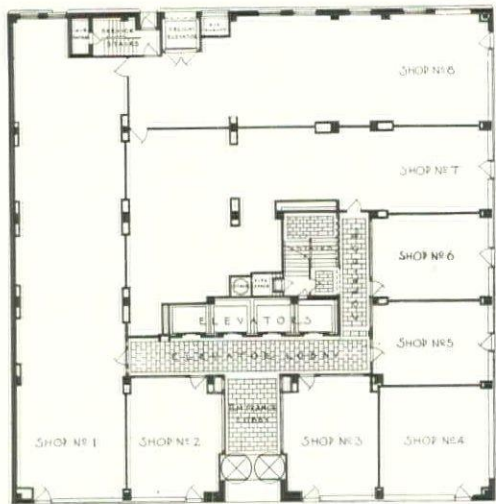
CENTRAL SAVINGS AND LOAN CO. BUILDING, YOUNGSTOWN.  
 MORRIS W. SCHEIBEL, ARCHITECT; R. M. JOHNSON, ASSOCIATED





AMERICAN BANKERS' INSURANCE BUILDING,  
CHICAGO. CHILDS & SMITH, ARCHITECTS

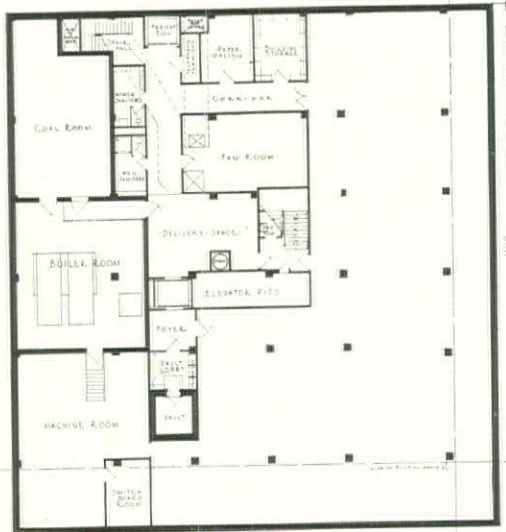




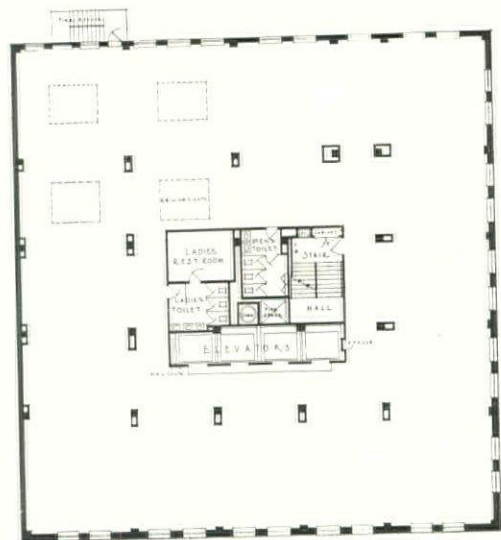
FIRST FLOOR



A TYPICAL FLOOR



BASEMENT FLOOR



THIRD FLOOR

### COST AND CONSTRUCTION DATA

Rentable Area: } Office space, 75,330 sq. ft.  
 83,390 sq. ft } Store space, 8,060 sq. ft.  
 Total Cost of Building (exclusive of land):  
 \$1,000,000 approximately.  
 Date of Completion: November 1, 1929.  
 Structural Frame: Skeleton steel.  
 Fireproofing Material: Concrete.  
 Structural Floor System: Reinforced concrete.  
 Heating: Direct radiators, vacuum system.  
 Lighting Type: Direct, with enclosing globes.

Ventilation: Supply to basement, 1st, 2nd and 3rd floors; exhaust from toilets.  
 Radiator Type: Phantom.  
 Elevator Type: Electric.  
 Plumbing: Wrought iron water supply pipe, wrought iron soil pipe.  
 Office Floors: Cement.  
 Corridor Floors: Marble.  
 Office Walls: Plaster.  
 Office Partitions: Clay tile.  
 Windows: Double-hung, steel.  
 Trim: Mahogany.

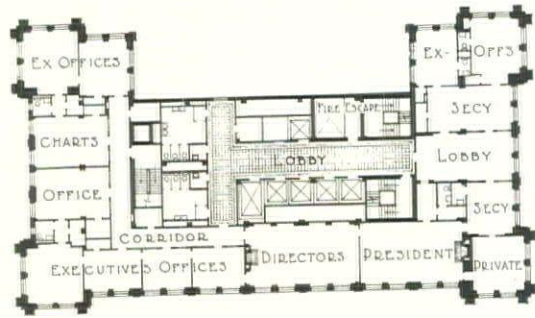
AMERICAN BANKERS' INSURANCE BUILDING,  
 CHICAGO. CHILDS & SMITH, ARCHITECTS



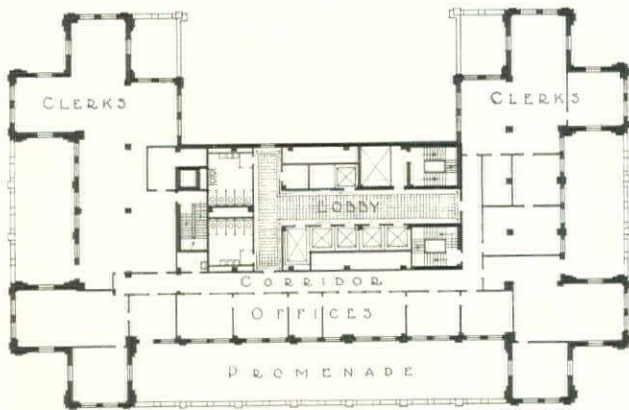


MOUNTAIN STATES TELEPHONE  
& TELEGRAPH BUILDING, DENVER.  
W. N. BOWMAN, INC., ARCHITECTS

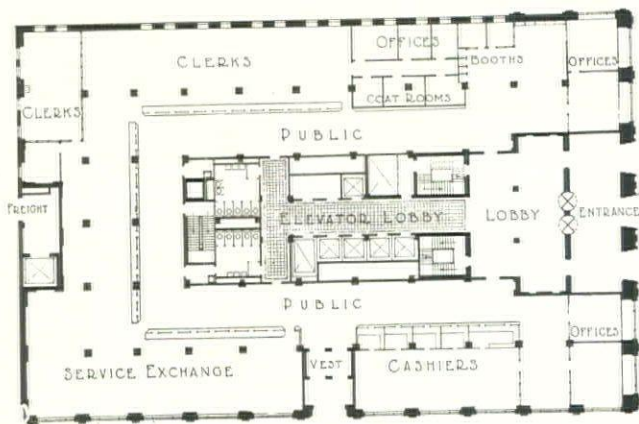




14TH FLOOR



11TH FLOOR



GROUND FLOOR

### COST AND CONSTRUCTION DATA

Rentable Area: Mountain States Telephone & Telegraph Company uses entire building.

Cubic Contents: 5,000,000 cu. ft.

Cubic Foot Cost: \$.60.

Total Cost of Building (exclusive of land): \$3,000,000.

Date of Completion: August 1, 1929.

Structural Frame: Steel.

Fireproofing (material): Concrete.

Structural Floor: Pan system.

Heating: Steam.

Elevator Type: Signal control.

Lighting Type: Electric.

Plumbing: Cast iron soil pipe.

Office Floors: Linoleum.

Corridor Floors: Rubber tile, marble and terrazzo.

Office Walls: Painted.

Office Partitions: Tile and plaster.

Windows: Double-hung steel.

Trim: Birch and walnut.

MOUNTAIN STATES TELEPHONE  
& TELEGRAPH BUILDING, DENVER.  
W. N. BOWMAN, INC., ARCHITECTS





BUILDING FOR THE OHIO BELL TELEPHONE CO., AKRON.  
MILLS, RHINES, BELLMAN & NORDHOFF, INC., ARCHITECTS



# THE PROBLEMS OF THE SMALLER OFFICE BUILDING

BY

WILLIAM C. WAGNER

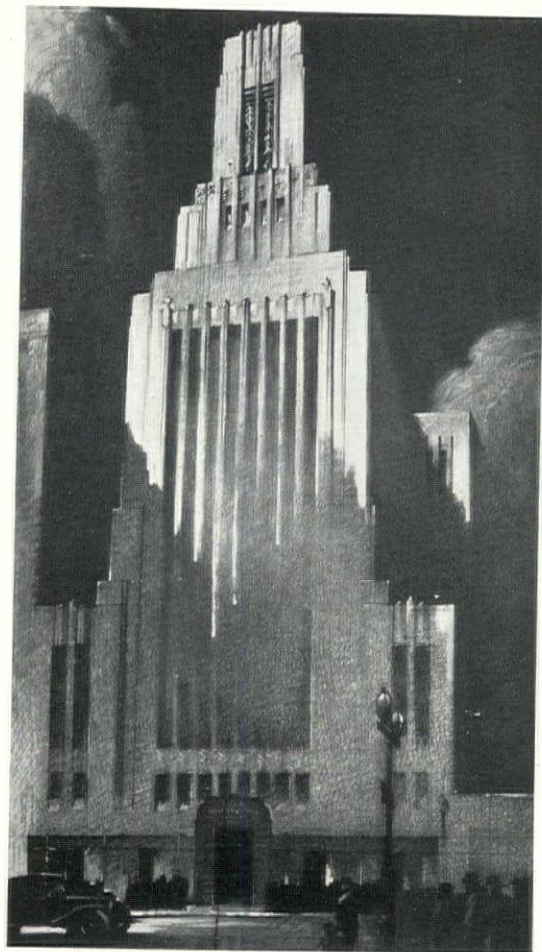
OF THE OFFICE OF MORGAN, WALLS & CLEMENTS,  
ARCHITECTS

THE driving force that determines the worth and extent of a commercial enterprise is the question of economic soundness. This is an elemental truth, since adherence to economic law is the foundation of all business. It is expedient, then, in investment building, to accord first consideration to economic problems.

The question of location bears an important relation to a building enterprise because it largely determines rentability and rental value. Rentability is indispensable to the success of a project; rental value fixes the maximum income, the production of which is the fundamental purpose of the building. The selection of a site is the first item of a financial set-up because it establishes the cost of the land, it determines that part of the operating and carrying charges assignable to land tax, and it imposes plan conditions.

Buildings of various types and sizes are confined in their range of location by the precepts of economics. Whether the cause or the result of high land value, it is true that buildings of skyscraper proportions are invariably built in districts where land value has increased to the point where great height is necessary to absorb the cost of the land. It is obvious that such districts are established business centers, and that therefore the element of risk attributable to location is reduced to a minimum, because the determining factors have been satisfactorily adjusted. Since this condition is not always present in sections where smaller office buildings are economically justifiable, the problems of location cannot be dismissed as solved for this type of building.

The plan controls the cost of the building and



*Photos. Mott Studios*

Proposed 13-Story Office Building.  
Morgan, Walls & Clements, Architects

supplements the cost of the land in determining the operating and carrying charges. By the proportion and nature of its rentable area it influences rentability and governs potential income. Thus one is obliged to develop a plan that will yield the maximum rentable area, and the utmost efficiency for its intended use. Ease of revision and adaptability to mixed tenant requirements are notable advantages in investment buildings, because they expand the limits of occupancy. The questions of tenant accommodations, building service, elevators, and general circulation, and provisions for lighting, heating and ventilating, are elementary but most important problems.

Maximum rentable area means maximum earning power for the expenditure involved. But the fact that rentable area is a maximum is not full indication that the building will be an economic success, because the net income might not be of sufficient magnitude to be a profitable percentage of the capital investment. This percentage can be computed by a comparison of



the net income, the capital investment, and the complete cost of the project. An analysis of these factors will show whether an increase or decrease in size will make the building more profitable.

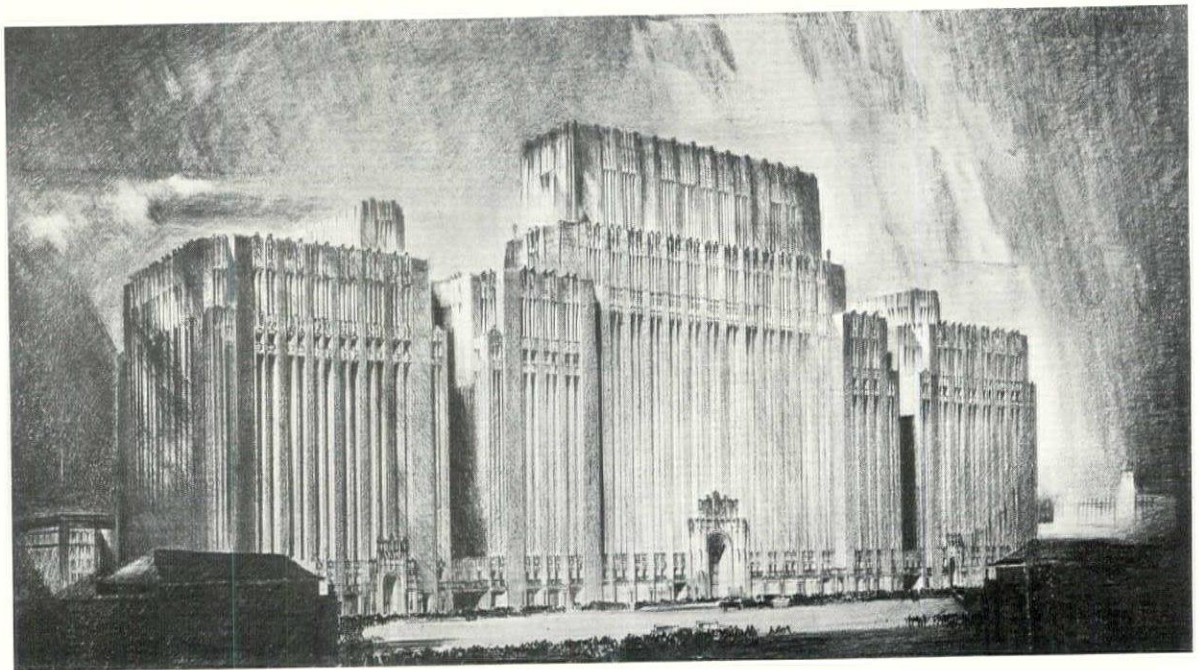
A building to be occupied entirely by one organization presents a problem whose requirements are more specific than those of a building projected solely for investment purposes. The basic consideration is not primarily that of ultimate expenditure, but more a problem of providing adequate accommodations for the present and future needs of the organization to be housed. Thorough knowledge and understanding of the reciprocal relations of all departments and their individual operating requirements are essential in order to provide the most satisfactory departmental grouping. Skillful arrangement has great time and labor-saving potentialities—qualities that are primary requisites of all programs for reducing operating costs. The phase of the problem that presents the greatest difficulty and the greatest liability for miscalculation is the forecasting of future needs. Here there is required an exhaustive survey of the development of past years, combined with an intelligent analysis of all facts contributing to probable expansion.

There is often the tendency, in considering the probabilities of future expansion, to so arrange the plan as to facilitate further building operations. The matter of expansion presents a problem that deserves very careful study because of its hypothetical nature. Any provisions for expansion that limit the efficiency of the plan, or cause additional expense, are almost never advisable, because elaborate programs of expansion are very seldom executed. Horizontal expan-

sion is limited by the confines of the site and by the permissible distances between correlated departments where intercommunication is of major importance. Wherever practicable horizontal expansion in the form of wings added to the original structure is more desirable than vertical expansion, because of its greater flexibility, its greater ease of execution, and the fact that it entails no additional original expenditure. Provisions for vertical expansion necessitate enlarged footings and foundations and increased strength of columns. The consequent additional expense, while not necessarily prohibitive, involves tying up an appreciable amount of capital in an unproductive investment.

The advisability of incorporating an automobile parking garage in the general scheme can best be determined by an accurate survey of the accommodations of the locality, the requirements of the building, and an analysis of the economic program. Experience has shown that in general an automobile parking garage in a small office building is not in itself an economic unit. A study of the required expenditures, the operating costs and the net income will show in a majority of cases that as a separate entity a parking garage is an accommodation only, and that it can be considered justifiable only for its effect on the ultimate success of the project.

The elevator has become the most important public service unit in office buildings, because by providing the necessary means of access to upper floors it has provided a source of income. Therefore, since elevator service is an index to rentability, an installation should provide the highest standard of service compatible with the





needs of the building. This is absolutely essential.

It is necessary first to consider the character of the building and the number and types of floors to be served,—whether basement, garage or office floors. The occupancy of the building is then estimated from the rentable area. Good circulation requires that the interval at which cars leave the entrance floor be from 20 to 30 seconds, and that the total number of occupants of a building be moved in not more than 45 minutes. It is then possible to accommodate in five minutes one-ninth of the number as a morning, noon or evening peak load, which is in accordance with good practice. Operating on an interval of from 20 to 30 seconds in a smaller office building generally increases the capacity for handling peak loads and reduces the time required to move the entire number of occupants. A study of the peak load, the passenger capacity of each cab, and the time required for a full round trip, will determine the number of cars required to provide satisfactory elevator service. A survey of operating devices and control systems is advisable to help facilitate and expedite a smooth flow of traffic.

The problem of elevator service in a building for a single purpose is more complicated and requires a more detailed study than in a building of general utility. Peak loads are generally greater, noon traffic will probably be equally heavy in both directions due to the existence of a cafeteria or recreational space in the building, and the intermediate traffic will be more brisk due to inter-floor communication.

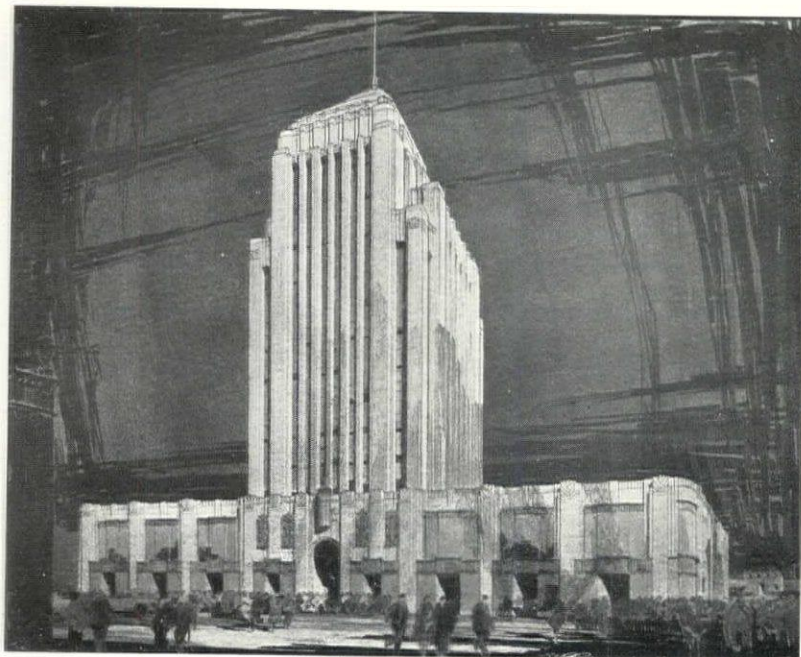
The factors that control the choice of a structural system are the limiting characteristics of the materials used. As building height increases and

spans lengthen, use of reinforced concrete gradually becomes impractical due to proportional increases in the sectional areas of the structural members. Where the height of the building and the nature of the plan permit a choice between reinforced concrete and steel frame construction, and where the economic program will allow the increase in cost, it is desirable to employ a steel frame because of its greater adaptability and its greater ease of structural revision.

The smaller office building presents no problem in design that is not subject to the same principles of simplicity and directness that obtain for any type of building. It is conceded that design should proceed from structure, that it should be a rational expression of purpose. Depending upon the nature of the building, whether for general utility or for a special purpose, the problem becomes one of expressing desired qualities of the structure, or of isolating distinguishing characteristics of an organization, and expressing these architecturally. This is a difficult problem that demands ingenuity and imagination,—a problem where style is not necessarily pertinent.

Nevertheless, where a building has been developed with an intelligent use of materials, with a thorough understanding and sympathy for all the principles of modern business, where there has been a successful endeavor to provide conditions wherein these objectives can be fully maintained and developed, how can the design do otherwise than reflect frankness and thorough efficiency, straightforward simplicity and refinement, an inspiring sense of fitness and an honesty of purpose? And are not these fundamental requirements of successful business?

On Opposite Page, Three  
Office Buildings Connected  
by Garage Entrances.  
Morgan, Walls & Clements,  
Architects

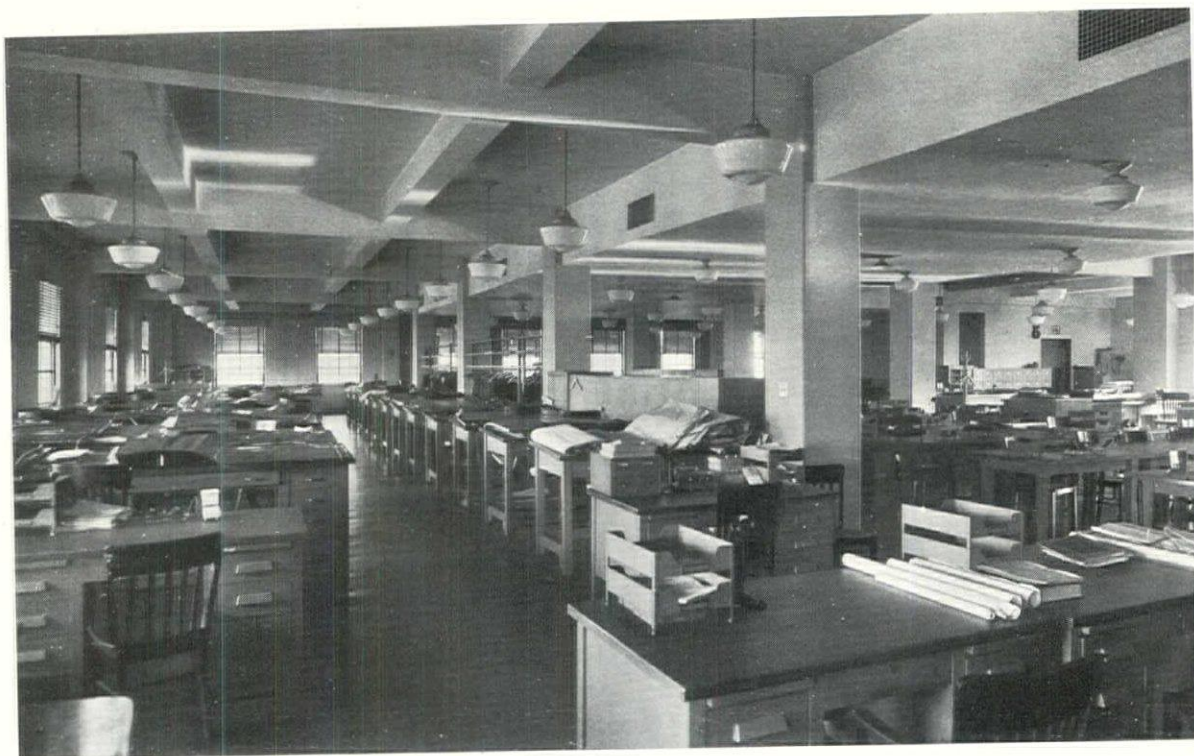


(Right) Store and Office  
Building for the Domin-  
guez Wilshire Company,  
Los Angeles. Morgan,  
Walls & Clements, Archi-  
tects





Private Office: Todd, Robertson & Todd Engineering Corporation, New York  
Sloan & Robertson, Architects



A Large General Office: Brooklyn Edison Co., Inc.  
Voorhees, Gmelin & Walker, Architects



# THE INTERIOR ARCHITECTURE OF OFFICES

BY

ARTHUR LOOMIS HARMON

THERE is much talk of the romance of business. Is it reflected in the architecture of the offices where it is conducted? Start with a large general office as shown in the illustration. This is part of one floor of which there are many in the building, duplicated in many others but with less light and less of order. Fill it with people, and in them there is romance; but then you must include their hours outside the office, the range of their thoughts while there, and the office clock. Of architecture there is none in the usual sense.

Look into the executive offices. The lives of those who occupy them are more a part of the businesses. That is one of the reasons for their being in them. The returns are greater; something is left over in money and thought not only to impress the customer but also to satisfy the longing for a beautiful setting. If "rich" is more often the suitable word to define the result, the intention is honorable.

In looking for romance, remember that these spaces "have arrived;" prosperity and the conservative outlook are theirs. There is something to be said for the wife in Barrie's "Twelve Pound Look" who was tired of her husband's "fat friends" eating his "fat dinners." You see some of it. Perhaps the reason there is not more is the fault of the designers. Or it may be not in themselves but in the stars; at least in their orbits, for these days stars are known by the orbits that they keep, and in the orbits which run through business offices the romance may have been paid in somewhere else, to appear again on the books of the company,—of course in profits.

There are physical limitations which go with the office interiors. Ceiling heights are not bad, but are uniform and not high. Windows are large and few in number. Grouped windows are extremely rare. One or two walls may be blank and unbroken. Something is wanted to give a



*Sigurd Fischer*

A Telephone Room, General Motors Building, New York  
Shreve & Lamb, Architects





(Left) Board Room, Brooklyn Edison Co., Voorhees, Gmelin & Walker, Architects

(Page Opposite) The Information Desk at Brooklyn Edison Co., Voorhees, Gmelin & Walker, Architects

*Sigurd Fischer*

feature on one of the walls. It is for this reason in most cases, I think, that fireplaces are introduced,—for their architectural value rather than in the expectation of their use.

Individuality is generally suppressed even in the private offices of executives. Sometimes one makes his office look like a living room as is shown in one of these illustrations. Even then he is careful not to carry this too far, and he strives to produce the effect of a room associated with the business rather than a living room in which he does his work. He would have no time for books. The pictures he might prefer would suggest an alien thought, at least to others, and so would the feminine influences that go to make

his home, and if he used all these things he would be exposing himself to every stranger who came to see him on business.

The reader will note a tendency toward modernity. The reason is significant,—at least to me. Rooms seem to have distinct characteristics apart from their furniture. The characteristics of an office seem to me to lie in simplicity, dignity, a certain expression of use, and a suggestion of the thing behind the office which that represents. This, in most cases, is more fittingly presented impersonally than as the habitat of a marked individuality which is in itself the business.

The rooms where architectural treatment is demanded are usually of two kinds,—the execu-



*Sigurd Fischer*

tive office and the board room. In the larger lay-outs lobbies and reception rooms also become important and occasionally, libraries, and infrequently dining rooms. Examples of typical lay-outs of executive office floors are developed showing elevator lobbies, reception rooms, board rooms, private offices, and other spaces. Except in large concerns, however, opportunities for architectural effects in planning are rare.

The illustrations show some of the modern tendencies. In tall office buildings of large cities all material, except furniture, must be fireproof. This does not preclude the use of wood, since that may be rendered fireproof by chemical process. Floors are wood or composition, usually

with rugs. Walls are treated in wood, plaster or composition; in any case simply, and in the case of wood frequently with flush unpaneled surfaces. Ceilings are most often plaster. Lighting is still the problem, here as elsewhere. Direct lighting is hard to dispense with at a desk. For indirect cove lighting there is seldom space. Indirect lighting from the ceiling is good for general illumination, but most people seem to dislike a bright ceiling and dark floor, preferring direct light from chandeliers or brackets for decorative as well as lighting values. No doubt in this article it would have been better to take the architecture and let the speculation go. However, that is what the illustrations are for!

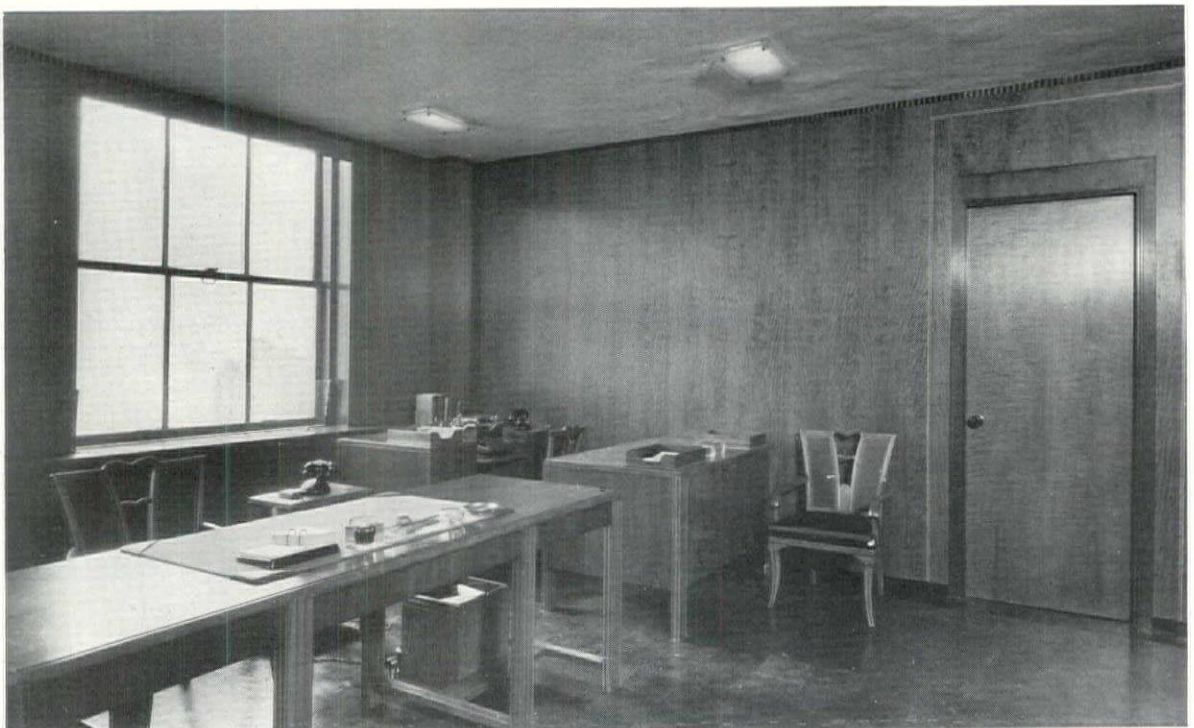




*Thomas Rotan*

(Left) An Executive Office in the News Building, New York. John M. Howells, Raymond M. Hood, Associated, Architects

An Executive Office for Ford, Bacon & Davis, New York. Eugene Schoen, Inc., Designers



*Mortimer Offner*



# MODERNIZING OLD OFFICE BUILDINGS

BY

GRAHAM ALDIS, Aldis & Company, Chicago

AND

F. P. BURT, Editor, *Buildings and Building Management*

THERE is a case in the courts today where a 198-year lease makes no provision for a building to replace the existing structure save in case of destruction by fire or other casualty. Lessor and lessee are now at issue on the lessee's right to replace the structure,—the Chicago Auditorium. The nineteenth century mentality which created such leases envisaged a commercial structure of the monumental type as a permanent improvement of as fixed a character as the Bank of England or a Gothic cathedral. Then the pendulum of thought swung to the opposite extreme. A number of early skyscrapers, the marvels of their day, from 10 to 15 stories high, succumbed within a couple of decades from the dates of their construction.\*

**CAUSES OF OBSOLESCENCE.** It began to look as though the life of the typical office building might not much exceed that of battleships. These premature demises were due to: (a) inappropriate type of improvement, e.g., an office building in an intensive shopping district; (b) inefficient designs,—high ceilings, clumsily shaped offices, heavy masonry walls and (c) heights inadequate to earn a return on increasing land values.

**STABILIZATION.** Now, however, a better understanding and definition of urban trends increase the chances of constructing the right building. Office building design conforms to office users' requirements. Zoning and height limitation ordinances, whose general terms are stabilized in the greater American cities, insure that "maximum developments" will not be materially exceeded. If, then, we ignore two radical and reciprocally opposed suggestions,—first, artificial light and ventilation obviating the need of windows and light courts, and, second, all-glass exteriors,—ignoring these, we can assume that existing office building design will never be radically altered. If then, existing structures are going to stand for 40 years instead of 20, a very

different economic philosophy will prevail about their upkeep. It will not be a question of patching the original mechanical installation to force its mechanical life to last out the economic life of the shell. Assuming the life of machinery to be from 10 to 20 years,\* one and perhaps two complete replacements will be normal.

**DESIGN CHANGES.** But utility, direct economy, is not the sole factor. If the disciples of the modern school are correct, it will, indeed, be the lesser factor. For, if design is henceforth to express purpose instead of accepted ideas of ornament, then much that has been acceptable, even impressive, is out of date. Today, in Chicago, the various "towers" built since the passing of the zoning ordinance of 1921 divide markedly into "before" and "after." Contrast 333 North Michigan Avenue and the Palmolive Building with the *Tribune* Tower, or with even the same architects' Methodist Temple, or with the Pure Oil Building. Not that the exterior appearance of these towers will be changed, but there is a mass of detail,—exterior and interior, cornices, trim, the corridor finish, the lobby, in fact the exterior of the entire lower floors,—where radical changes are not merely possible but indeed are highly probable in many buildings of 20-odd years' age.

It is not the province of this paper to discuss when a building is obsolete, but it should not be forgotten that there are certain cases where modernization is demanded even when strictly economic considerations would indicate a complete replacement. Such cases occur when a property is small or is being maintained for consolidation after the expiration of an adjoining lease, and more especially when the land tenure

\*The life, in years, of some items of building equipment has been estimated thus:

Boilers—(a) Water Tube .....	24.5
(b) Horizontal Tube .....	16.1
Stokers or Grates .....	7.2
Boiler Plant Piping—(a) Steel .....	18.6
(b) Iron .....	30.0
Pumps .....	10.-16.0
Elevator Motors (Direct or Geared) .....	16.4
Signal and Control Equipment .....	5.8
Elevator Cabs .....	30.0
Safety Equipment .....	5.3
House Water Tanks—(a) Steel .....	23.5
(b) Wood .....	13.6
Water Closet Bowls .....	21.3
Water Closet Flush Tanks or Valves .....	9.8
Water Closet Seats .....	11.0
Radiators .....	27.5
Indirect Radiation .....	21.2
Electric Fixtures .....	9-12.0

(\*Depreciation of Office Buildings: Its Relation to Income Tax." Published by the National Association of Building Owners and Managers, Chicago, 1925.)

\*Champlain Building, 15 stories, northwest corner Madison and State Streets, Chicago. Erected 1894, demolished 1915,—21 years.

Trude Building, 14 stories, southwest corner Wabash Avenue and Randolph Street, Chicago. Erected 1897, demolished 1912,—15 years.

Manhattan Trust (Gillender) Building, northwest corner Nassau and Wall Streets, New York. Erected 1894. Typical fireproof, steel construction of the period, it became obsolete with respect to requirements of location and was torn down and replaced by a new building in 1912. Life, 18 years.

("The Effect of Obsolescence on the Useful and Profitable Life of Office Buildings," by Earle Shultz, p. 215. Published by the National Association of Building Owners and Managers, Chicago, 1922.)



is qualified, e.g., subject to easement or possible condemnation; or, where the terms of ownership or of the 99-year lease do not permit rebuilding, or contain revaluation or other provisions which prevent financing a new building. Such cases are exceptional, but are probably numerous.

**THE PURPOSE OF MODERNIZATION**, in fact of any building alterations, is of course to enable the building so altered to compete profitably with other newer or better buildings. The factors usually included in modernization projects are: (1) operating efficiency, (2) appearance, and (3) "rentability," the factors other than aesthetic which appeal to tenants. Ordinarily, the requirements of such a project are not confined to one of these factors but may include two or even all three of them. In this discussion the engine room proper may be disregarded. Changes of equipment in this department are made as they would be in a power plant, primarily for operating efficiency, although rentability may also be improved.

**CONDITIONS FOR SUCCESS.** It may be observed that most of the buildings that undergo successful rehabilitation are those that have gained good repute in early life and which also possess certain inherent advantages in location, etc. An example of this type of structure is the Marquette Building, in Chicago, completed in 1895 and "still going strong." This building was fortunate in its,—for the time,—advanced design, with impressive lobby, shallow and well lighted offices, and modern surface materials, such as terra cotta exterior, mosaic tile flooring, mahogany and marble trim. The lighting fixtures have been replaced at least three times, and the electric wiring once, during this period of time. The elevators are now of the high-speed variable voltage electric type. Thus, this 16-story, 36-year old structure continues to capitalize profitably both its own history and the history of Pere Marquette as perpetuated by its uniquely developed and decorated lobby.

**ELEVATORS.** Hydraulic elevators are almost everywhere being supplanted by electric elevators if for no other reason than economy of operation and the wearing out of the cylinders. The instances where old rheostat-controlled electric elevators are being supplanted are becoming more and more frequent, wherein there is some gain in operating efficiency. But the primary motive for the change is a refinement in the service rendered to the tenant. He feels that he is enjoying the newest and the best. More marked even, because of this motive, is the replacement of elevator cabs as the enclosed shaft requires an enclosed cab. Nevertheless, even where the shaft is not enclosed,—even in some cases where it enjoys natural daylight,—enclosed cabs have been installed so that the passenger will enjoy the

feeling of being boxed up and expressed skywards in the manner characteristic of the newest buildings. The manager of an old building cannot afford to ignore "sympathetic magic."

**THE DREXEL BUILDING**, in Philadelphia, has entered its 42nd year of successful operation. Its record of space occupancy normally runs between 92 and 96 per cent. It is one of the earliest buildings of modern type, with fireproofed metal columns, girders and beams. It began life with this sturdy framework, with good proportions, and has had the advantage of fostering care. Its owner, the late Anthony J. Drexel, made special provisions in his will for the welfare of the building, stating his purpose thus: "My object in this is that I would wish my descendants and members of my family to be interested in the Drexel Building, and especially because I believe that there is no more certain or reliable property to be held than real estate." Rejuvenating operations on this building have been quite frequent. Major structural changes included the entire remodeling of one of the street entrances, eliminating entrance steps, widening the entrance doorway, and providing a street-level vestibule; the construction of two new floors on a level with the second and third floors of the remainder of the building, in a large, tall section that formerly contained the banking quarters of Drexel & Co.; the opening up of a light court on Chestnut Street by removing a narrow four-story building whose owner would not sell at the time the Drexel Building was erected,—this last change releasing good space for a row of well lighted offices on the second, third and fourth floors.

Other improvements included a complete reconstruction and re-equipping of the toilet rooms; a thorough modernizing of the lighting system in the offices as well as the public spaces; the covering of all office floors with linoleum; the enclosing of the elevator hatchways with steel framed wire glass, and the installation of double swinging steel doors in the entrances to the corridors, also glazed with wire glass. Two additional passenger elevators and one freight elevator have been installed, but the hydraulic system of operation has been retained. Except for the installing of duplicate generating apparatus, there has been no radical change in the mechanical plants. The notable thing about the keeping up of this building is that it has been a continuous process, based upon a fixed policy to keep close watch for opportunities to make improvements and to see that they are made before tenants complain or even suggest changes.

**STORE FRONTS.** A few years ago the general tendency was toward making store fronts with the maximum glass area and no visible means of supporting the superimposed walls. This require-



ment by merchants was a natural cause of grief to many architects and an obvious source of difficulty in reconstructing old buildings having solid masonry piers or bases.

About the most extensive and costly of cases on record is that of the First National Bank Building, in Chicago, an office building, the high repute of which has kept it well filled with tenants at high rental rates since its opening in 1902. Continuous operation was provided for the bank and the tenants during reconstruction. (For more complete data see *THE ARCHITECTURAL FORUM*, February, 1930, page 289).

**THE CHEAPEST CASE** of modernizing found, one that, nevertheless, was exceptionally profitable, is that of the Sonna Building. This is a three-story brick building that stands on one of the most prominent corners in Boise, Idaho. It was built in three sections between 1886 and 1896 and occupies a main street frontage of 223 feet and a depth on a side street of 122 feet. After being the principal building of the city for an average building's lifetime, it was forced to compete with several new fireproof office buildings. Being owned by an estate whose trustees were not willing to wreck and rebuild, it was put through a renovating process that consisted chiefly of remodeling the entrance and lobby, resurfacing corridors and repainting walls and trim in the office space and improving store fronts and incidentally getting rid of objectionable signs. The cost amounted to about \$13,000. Tenants have been retained, have been charged higher rents, and the net resulting increase in revenue is sufficient to pay off the investment for reconstruction within two and one half years.

**ADDITIONS.** Remodeling old buildings is frequently brought to the attention of owners when they construct additions to their existing buildings. In such instances the progress made in construction methods and the development of equipment accentuate the shortcomings of the old structures. Building owners and managers are interested in obtaining the maximum rental income, and to this end it is frequently necessary to spend some money on an old building in order to prevent this space from depreciating the rental value of office space in the new section.

The importance of making these decisions correctly has resulted in the Building Planning Service being called upon to work on a number of assignments where additions to existing buildings were involved, such as the Huntington National Bank Building, Columbus, Ohio; the Paulsen Building, Spokane; the Yeates Medical Building, Minneapolis; and in two other instances, the First National Bank Building, St. Paul, and the Penobscot Building, Detroit, the new additions were so much larger than the existing build-



Original Store Fronts



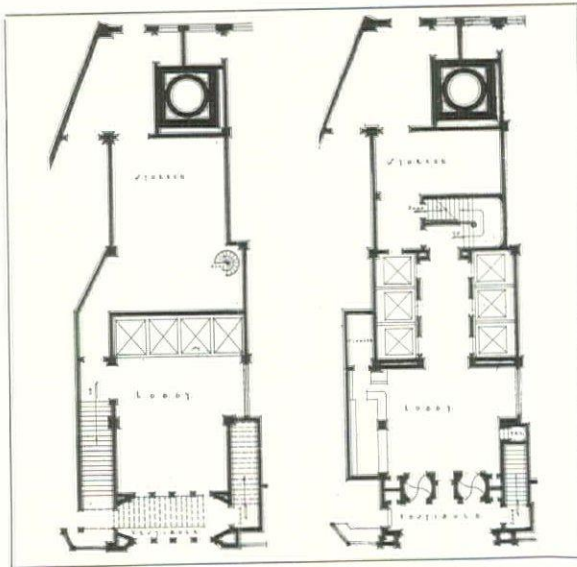
Remodeled Store Fronts  
The Arcade Building, Cleveland

ings that the new structures could hardly be called additions. In the Huntington National Bank Building it seemed desirable to make some changes in the corridors of the old building.

**CORRIDORS.** In general, the trend in corridor treatment in new buildings is to the use of full glass panel doors, whereas in the older buildings the half glass panel door was standard. With the development of the full glass panel door, borrowed light in corridors became less essential; and as borrowed light installations are more expensive than a straight plaster wall finish, new construction is less expensive than the old type.

**LIGHTING.** More progress has undoubtedly been made in developing efficient lighting units than in other office building furnishing. The tendency has been toward using a semi-indirect type of enclosing fixture and a larger sized light bulb, for the double purpose of providing additional light for tenants on the working plane, and to obtain a more uniform distribution of light. In some instances to the additional current requirements for lighting was added the current required for operating time and labor-saving office appliances, such as adding machines, electric typewriters, etc. Older buildings have not been wired with a sufficient amount of feeder copper to carry the required current. In one instance





Original Plan                      Alteration Plan  
 Old and New Arrangements of Main Entrance, Lobby and  
 Elevators, Rose Building, Cleveland

this has necessitated the installation of larger feeder bars to the distribution panels on various floors, which entailed a considerable expenditure of money. The trend in office building electric consumption is toward even larger uses of current, and a number of old buildings may be faced with the necessity of furnishing additional copper within the next few years.

**INTENSIVE SPACE USE.** An additional problem is presented in the more intensive use of office building space, and whereas 110 square feet was formerly considered the average space required per capita, the more efficient tenant layouts have decreased space requirements so that some modern buildings have been planned for normal occupancy of 90 square feet per capita. In certain instances, where office space is used as open workroom units without partitions, the actual rate is one worker for each 65 square feet of space. These trends not only indicate the need for faster elevators but in some instances may involve adding additional elevator units. One example is that of a LaSalle Street building in Chicago where an additional elevator was installed some three years after the building was opened. The additional elevator unit cost more than double what it would have cost if it had been installed when the building was originally constructed. Such changes can be anticipated.

**HEATING.** Recent developments in heating plants for office buildings have been toward the use of temperature control devices which require new appliances attached to the equipment rather than changes in the basic heating system. The old type of multi-tubular radiators, with the top and bottom headers, has been replaced by shallower two- or three-column cast iron radia-

tors. Within the next few years we may see a wider use of light weight copper radiators with extended surfaces, which will greatly reduce the floor area that they occupy.

**STORE FRONTS.** Probably a greater amount of money has been spent in downtown commercial buildings for the rehabilitation of store fronts than in any other portion of the buildings. The old structure is frequently handicapped by having a large amount of stone or other facing material, which reduces the amount of available window display space. Even banks are desirous of obtaining additional window display space, and the Northern Trust Company of Chicago has expended a considerable amount of money to obtain additional ground floor window area.

**ADDING STORIES.** Another item to be considered in this general subject is the addition of stories to a building after it is completed. While this is usually space expensive to produce, it has been secured in the Garland, Peoples' Trust, Northern Trust, and Bell Telephone Company (Washington Street) Buildings, in Chicago.

**A DANGER.** We often are a wasteful people, particularly in prosperous times. Often it requires an economic shock, like that administered last fall, to make us conscious that we are running toward disaster, notwithstanding cautionary signals such as had begun to appear a year or more ago. Even now there are some in the building construction field who appear to think that what is known as President Hoover's plan to restore confidence means that these warnings may be disregarded. But we can assume that the President and his advisers are astute enough to realize that the operating of commercial buildings is an industry comparable with any other large industry,— railroading for example. With our office buildings abnormally vacant, there is no more justification for erecting new structures to remain empty, to increase vacancies in and further jeopardize the income of real estate bondholders, than there is to encourage the paralleling of already adequate railway lines or the purchase of new rolling stock when yards are full of idle cars. The campaign now being carried on from Washington by the Department of Commerce may, however, logically have support from those who have the older buildings in their charge.

**CONDITIONS JUSTIFYING MODERNIZING.** A good name, advantageous location and enough height to constitute a reasonably adequate improvement of the site from an earning standpoint are important factors in justifying remodeling. To these should be added a floor plan having dimensions that permit the laying out of office units to meet the local demand. The word "local" is used because it is a fact that preferences in office dimensions vary considerably with the



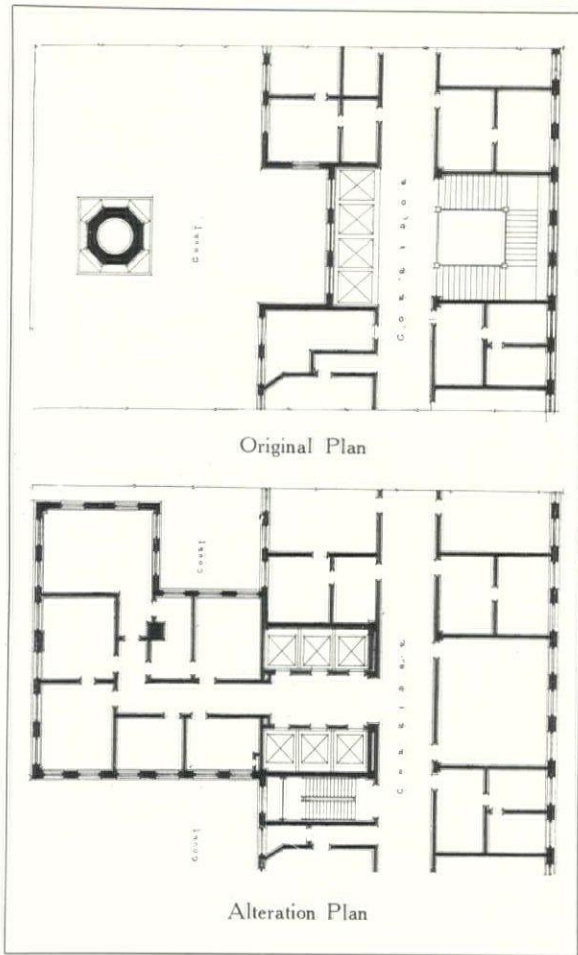


Remodeled Entrance and Elevator Lobby, Rose Building, Cleveland

locality. In the northern tier of states, from the Mississippi to the Atlantic, a bay width of from 16 to 18 feet and a depth from windows to corridor of from 22 to 26 feet are generally acceptable. But in some parts of the country offices so dimensioned would not find a ready market, nor would tenants accept the low ceilings that have come into vogue in cities where building height regulations create an urge to crowd in an extra story. Indeed, some of the older buildings are beginning to learn that their high ceilings, airiness and spacious lobbies, while expensive to maintain, are not such bad investments after all.

The author recently took a group of persons on a detailed inspection tour of two prominent buildings in a good sized city. One was of the type described. The other was an excellent example of the intelligently but very tightly planned modern type, as efficient an operating unit as an ocean liner. The respective managers were equally characteristic. The older man had grown up with his building, knew every tenant's idiosyncrasies and indeed had sometimes provided for their requirements before the tenants themselves had realized them. His competitors were brisk, exact and accurate, and demonstrated their automatic water coolers and gadgets as enthusiastically as automobile salesmen. The inspecting group divided about equally in their preferences as hypothetical tenants from out of town.

But, given these attributes of good reputation, strategic location, appropriate height and floor dimensions, the remodeling of a sound, fireproof framed structure is a sounder conservation of established values than perhaps promoters realize. And this is true even if it proves necessary to



Original and Alteration Plans Showing Addition in Rear. Rose Building, Cleveland

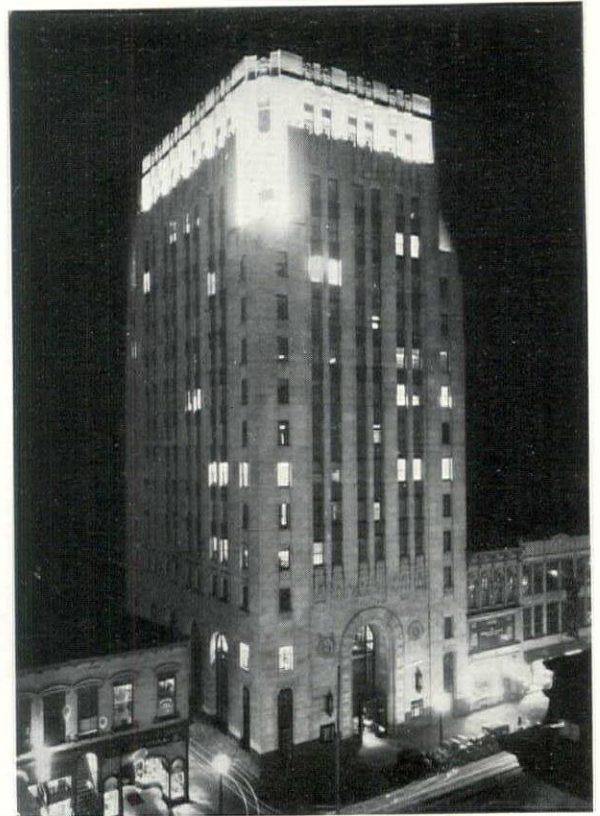
re-face the exterior, redecorate the lobby and corridors, and supplement and modernize the elevator, heating, lighting and plumbing plants.

The skyscraper has been hailed as one of the most characteristic expressions of the American genius. Yet, paradoxically, it is one of the least "rationalized." The 2000-odd buildings have nearly as many owners. Many of these owners, like banks, public utilities and large corporations, regard their buildings as a subsidiary matter. Other buildings suffer because of absentee ownership, ownership by estates, etc., willing to sell space but lacking the knowledge of how to improve. Gradually, however, the owner is coming closer to the management and is realizing that his office building is a business and not a fixed investment. Through a systematic study of the rental market, investors and promoters are acquiring a belated recognition that the law of supply and demand applies even to office buildings. With this stabilizing influence, alert owners of sound old properties can be expected to institute rehabilitation programs with increasing frequency and of greater comprehensiveness.

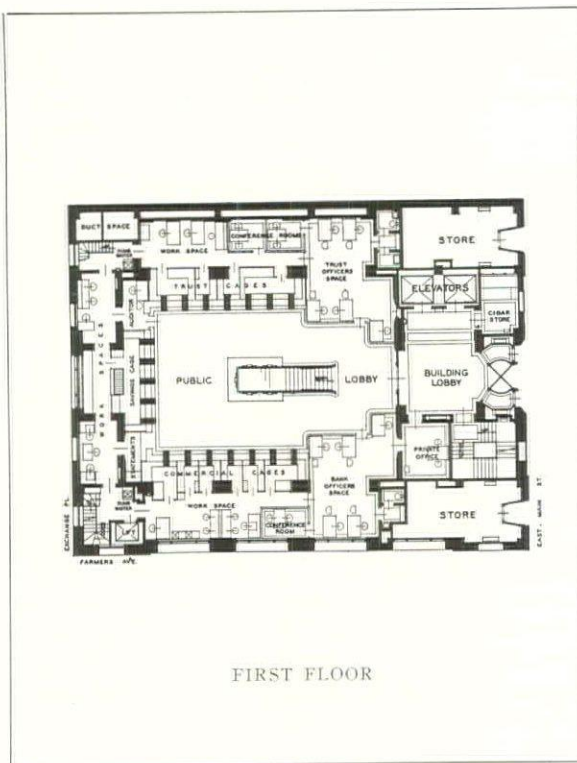




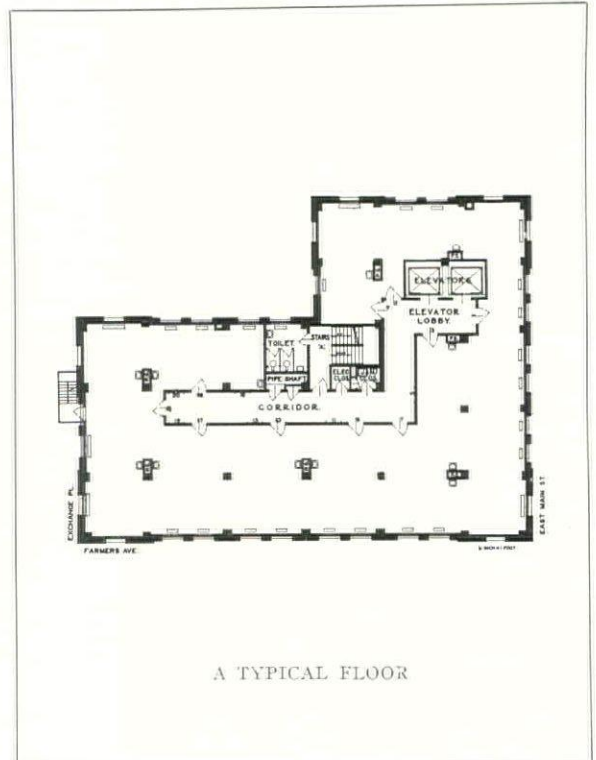
GENERAL VIEW



NIGHT VIEW



FIRST FLOOR



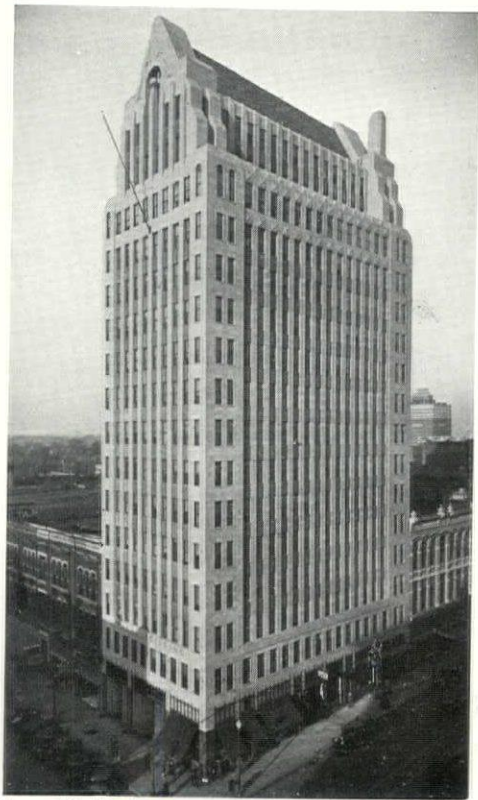
A TYPICAL FLOOR

KALAMAZOO TRUST & SAVINGS BANK BUILDING.  
WEARY & ALFORD COMPANY, ARCHITECTS





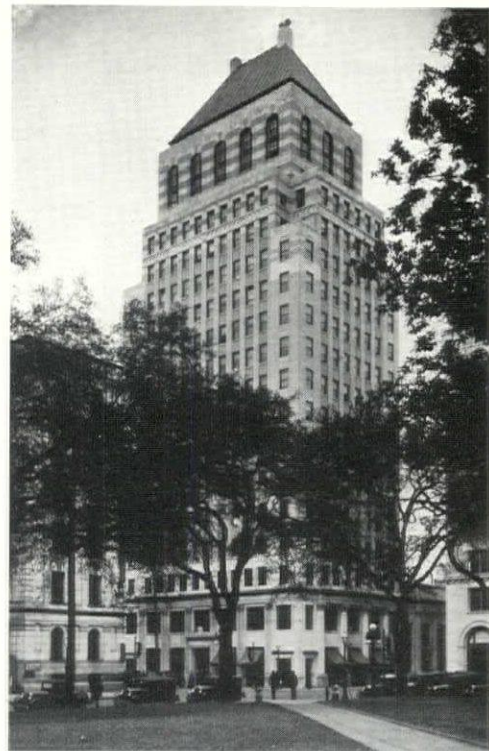
*Oscar V. Hunt*  
 PROTECTIVE LIFE INSURANCE BUILDING  
 BIRMINGHAM, ALA.



*Oscar V. Hunt*  
 WATTS BUILDING  
 BIRMINGHAM, ALA.



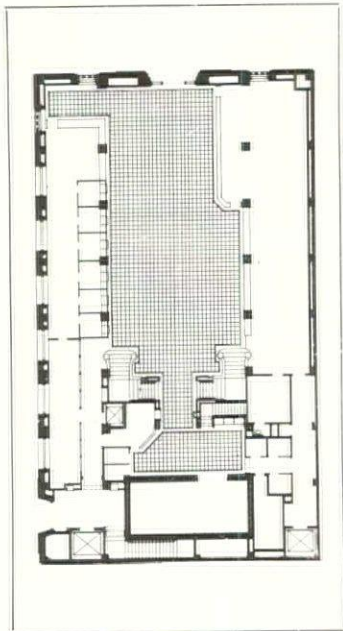
*Tebbs & Knell, Inc.*  
 ALABAMA POWER CO. BUILDING  
 BIRMINGHAM, ALA.



*Overbey Studios*  
 MERCHANTS NATIONAL BANK BUILDING  
 MOBILE, ALA.

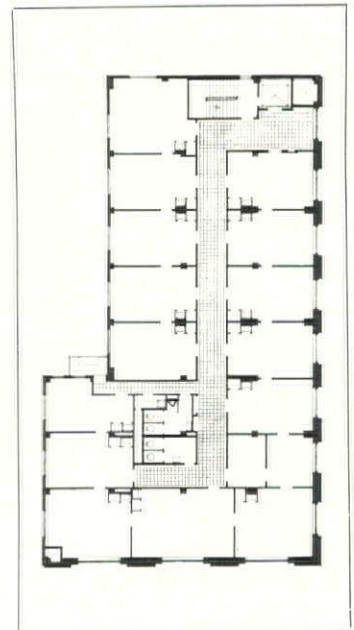
FOUR OFFICE BUILDINGS DESIGNED BY  
 WARREN, KNIGHT & DAVIS, ARCHITECTS



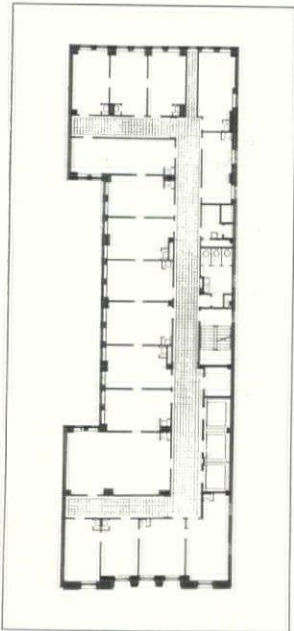
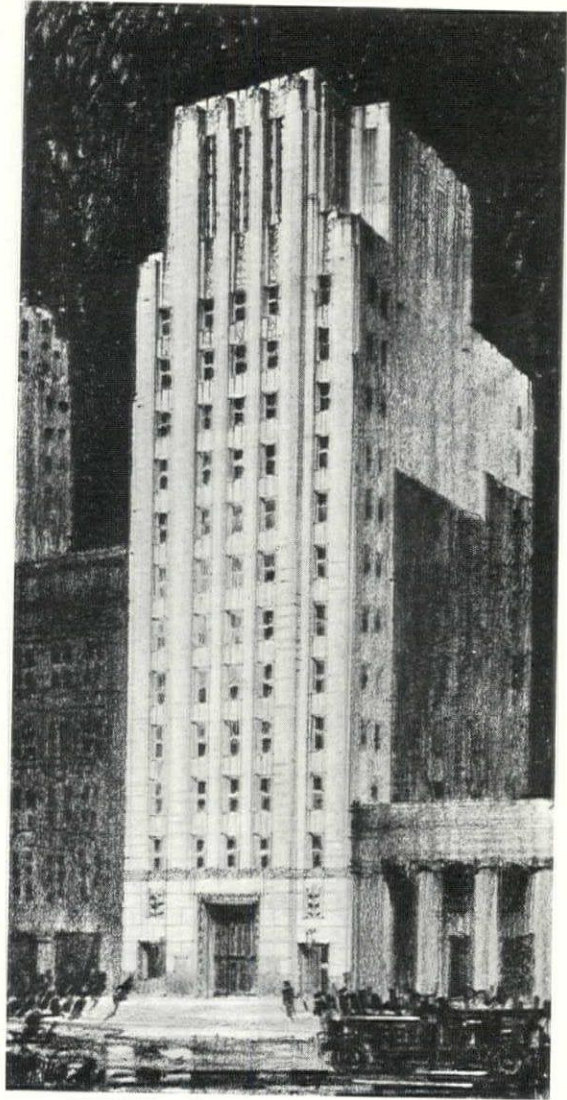
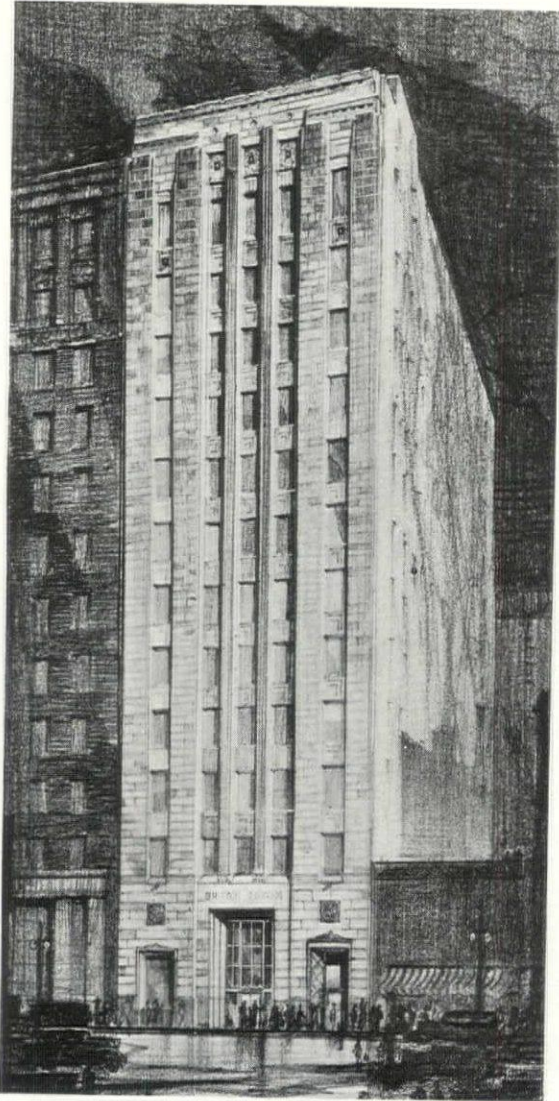


FIRST NATIONAL BANK  
BUILDING,  
BEVERLY HILLS, CAL.  
DESIGNED BY  
JOHN PARKINSON AND  
DONALD B. PARKINSON  
Architects

(LEFT) FIRST FLOOR  
(RIGHT) TYPICAL FLOOR



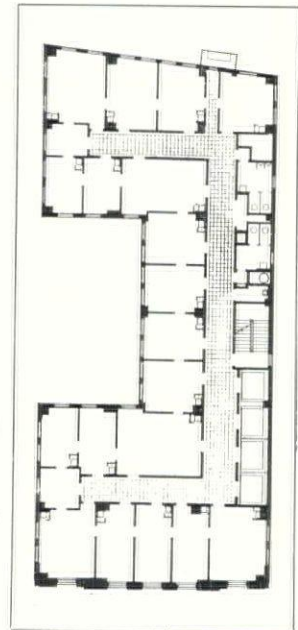




TWO OFFICE BUILDINGS  
DESIGNED BY  
JOHN PARKINSON AND  
DONALD B. PARKINSON  
Architects

(LEFT) THE BUILDING FOR HARRY J. BAUER, LOS ANGELES, CALIFORNIA

(RIGHT) THE BUILDING FOR BANK-HUNTLEY & COMPANY, LOS ANGELES, CALIFORNIA

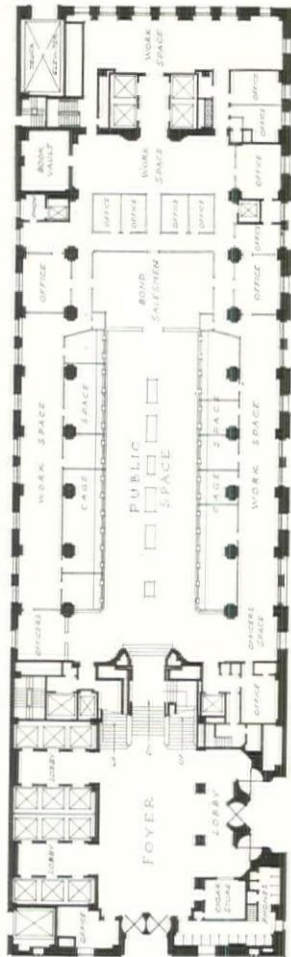




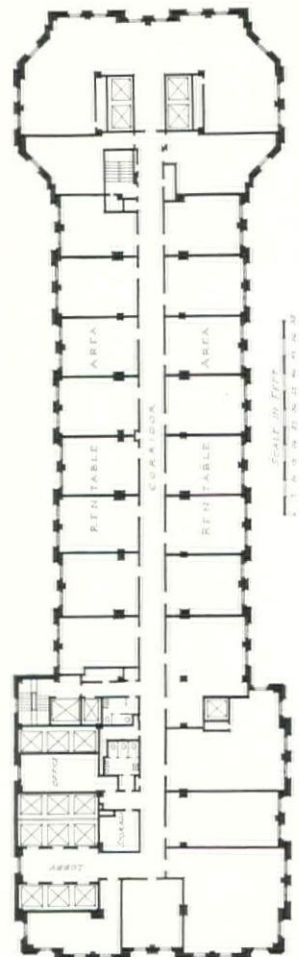


Photo, Thomas Ellison

UNION TRUST CO. BUILDING,  
DETROIT. SMITH, HINCHMAN  
& GRYLLS, ARCHITECTS



FIRST FLOOR

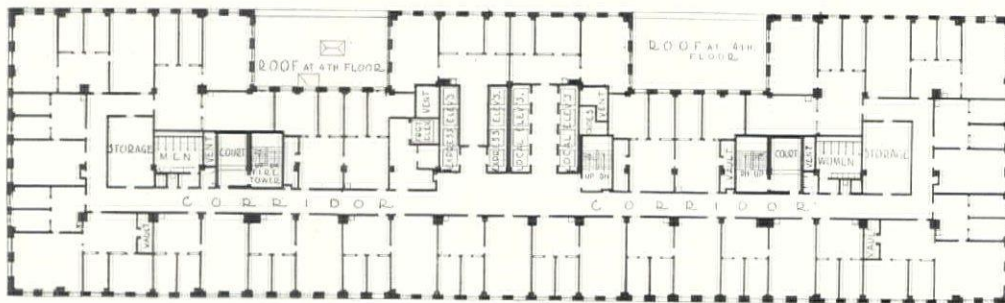


A TYPICAL FLOOR

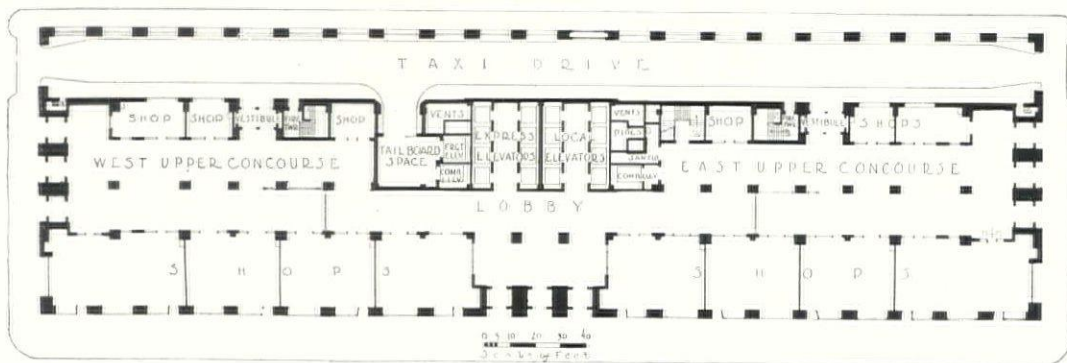




BROAD STREET STATION BUILDING, PHILADELPHIA.  
GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS



A TYPICAL FLOOR



FIRST FLOOR



(Continued from page 786)

seem to be a most impracticable and time-destroying basis of hoisting passengers. On the other hand, the amount of space taken up by elevators can easily kill off legitimate profits in an office building so some way will just have to be found to solve the problem.

Uptown, around the Forty-second Street district, we have lots of new gimcracks in the way of office buildings. A very good one is 10 East Fortieth Street, a forty-story effort by Ludlow and Peabody; another is at the corner of Forty-third Street and Fifth Avenue, by Shreve, Lamb and Harmon, who by-the-way, enjoy the distinction of putting up two monsters at the same time on the two most important corners of Fifth Avenue. The newer Salmon (nothing to do with smoked or canned) at Forty-second Street and the already famous Empire State Building replacing the old Waldorf at Thirty-fourth Street ought to make those genial young architects extremely taken with themselves.

It seems that Shreve and Lamb delved a little bit in the old family library one day and got out some of those well-known and widely-used ram's heads. They clapped them on their 43rd Street masterpiece over the windows, as usual.

We happened to be passing that corner one day, the other star-gazer being Harry Allan Jacobs, an architect of personality, charm and sentiment.

"Questionable taste, those ram's heads," said H. A., "they shouldn't advertise the designer like that."

"How so, buddy?"

"Why, ram's heads, *rams!* Wasn't the architect named Ram?"

"No, no, stupid, *Lamb*, not *Ram*."

"Whasser difference?"

"Whatye mean, whasser difference?"

"All the same, friend, all the same. Practically no difference—a ram is just a lamb with ambition.

The Daily News Building on 42nd Street is a new vertically-striped bedticking-like affair of Raymond Hood and J. M. Howells, just a block

away from that epic of publicity the Chrysler Building, she of the needle-pointed top, the automotive decoration, the windows out on the edge of the brickwork and the vast gleaming and shimmering dome up in the clouds—probably the nearest that the shimmy will ever get to Heaven!

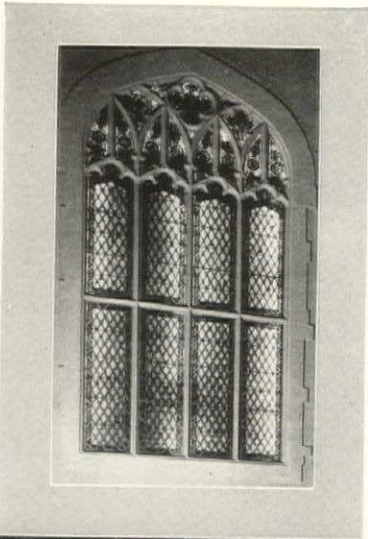
To our untutored mind, the entrance lobby of Mr. Chrysler's monumental mist-piercer is the most stunning thing in town. *The* most gorgeous marble ever seen in an office building since the Metropolitan Life lined its two-storied lobby with a coating of gorgeous Gorgonzola cheese—or was it Pavanazzo? It didn't have the smell but it sure had the look.

One day, Mr. Whitney Warren took a 3B Koh-i-noor in his left hand (being a little gouty in the right) and dashed off the New York Central Building, squatting like a great granite *grenouille* across Park Avenue and gorging and disgorging taxicabs through two openings which were too small the very first day they were opened. The dome of this building at night, however, is one of the sights of the city and vies with Palisades Park across the Hudson in the number of electric lamps used.

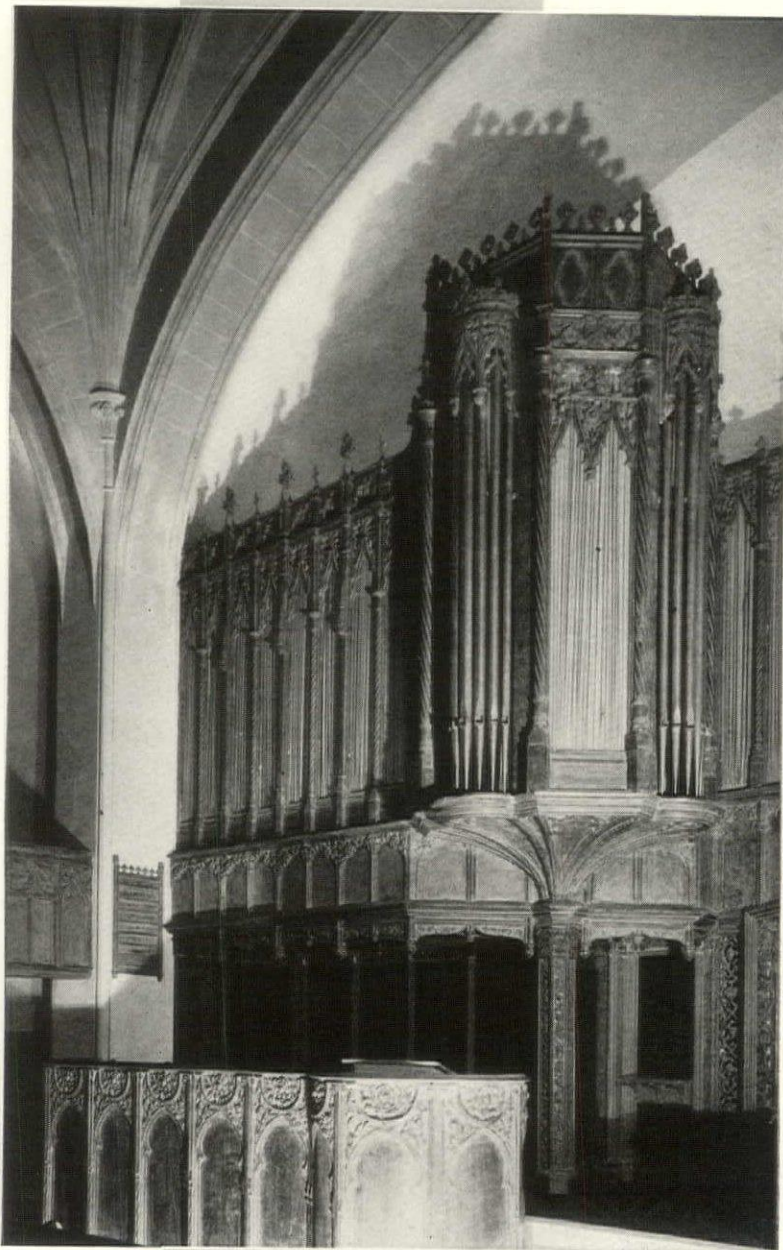
The Lincoln Building is another flash-back to old lines. This time Pugin's Gothic was the most popular tome in the library and the top of the tower reveals three great Gothic openings serving what? A music hall or a theater perhaps, just to out-Chanin the Chanins, who really have got a theater in their own building.

Yes, there is nothing the matter with our office buildings. Some have a shape that would never get them a job at Paquin's, others have a few warts and excrescences sticking out of them in the most indelicate places; some are overloaded with ornament, others are stripped for action; a few just end off short, with not even a tank showing, others have a neat roof such as should cover a nice farm house; one we know has a lot of gold spikes sticking up on top, another has a Greek temple on high. But all in all, by and large, they all get by and perhaps we shouldn't expect perfection in this decadent age.





# *Authentic* PLASTER ORNAMENT



## *Effective use of Woodkast in Manhattan Towers Chancel*

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

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

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A PAGE FROM THE PORTFOLIO OF OFFICE INTERIORS IN GOOD FURNITURE AND DECORATION  
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Ely Jacques Kahn, Architect



Two simple and efficient rooms quite functionalistic in character, they obtain through the use of an interesting handling of beiges and browns a feeling of charm and comfort. While both rooms are thoroughly modern in feeling, note that almost every piece of furniture is a simplified reproduction of some period of style.





*Herbert N. Straus Stable, Red Bank, N. J.*

*Alfred Hopkins & Associates, Architects*

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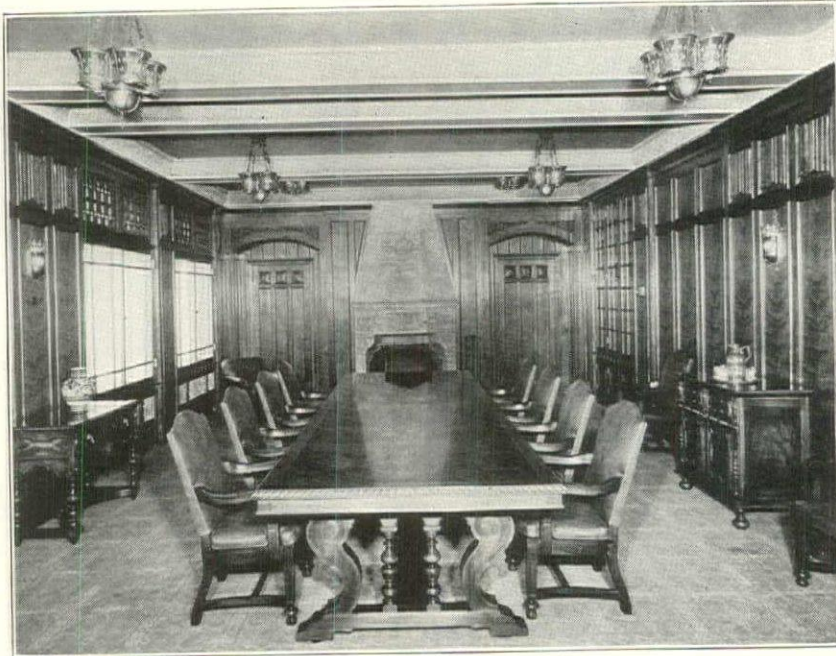
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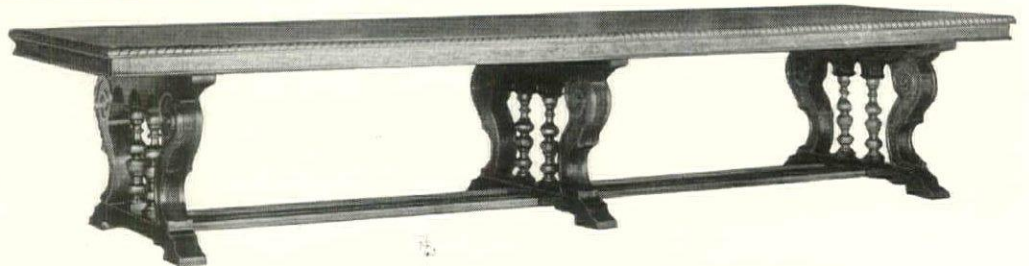
# Harmony Permits *no* Exceptions



*The Room:* Directors' Room of the Mountain States Telephone Company, Denver, Colo. Architect: W. N. Bowman, Denver. Woodworker: Hallack and Howard Lumber Company, Denver

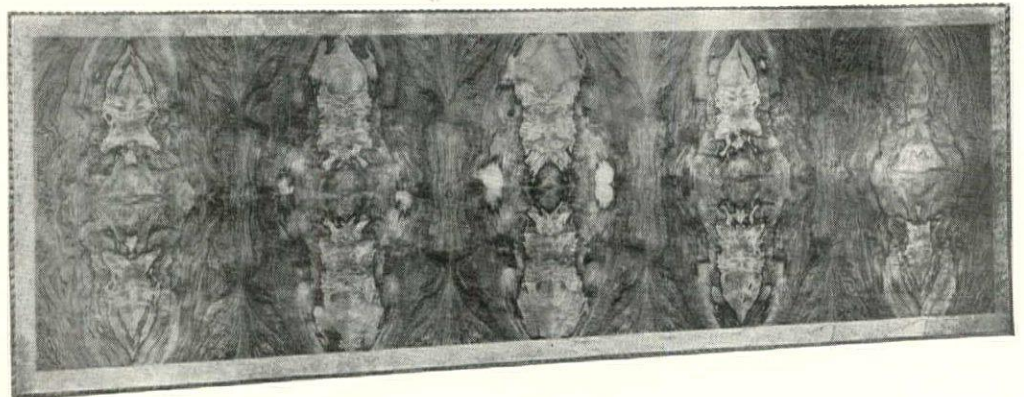
## *The Table:*

A 14-foot table designed and built for this room by the Macey Company of Grand Rapids, Michigan



## *The Table Top:*

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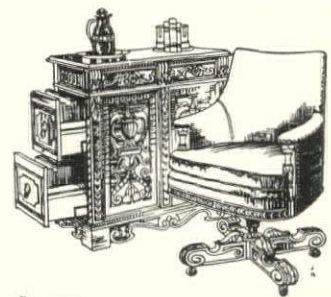
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By Howard and Crossley

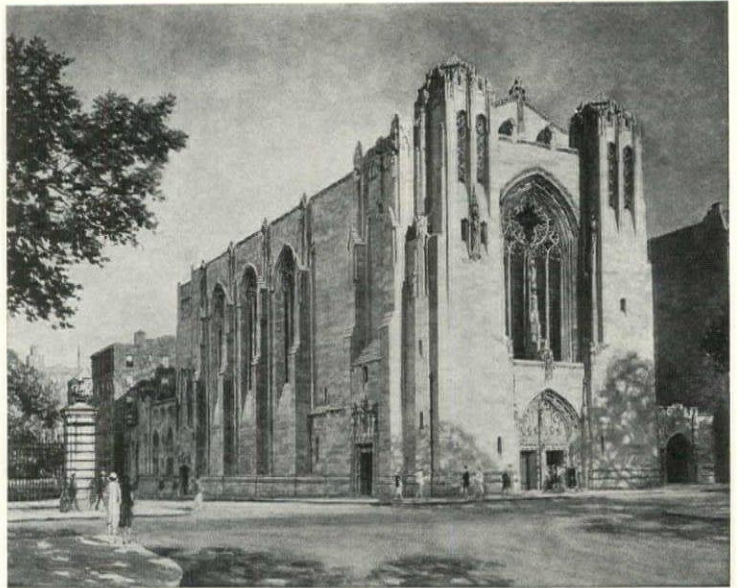
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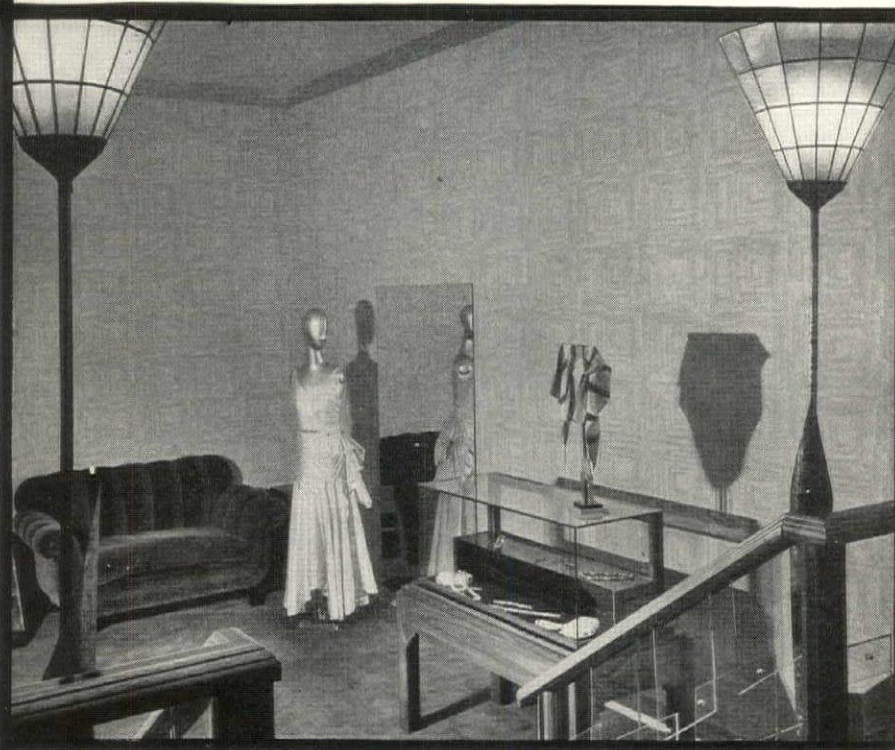
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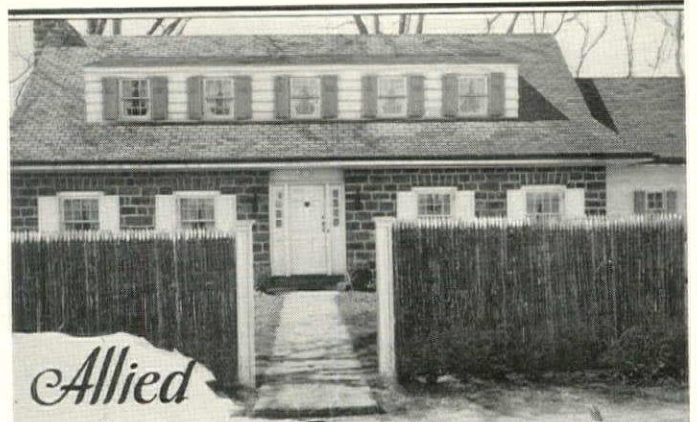


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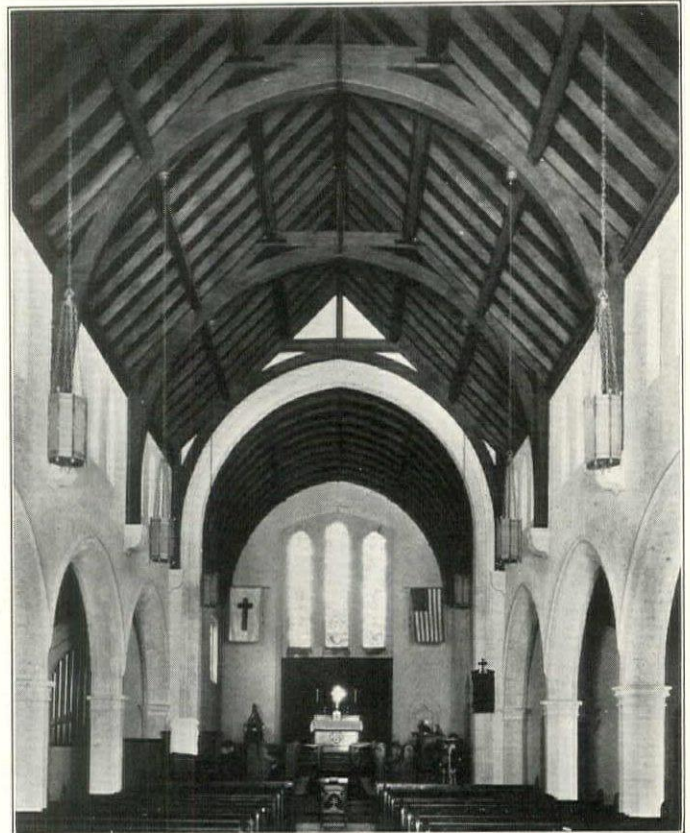
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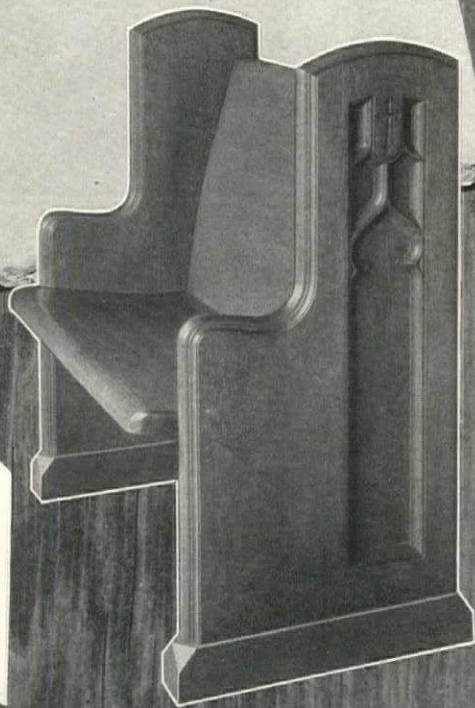




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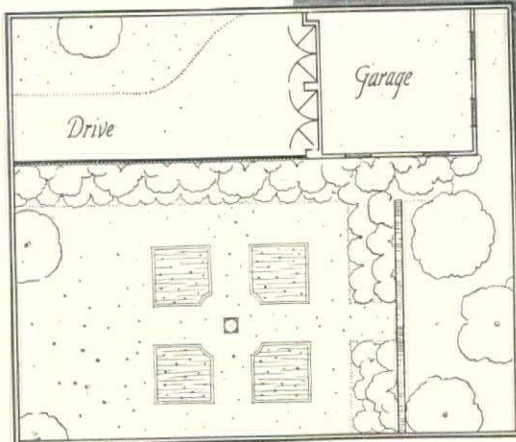
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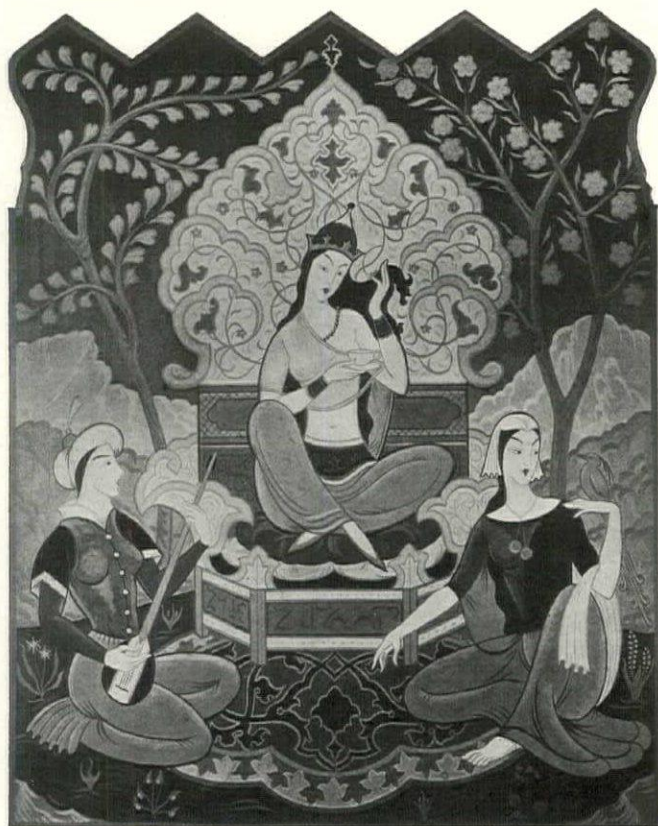
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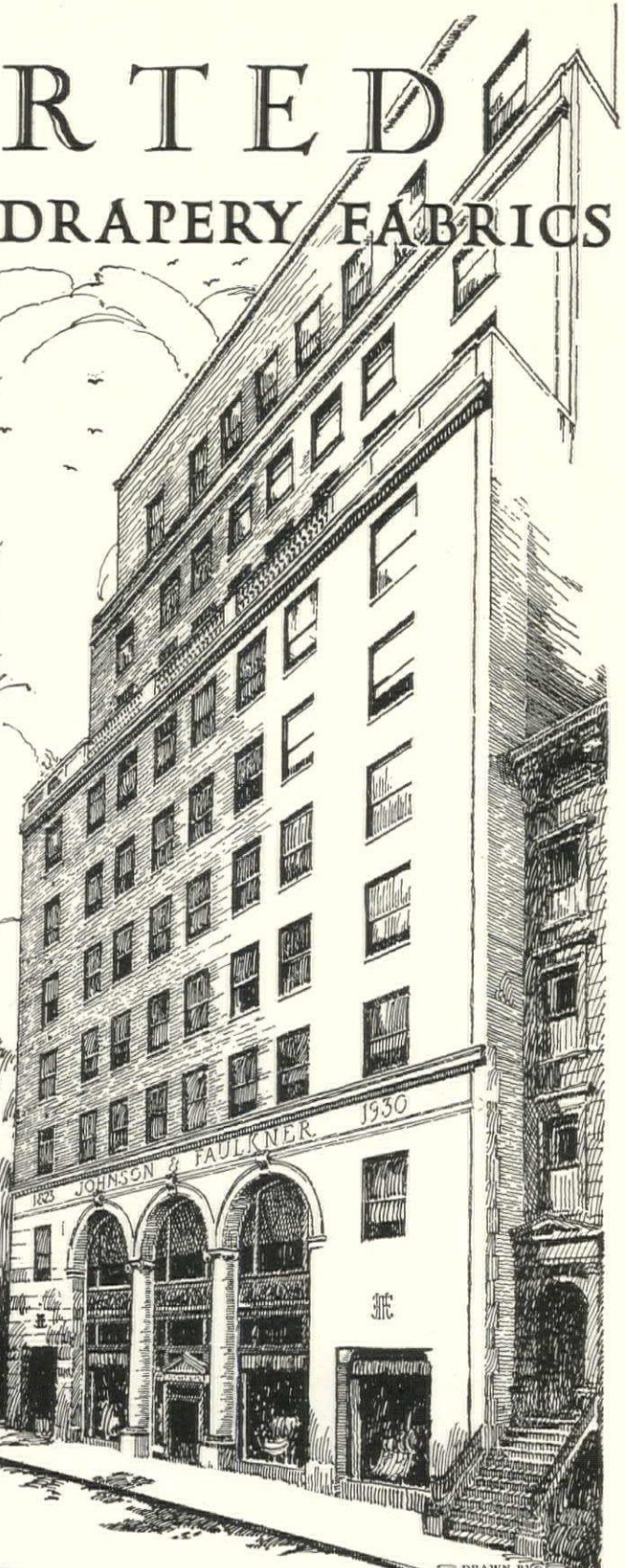
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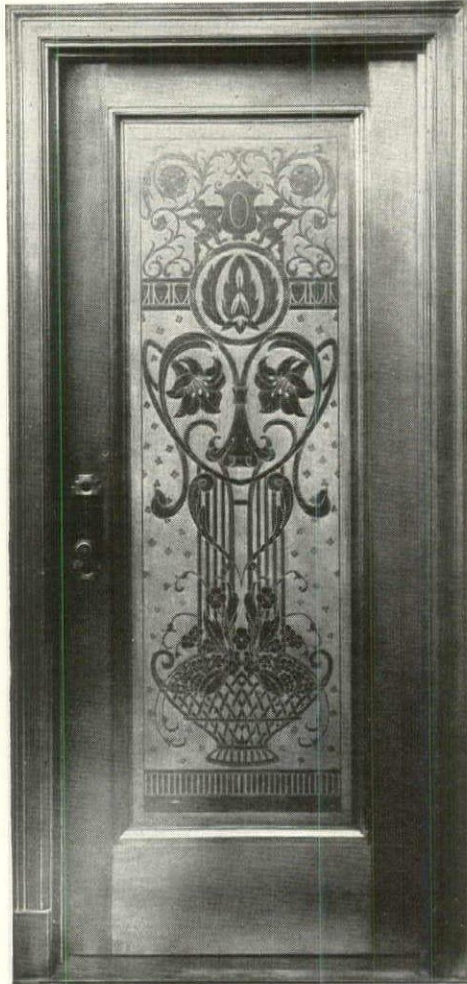
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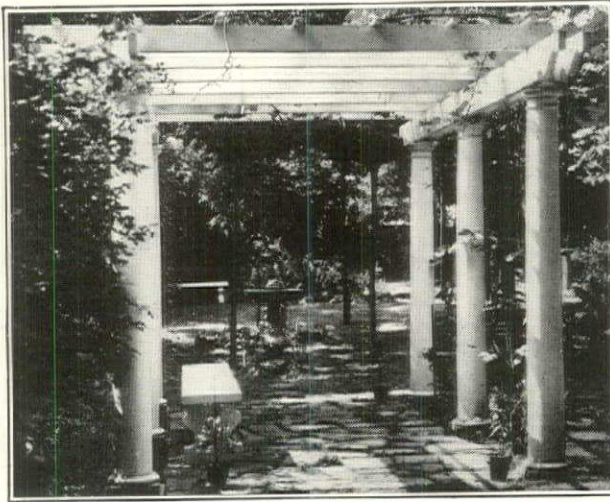
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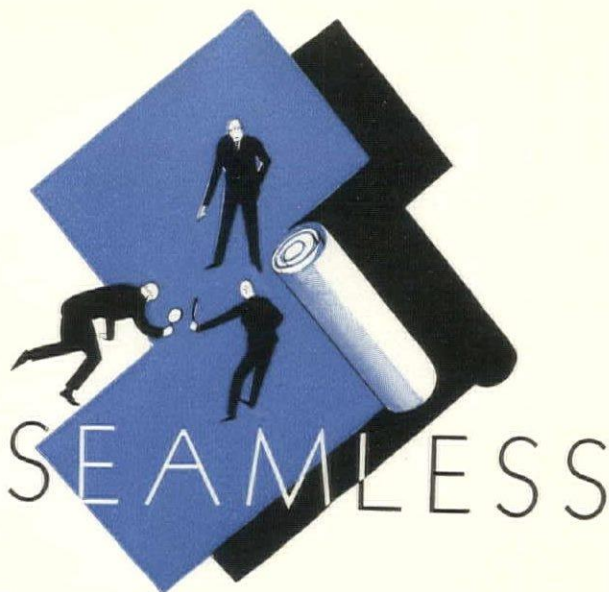
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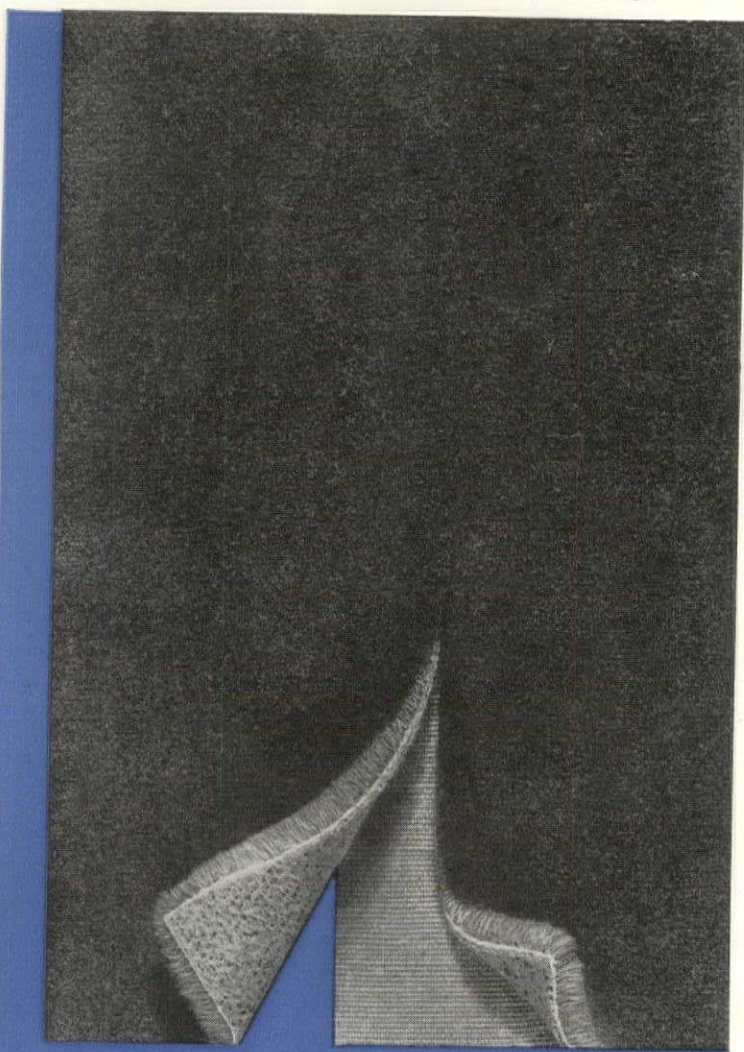
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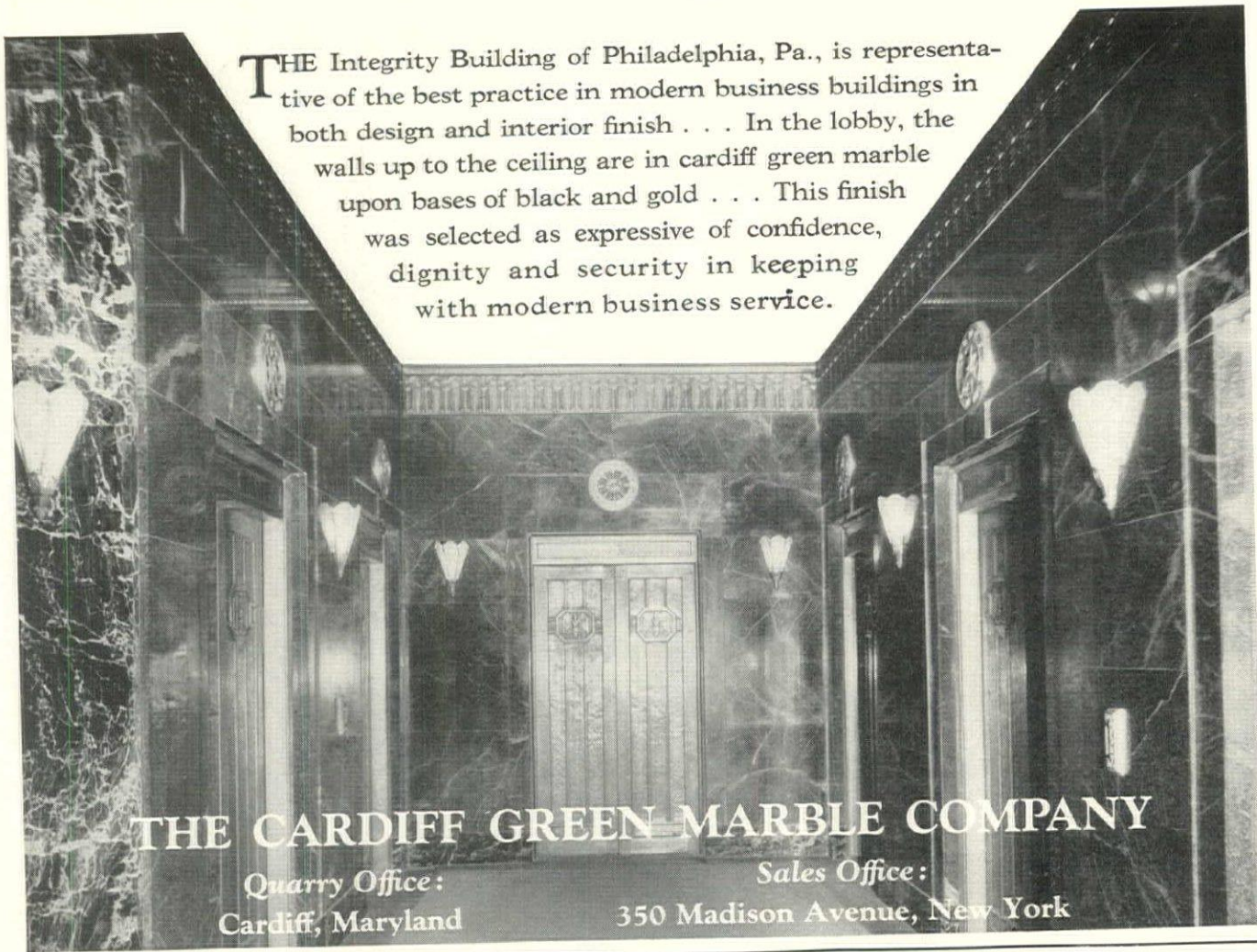
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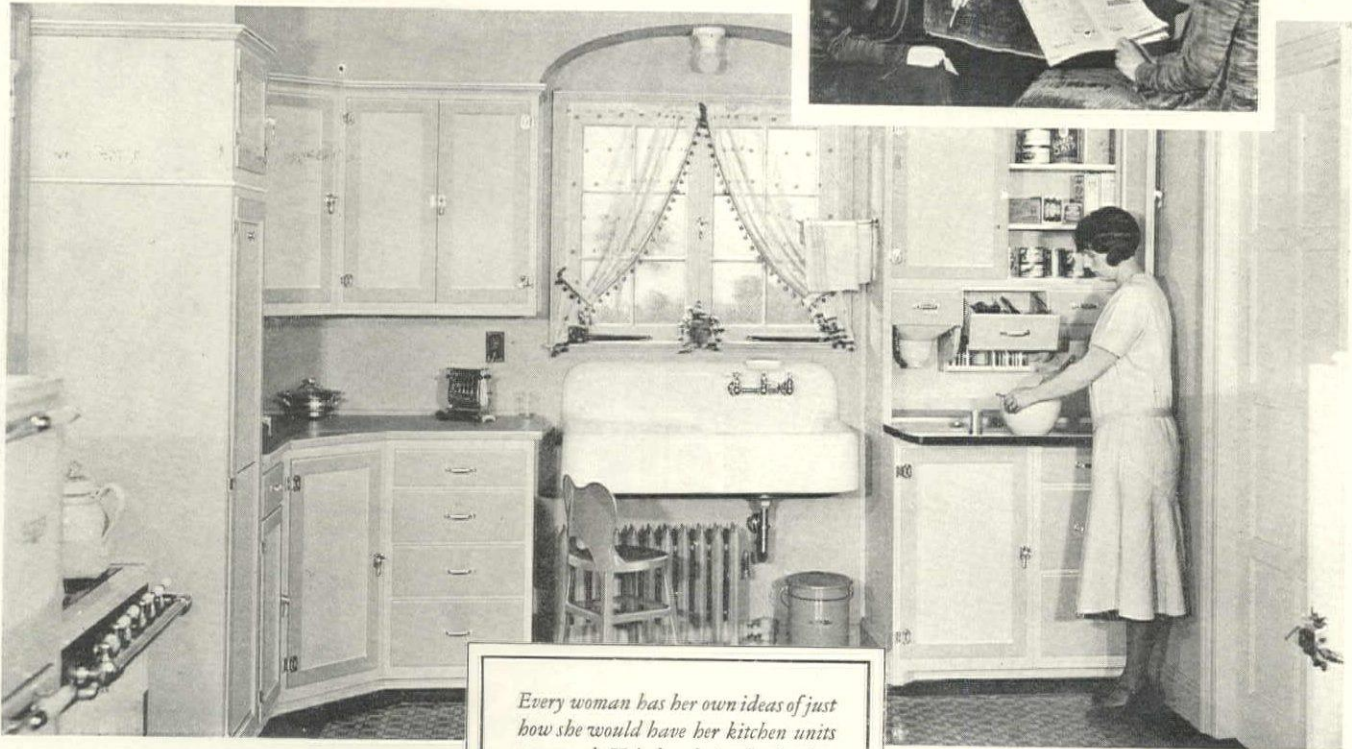
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# We learned about Kitchens from Women!



*Every woman has her own ideas of just how she would have her kitchen units arranged. Help her design her kitchen with our Miniature Set. This way, she can see in advance that the kitchen unit arrangement you plan for her home is exactly to her taste*

**W**ORTH, east, south, west — wherever there were homes and kitchens—we asked our question. "How", we said, "would you have your kitchen units arranged to best save your hands, your back, your steps, your time?"

No two women agreed! One wanted storage units here, one wanted them there; one suggested a unit for pots and pans near the sink, another said near the stove; one wanted additional drawer sections, another preferred more shelf space.

Clearly enough, no one kitchen unit arrangement was possible for all women, all kitchens. So we built Curtis Kitchen Units in a wide variety of styles and sizes. Then all these units were reproduced in Miniature Kitchen Sets, making it possible to plan ideal arrangements in advance. (At least 5000 different "model kitchens" are possible.)

Architects are finding our Miniature Set (all Curtis dealers have them) an invaluable aid in planning for women the kind of kitchens they would design for themselves. Many are inviting women

clients to express their own ideas in kitchen arrangement—as in the illustration shown. All Curtis Units come completely set up, ready to put in place with only a slight installation cost.

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### BRING OLD ENGLAND INTO THE MODERN HOME

—with these Curtis English pieces, selected from our Early American and European reproductions.



Although English in origin, this living room mantel is so closely related to Early American that it may be adapted to any type of home. (All Curtis Woodwork—doors, windows, frames, trim, porchwork—shows the same careful workmanship you see in these Curtis period pieces.)



The entrance to a home is its outward expression of inner hospitality. This Curtis doorway was inspired by an old English design

THE CURTIS COMPANIES SERVICE BUREAU  
357 Curtis Building, Clinton, Iowa

Visit Curtis Woodwork, Inc., Display Rooms and Sales Office, Room 201, 9 East 41st Street, New York City. Chicago Display Rooms, Curtis Door & Sash Co., 1414 South Western Avenue, Chicago, Illinois

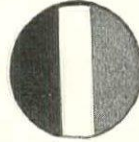
Curtis Companies Service Bureau  
357 Curtis Building, Clinton, Iowa  
 Send me, free, "Your Dream Kitchen" and information on your Free Planning Service. I intend to build  remodel   
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Street.....  
City..... State.....





This Red-White-Blue Dowel Trade Mark is on the edge of each



Roddis Flush Door. It is Roddis' mark of identity and quality.



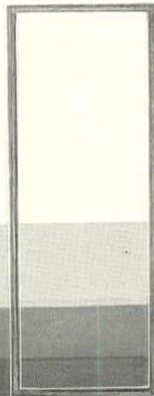
# RODDIS FLUSH DOORS

**F**ANCY work, of the character illustrated above, is also had in Roddis Flush Door construction, detailed below. The door at the left is of special sawn white oak with hand carved mouldings and ornaments. The door at the right is of one-eighth inch black walnut face veneer laid in squares and V-grooved on all joints. Two expressive examples of Roddis custom designed possibilities, with Roddis completely solid door construction.

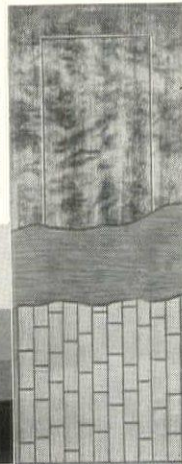
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Roddis Construction, as pictured here, consists of: Core of White Pine Blocks; Hardwood Cross Band Veneer; Hardwood Surface



or Finishing Veneer; Hardwood Edge-strip on all four edges; Solid Door glued under hydraulic pressure and thoroughly dried.





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*"I've always claimed that people an' wood have lots in common. Take this piece of Pondosa. Smooth, straight and well seasoned. Lot o' folks like that. That's what I like about this lumber—it wears well—and improves on acquaintance."*

—From the philosophy of the boss-carpenter

FOR window and door frames, casements, for entrances, railings, benches, for all outside trim, Pondosa has many excellent qualities. The firm, fine grain of this all-purpose lumber resists all kinds of weathering. Paints, stains and varnishes cling tenaciously to its surface under severe climatic conditions. Scaling, rippling and grain risings are not a problem.

And Pondosa is surprisingly easy to work. Carpenters know that it saws and finishes quickly—takes nails and screws with little chance of splitting. And Pondosa stays put! Thoroughly seasoned, rigidly graded, each board is carefully, scientifically prepared for use. You have the word of every member mill of a great organization that Pondosa comes to you exactly as represented.

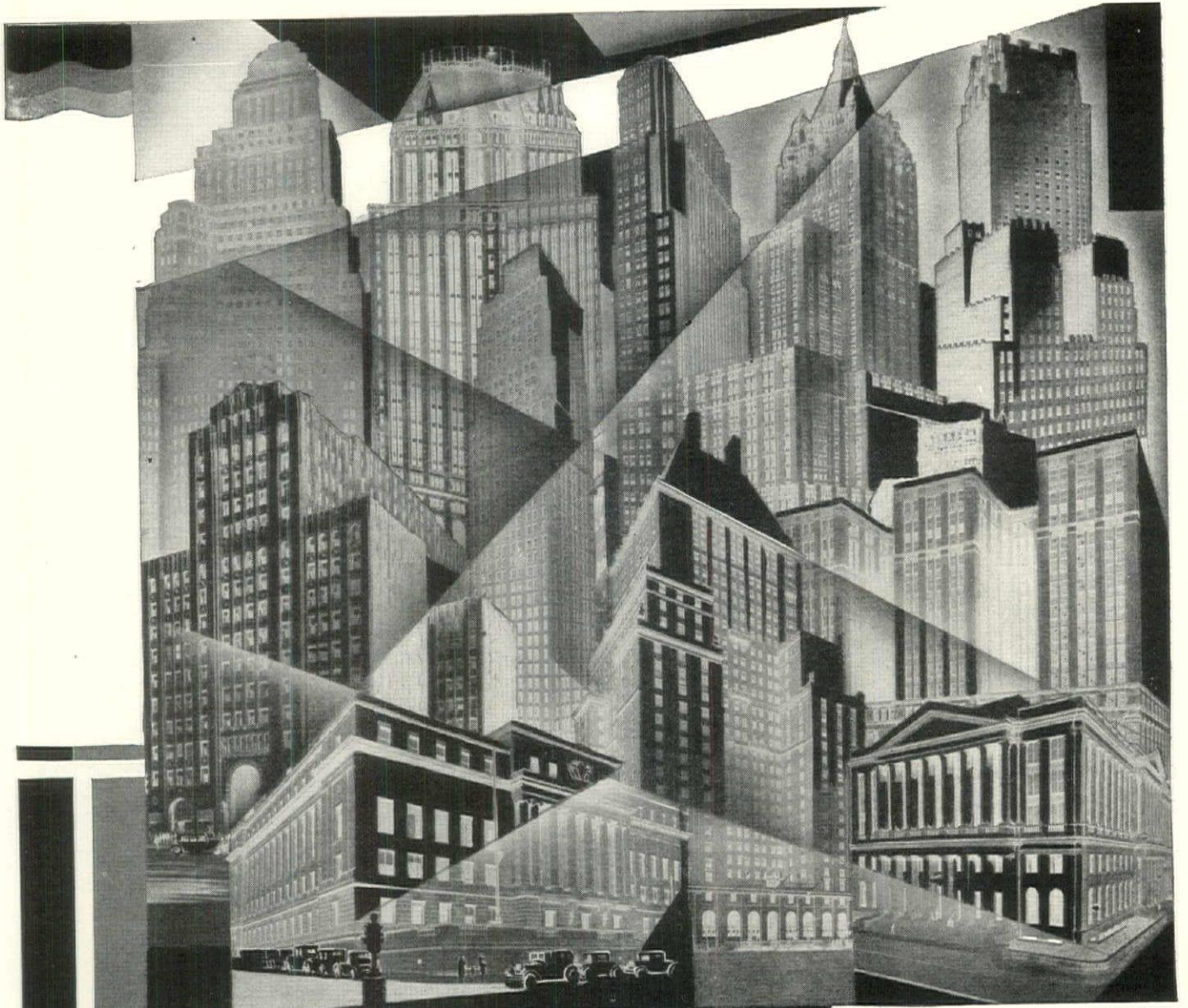
These mills, members of the Western Pine Manufacturers Association, have imprinted the familiar pine tree trade-mark on Pondosa. That insignia makes it as easy to specify this good wood as it is to specify reliable plumbing, heating or electrical equipment. Pondosa can be had from all local lumber dealers. Western Pine Manufacturers Association, Portland, Oregon.



## Pondosa Pine

THE PICK O' THE PINES





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EACH of these fine buildings is a steel and stone testimonial to the merits of Bonded Floors installations. If we covered this page with signed statements praising Bonded Floors they could not speak more eloquently or authoritatively. ¶ Why are Bonded Floors chosen so often for outstanding sky-scrapers all over the country? Why do institutions like telephone companies and insurance companies call for the services of our organization again and again? Why have leading architects in the office building, school, hospital and

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San Francisco, Calif.

New York Life Insurance Co. Building  
New York City, N. Y.

New York Telephone Co. Building  
New York City, N. Y.

Maccabees Building  
Detroit, Michigan

Essex County Hall of Records  
Newark, N. J.

David Stott Building  
Detroit, Michigan

Savoy Plaza Hotel  
New York City, N. Y.

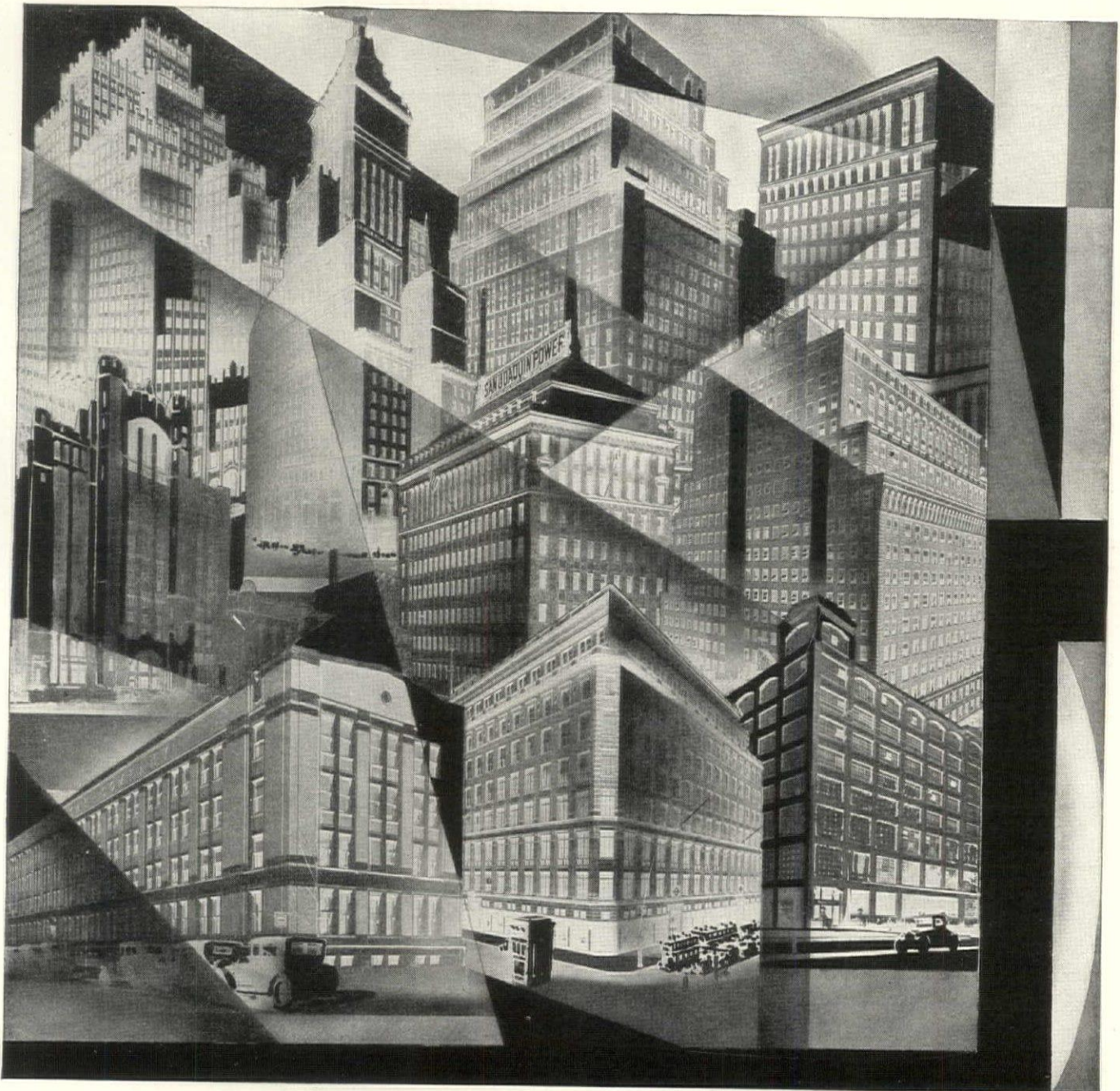
Pennsylvania R. R. Building  
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Mutual Benefit Life Insurance Co. Bldg.  
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church fields standardized on these resilient floors—writing them into their specifications time after time? ¶ Service—that's the answer! And it covers both product-performance and installation-procedure. It means the kind of helpful, dependable planning and workmanship which only our experienced organization of authorized contractors can render. It means service in terms of floor quality, long life, economy. ¶ Let us tell you about our Guaranty Bond against repair expense. ¶ Let us send samples so that you may see the new Sealex Linoleums and Sealex Treadlite Tiles (cork-composition) which make our resilient floors—spot-proof, easy to clean.

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Detroit Masonic Temple  
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Cadillac Motor Car Co. Building  
Detroit, Michigan

San Joaquin Light & Power Corp. Building  
Fresno, California

Saks 5th Avenue  
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Montgomery Ward & Co. Building  
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“ Please REPEAT  
*that last sentence* ”

*Proper acoustical treatment banishes  
these conference - room interruptions*

**I**NTERRUPTIONS and misunderstandings are almost inevitable in rooms whose walls and ceilings absorb too little sound and reflect too much. Proper acoustical treatment is essential in the modern business room or office.

Excessive reverberation, echo, interference, and other acoustical defects are easily corrected. By the scientific placing of Armstrong's Corkoustic, sound can be controlled and made clear and distinct.

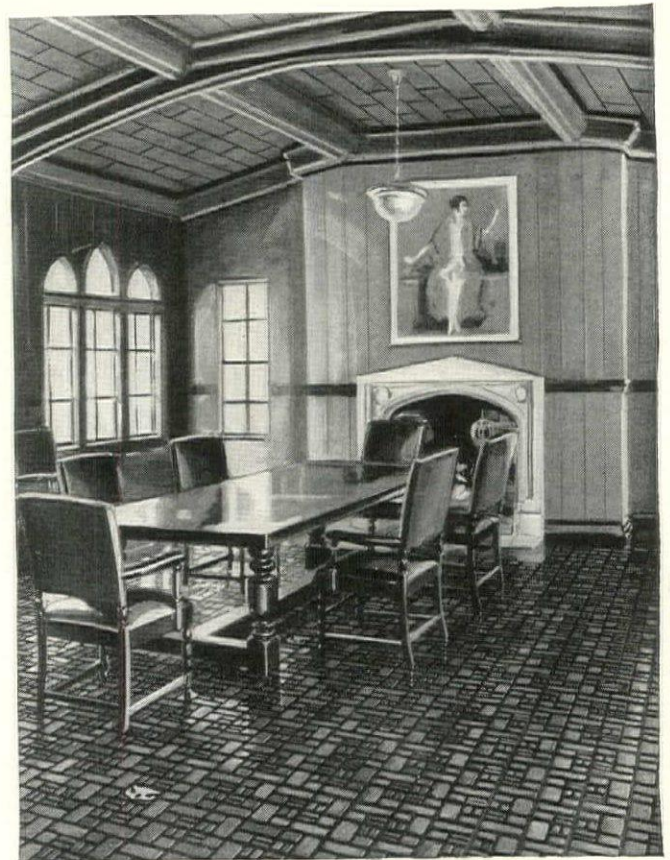
Corkoustic is an Armstrong product, made of pure cork. It has sound absorbence sufficient for the correction of any acoustical conditions. It has structural adaptability and strength, and will not warp, buckle, or sag. It is easily applied and requires no unusual preparation of building surfaces. It can be used in old or new construction.

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In addition to providing acoustical correction, Armstrong's Corkoustic affords highly efficient insulation for walls and ceilings. Corkoustic-lined rooms are cooler in summer and much more easily heated in winter. This is a feature of particular importance for all top-floor rooms and for churches and auditoriums with large exposed roof areas.

If you have ever asked yourself: "What shall I do about acoustical treatment?" we suggest that you permit our engineers to offer you the benefit of their experience and training. And for complete information about Armstrong's Corkoustic in business rooms,

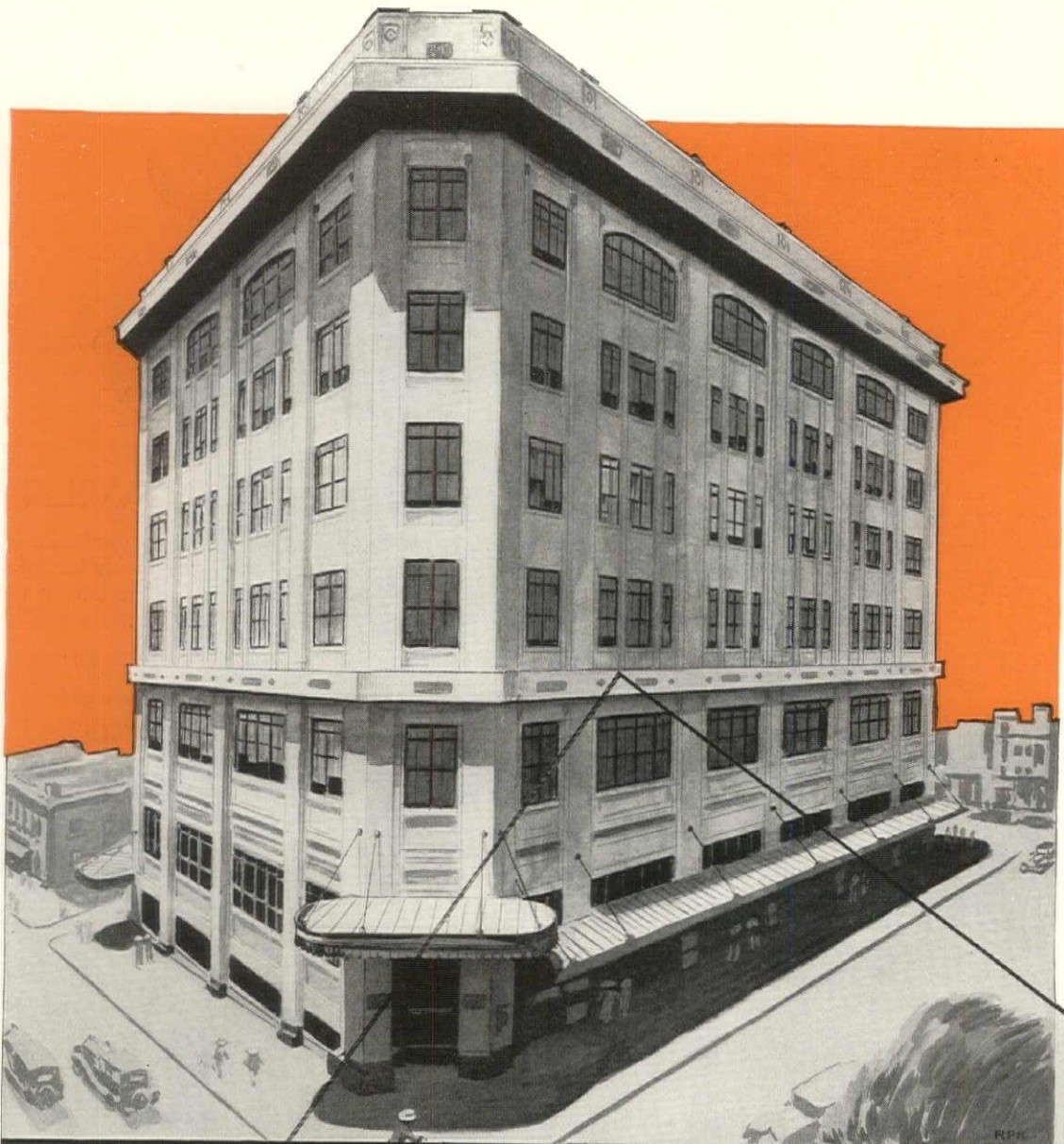
churches, auditoriums, theatres, and similar rooms, and also in shops, factories, and wherever workers are subjected to noisy surroundings, we'll be pleased to send you our illustrated book, "Acoustical Correction." Armstrong Cork and Insulation Company, 900 Concord Street, Lancaster, Pennsylvania.



*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.*

**Armstrong's Corkoustic**  
*for the acoustical treatment of all buildings*





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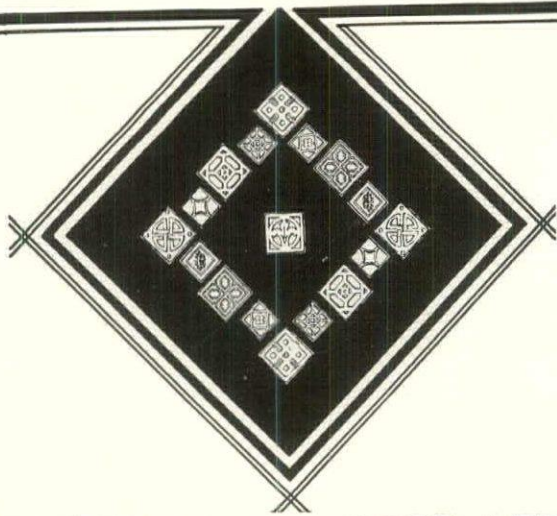
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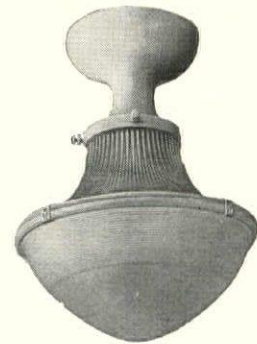
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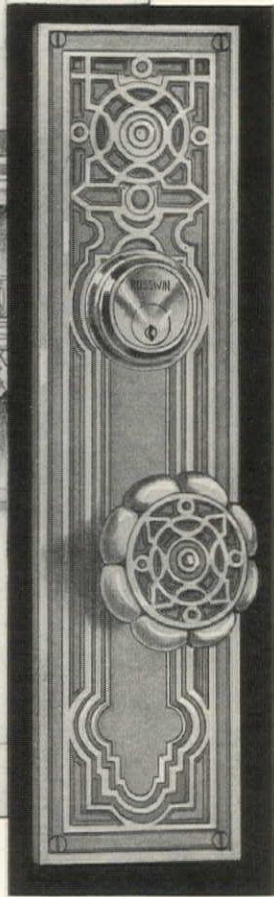
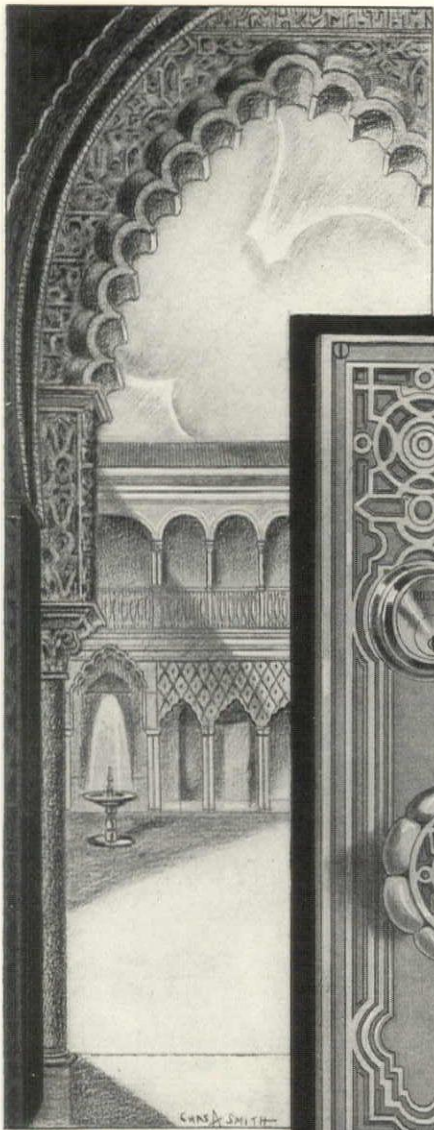


The barbaric splendor  
and oriental beauty of  
**MOORISH ART**

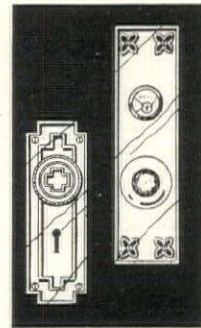
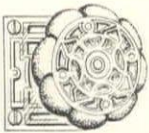
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Architects have told us that Telesco's new display store in New York is an inspiration for modern office decoration. If you cannot call, write for the New Telesco booklet—there is naturally no obligation.

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*A LIST of users of modern  
Telesco Partition reads  
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representative few will testify:*

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One Wall St., Irving Trust Bldg.,  
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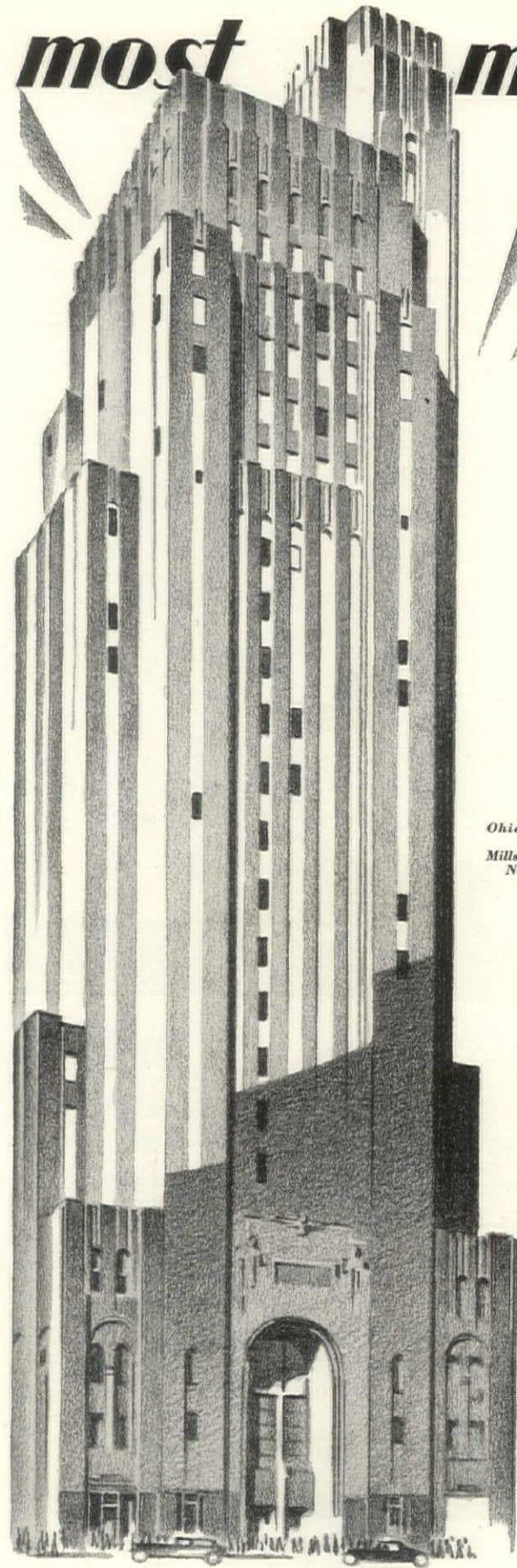
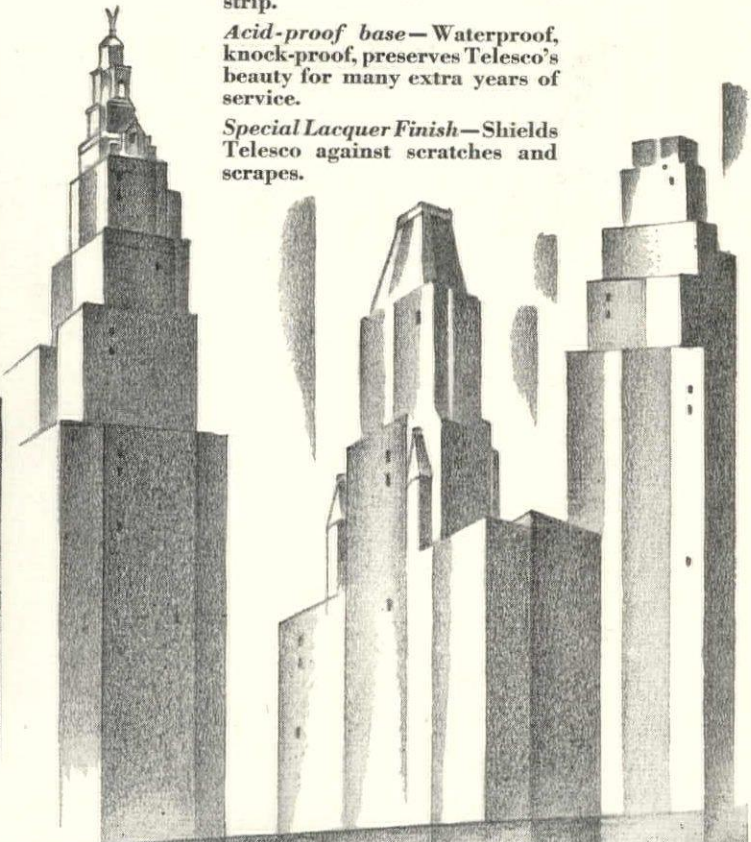
*Beautiful wood*—Telesco is made exclusively in rich walnut or mahogany wood.

*Telescoping post*—Adjustable to various heights. Illustration above shows carpenter raising post and securing it to ceiling strip.

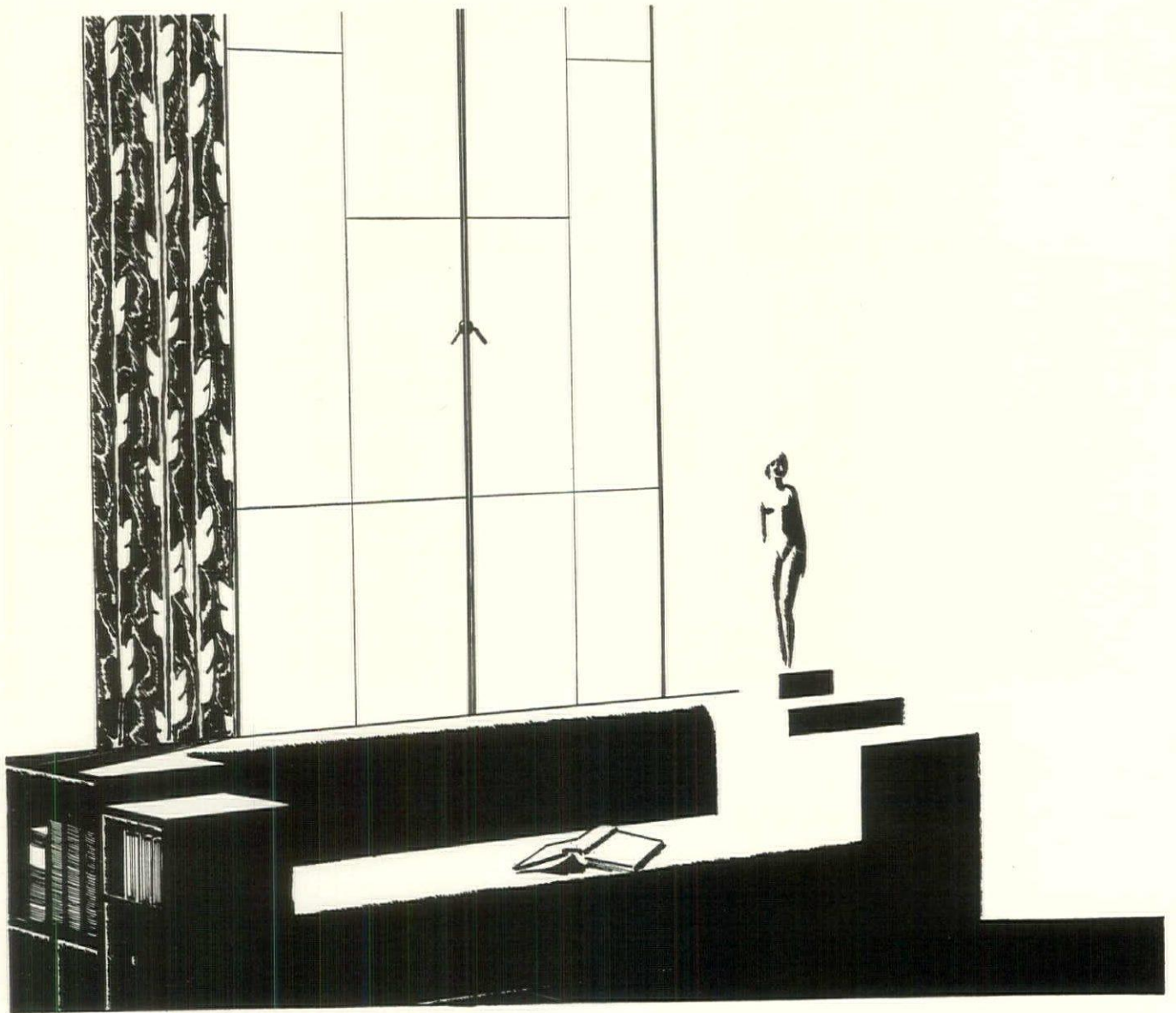
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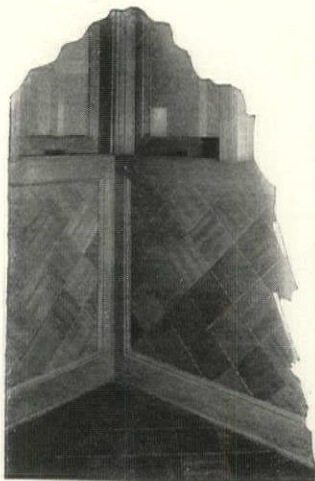
See our catalog in Sweet's, Vol. B, pages 2173 to 2175.



Northwest Lion's Club, Chicago; Shattuck & Layer, Architects; floor laid by Kaucher Engineering Co.

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Floors that are *different*. Design patterns, using various hardwoods, alone or in combinations



A new development in decoration. Gumwood blocks laid diagonally in the walls, walnut blocks for the floor.

**V**ARIETY in woods; variety in patterns; variety and new uses in floors, walls and ceilings. Limitless variety in style is now possible with \*CELLized wood floor blocks, practical and economical for all types of structures including homes, because of the novel unit block, which is laid directly over concrete or wood subfloor in EVERBOND, a sound-deadening plastic cement.

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OAK

back, showing spline

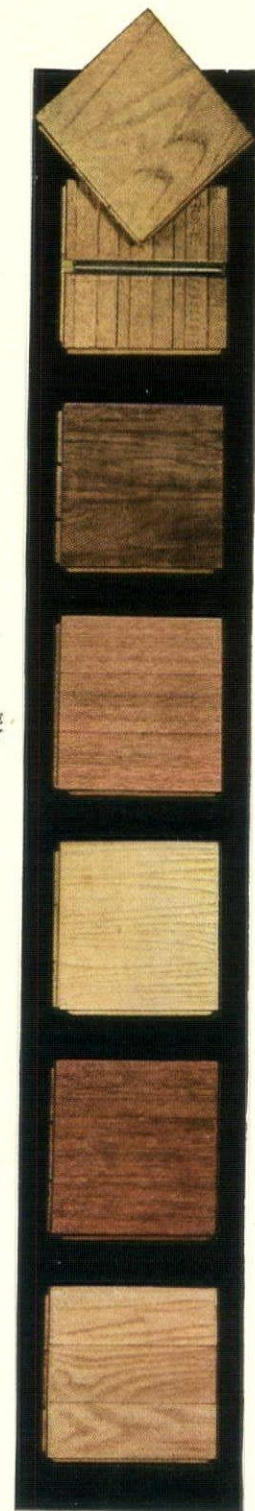
WALNUT

LIGHT PHILIPPINE MAHOGANY

MAPLE

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BEECH



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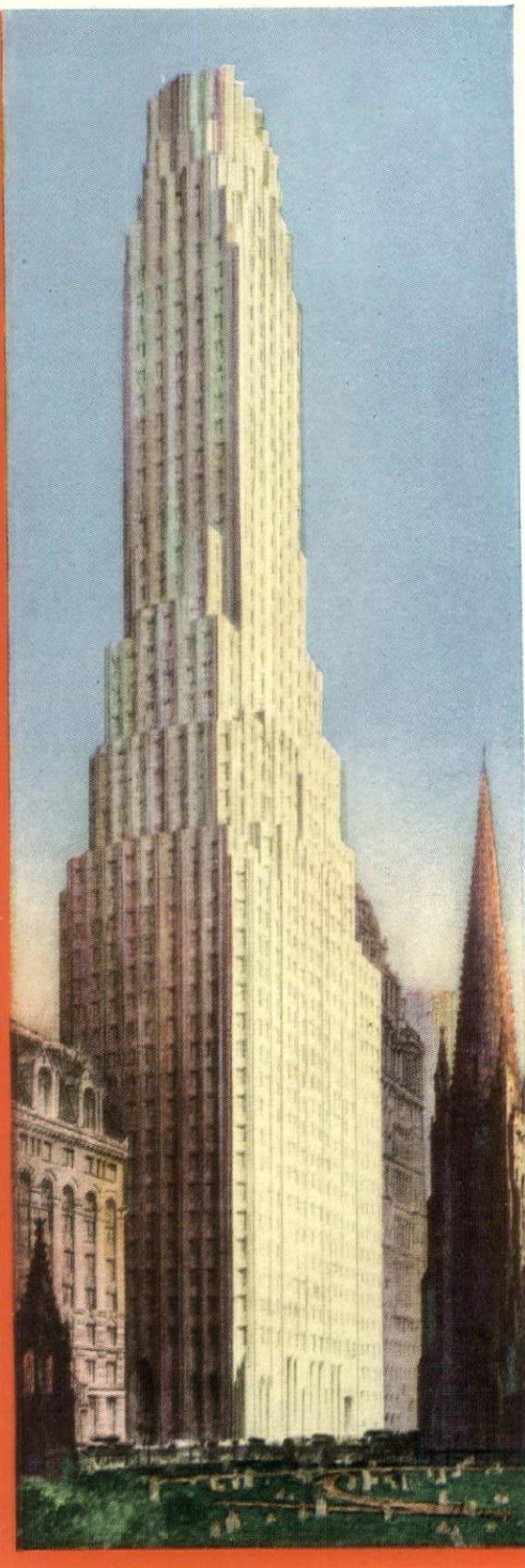
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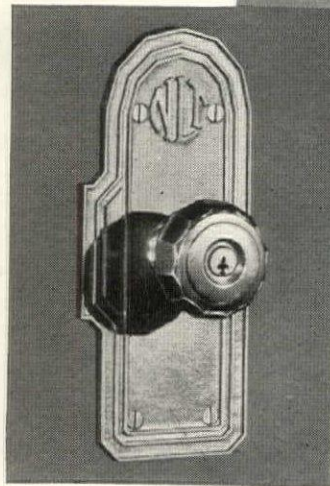
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## WIRING SYSTEM



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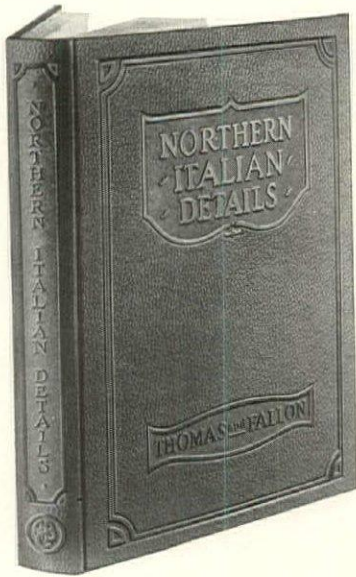


This special design in the Sargent Union Lock was made for the Northern Life Tower in Seattle, Wash. A. H. Albertson, Architect. Joseph W. Wilson, Paul Richardson, Associates.

# SARGENT

LOCKS AND HARDWARE





# Northern Italian Details

By WALTER G. THOMAS and JOHN T. FALLON  
With an Introduction by JOHN MEAD HOWELLS

THE continued and widespread demand for this well-known inspirational work has necessitated the preparation of this new edition. It takes the architect off the beaten and prosaic paths and presents him with many meritorious examples of Italian details.

It is generally conceded by architects that the better-known examples of Italian architecture—in spite of their great charm—have served as “inspiration” to designers until the demand for something less trite is unmistakable.

To fulfill this need, the authors, both architectural draftsmen and designers of unquestioned ability, were commissioned to visit Northern Italy to collect material lying off the beaten paths. In other words, to secure as large a number as possible of the comparatively small and unfamiliar, and really some of the most charming examples of the work that has made Italy the Mecca of architects for centuries.

The result of their labors is a compilation of 143 plates of details representing in the main “architectural bits” such as doorways, windows, stairways, paneling, grilles, gates, fountains, knockers, lamps, balustrades, pedestals, railings, choir stalls, benches, etc.

Each subject is presented by means of photographs, measured and figured drawings and descriptive text. And all are to large scale so you can see every detail.

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work of greater value to the architect and student is the arrangement of the clear, full-page photographs and measured drawings of the same detail side by side. The photograph gives the sentiment and impression of the original detail, while the drawing provides the means of reproducing it exactly. A concise explanation and description of each subject is given in the text.

The examples illustrated have been well chosen and cover architectural works at Cremona, Milan, Parma, Genoa, Venice, Bologna, Bergamo, Pavia, Ferrera, Verona, Brescia, Nervi, Modena, Padua, Vicenza, Mantua and Piacenza.

The introduction is by John Mead Howells, who says of the work:—“It is truly an architectural book for architects as Vitruvius or the Grand Blondel. Its every plate ought to be useful in the draughting room, for only simple and useful details have been chosen, and they have been presented in a straightforward way.”

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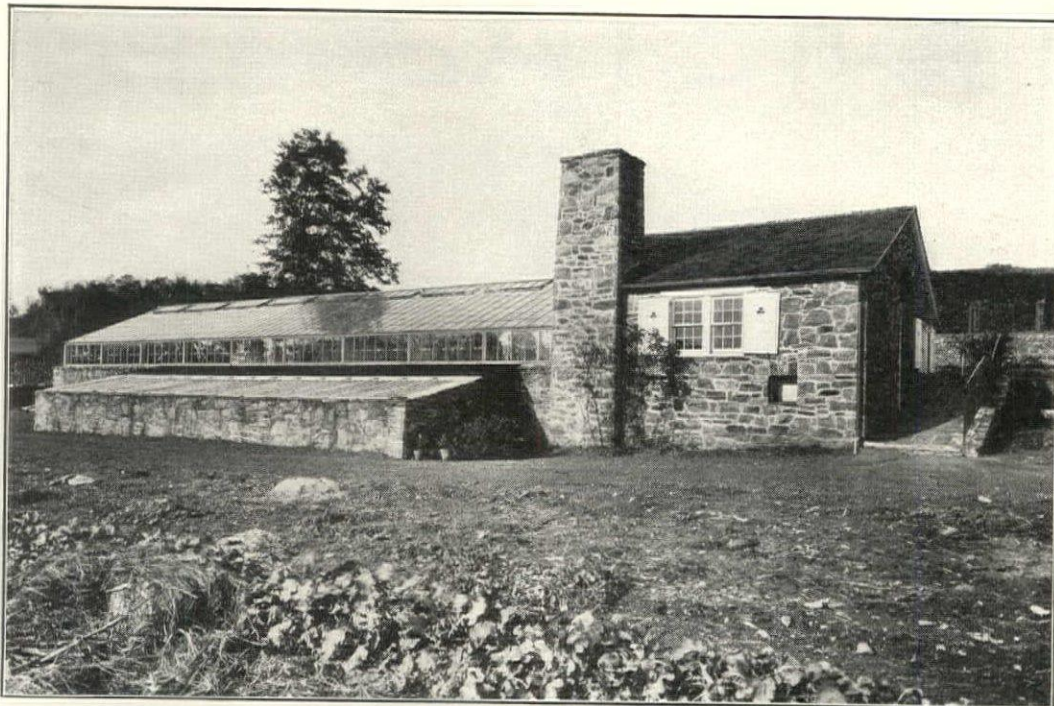
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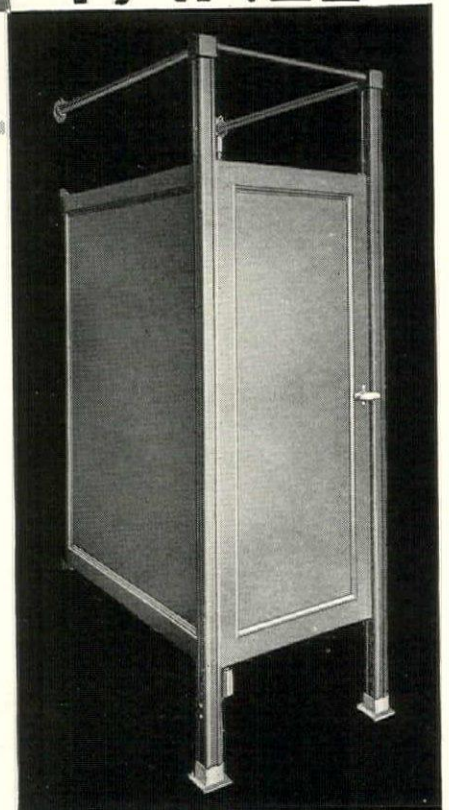
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The publications listed in these columns are the most important of those issued by leading manufacturers identified with the building industry. They may be had without charge unless otherwise noted, by applying on your business stationery to *The Architectural Forum*, 521 Fifth Ave., New York, or the manufacturer direct, in which case kindly mention this publication.

## ACOUSTICS

- R. Guastavino Co.**, 40 Court Street, Boston.  
Akoustolith Plaster. Brochure, 6 pp., 8½ x 11 ins. Akoustolith as Related to Architectural Acoustics. Booklet, 10 pp., 8½ x 11 ins.
- Johns-Manville Corporation**, New York.  
Sound-Absorbing Treatment in Banks and Offices. Booklet, 18 pp., 8½ x 11 ins. Illustrated.
- Sound-Absorbing Treatment in Churches and Religious Institutions. Brochure. 22 pp., 8½ x 11 ins. Illustrated.

## ASH HOISTS

- Gillis & Geoghegan, Inc.**, 544 West Broadway, New York.  
G & G Telescopic Hoist catalog, 8½ x 11, A.I.A. Standard Classification 3011 contains complete descriptions, method of selecting correct model to fit the building's needs, scaled drawings showing space requirements and specifications.

## ASH HOISTS—TELESCOPIC

- Gillis & Geoghegan, Inc.**, 544 West Broadway, New York.  
G & G Telescopic Hoist catalog, 8½ x 11, A.I.A. Standard Classification 3011 contains complete descriptions, method of selecting correct model to fit the building's needs, scaled drawings showing space requirements and specifications.

## BRICK

- Hanley Company**, Bradford, Pa.  
General Catalog. 16 pp. 8½ x 11 ins. Illustrated.  
Bradford Reds. Folder. 8 pp., 3 x 8 ins. Illustrated.

## CABINET WORK

- Henry Klein & Co.**, 25 Grand Street, Elmhurst, L. I., N. Y.  
Driwood Period Mouldings in Ornamented Wood. Brochure, 28 pp., 8½ x 11 ins. Illustrated.
- Ensemble Offices for the Banker and Broker. Folder. 4 pp., 8½ x 11 ins. Illustrated.
- Luxurious Office Partitions in Walnut, Mahogany and Quartered Oak. Folder. 4 pp., 8½ x 11 ins. Illustrated.

## CARPETS

- Collins & Aikman Corporation**, 25 Madison Avenue, New York.  
"Seemingly Seamless Carpets." Booklet, 8 pp., 8½ x 11 ins. Illustrated.

## CEMENT

- Carney Company, The**, Mankato, Minn.  
A Remarkable Combination of Quality and Economy. Booklet, 20 pp., 8½ x 11 ins. Illustrated. Important data on valuable material.
- Louisville Cement Co.**, 315 Guthrie St., Louisville, Ky.  
BRIXMENT for Perfect Mortar. Self-filing handbook, 8½ x 11 ins. 16 pp. Illustrated. Contains complete technical description of BRIXMENT for brick, tile and stone masonry, specifications, data and tests.
- Portland Cement Association**, Chicago, Ill.  
Concrete Masonry Construction. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Deals with various forms of construction.
- Town and Country Houses of Concrete Masonry. Booklet, 20 pp., 8½ x 11 ins. Illustrated.
- Facts About Concrete Building Tile. Brochure, 16 pp., 8½ x 11 ins. Illustrated.
- The Key to Firesafe Homes. Booklet, 20 pp., 8½ x 11 ins. Illustrated.
- Design and Control of Concrete Mixers. Brochure, 32 pp., 8½ x 11 ins. Illustrated.
- Portland Cement Stucco. Booklet, 64 pp., 8½ x 11 ins. Illustrated.
- Concrete in Architecture. Bound Volume, 60 pp., 8½ x 11 ins. Illustrated. An excellent work, giving views of exteriors and interiors.

## CHURCH EQUIPMENT

- John Van Range Co.**, Cincinnati.  
Practical Planning for Church Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

## CLUB EQUIPMENT

- John Van Range Co.**, Cincinnati.  
Practical Planning for Club Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

## CONCRETE BUILDING MATERIALS

- Concrete Steel Company**, 42 Broadway, New York.  
Modern Concrete Reinforcement. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

## CONSTRUCTION, FIREPROOF

- National Fire Proofing Co.**, 250 Federal St., Pittsburgh, Pa.  
Standard Fire Proofing Bulletin 171. 8½ x 11 ins., 32 pp. Illustrated. A treatise on fireproof floor construction.

## CONSTRUCTION, STONE AND TERRA COTTA

- Cowing Pressure Relieving Joint Company**, 100 North Wells St., Chicago, Ill.  
Pressure Relieving Joint for Buildings of Stone, Terra Cotta or Marble. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Deals with preventing cracks, spalls and breaks.

## DAMP-PROOFING

- Minwax Company, Inc.**, 11 West 42nd St., New York.  
Complete Index of all Minwax Products. Folder, 6 pp., 8½ x 11 ins. Illustrated. Complete description and detailed specifications.
- Toch Brothers**, New York, Chicago, Los Angeles.  
Handbook of R. I. W. Protective Products. Booklet, 40 pp., 4½ x 7½ ins.

## DOORS

- David Lupton's Sons Company**, Philadelphia.  
Lupton Commercial Steel Doors. Folder. 8½ x 11 ins. Illustrated.
- Lupton Steel Industrial Doors. Brochure. 8 pp., 8½ x 11 ins. Illustrated. Details and specifications.

## DOORS AND TRIM, METAL

- The American Brass Company**, Waterbury, Conn.  
Anaconda Architectural Bronze Extruded Shapes. Brochure, 180 pp., 8½ x 11 ins., illustrating and describing more than 2,000 standard bronze shapes of cornices, jamb casings, mouldings, etc.
- William Bayley Co.**, 147 North Street, Springfield, Ohio.  
Bayley Tubular Steel Doors. Brochure, 16 pp., 8½ x 11 ins. Illustrated.
- The Kawneer Company**, Niles, Michigan.  
Detail sheet, 8½ x 11 ins., with A.I.A. File No. featuring Heavy Welded Bronze Doors.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Fire-Doors and Hardware. Booklet, 8½ x 11 ins., 64 pp. Illustrated. Describes entire line of tin-clad and corrugated fire doors, complete with automatic closers, track hangers and all the latest equipment—all approved and labeled by Underwriters' Laboratories.
- Truscon Steel Company**, Youngstown, Ohio.  
Copper Alloy Steel Doors. Catalog 110. Booklet, 48 pp., 8½ x 11 ins. Illustrated.

## DOORS, SOUNDPROOF

- Irving Hamlin**, Evanston, Ill.  
The Evanston Soundproof Door. Folder, 8 pp., 8½ x 11 ins. Illustrated. Deals with a valuable type of door.

## DRAINAGE FITTINGS

- Josam Mfg. Co.**, Michigan City, Ind.  
Josam Products. Booklet, 73 pp., 8½ x 11 ins. Illustrated. A valuable line of accessories.
- Josam-Marsh Grease, Plaster, Sediment and Hair Interceptors. Brochure. 7 pp., 8½ x 11 ins. Illustrated.
- Josam New Saw Tooth-Roof Drain. Folder, 4 pp., 8½ x 11 ins. Illustrated.

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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 79

### DRINKING FOUNTAINS

**Halsey W. Taylor Co.**, Warren, Ohio  
Halsey Taylor Drinking Fountains. Architects' Catalog H. 52 pp., 8½ x 11 ins. Illustrated.

### DUMBWAITERS

**Sedgwick Machine Works**, 151 West 15th St., New York, N. Y.  
Catalog and Service Sheets. Standard specifications, plans and prices for various types, etc. 4¼ x 8¼ ins., 60 pp. Illustrated.  
Catalog and pamphlets, 8½ x 11 ins. Illustrated. Valuable data on dumbwaiters.

### ELECTRICAL EQUIPMENT

**The Electric Storage Battery Co.**, Philadelphia.  
Emergency Lighting and Emergency Power Data. Booklet, 12 pp., 8½ x 11 ins. Illustrated.

**General Electric Co.**, Merchandise Dept., Bridgeport, Conn.  
Wiring System Specification Data for Apartment Houses and Apartment Hotels. Booklet, 20 pp., 8 x 10 ins. Illustrated.  
Electrical Specification Data for Architects. Brochure, 36 pp., 8 x 10½ ins. Illustrated. Data regarding G. E. wiring materials and their use.  
The House of a Hundred Comforts. Booklet, 40 pp., 8 x 10½ ins. Illustrated. Dwells on importance of adequate wiring.

**Prometheus Electric Corporation**, 360 West 13th St., New York.  
Electric Heating Specialties. Booklet, 24 pages. 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.

**Ward Leonard Electric Co.**, Mt. Vernon, N. Y.  
Mobile Color Lighting. Booklet, 46 pp., 8½ x 11 ins. Illustrated. Valuable work on the subject.

**Westinghouse Electric & Mfg. Co.**, East Pittsburgh, Pa.  
Electric Power for Buildings. Brochure, 14 pp., 8½ x 11 ins. Illustrated. A publication important to architects and engineers.

Variable-Voltage Central Systems as Applied to Electric Elevators. Booklet, 12 pp., 8½ x 11 ins. Illustrated. Deals with an important detail of elevator mechanism.

Modern Electrical Equipment for Buildings. Booklet, 8½ x 11 ins. Illustrated. Lists many useful appliances.

Electrical Equipment for Heating and Ventilating Systems. Booklet, 24 pp., 8½ x 11 ins. Illustrated. This is "Motor Application Circular 7379."

Westinghouse Panelboards. Catalog 224. Booklet, 64 pp., 8½ x 11 ins. Illustrated.

Beauty; Power; Silence; Westinghouse Fans. (Dealer Catalog 45.) Brochure, 16 pp., 8½ x 11 ins. Illustrated. Valuable information on fans and their uses.

Electric Range Book for Architects (A. I. A. Standard Classification 31 G-4). Booklet, 24 pp., 8½ x 11 ins. Illustrated. Cooking apparatus for buildings of various types.

Westinghouse Commercial Cooking Equipment (Catalog 280). Booklet, 32 pp., 8½ x 11 ins. Illustrated. Equipment for cooking on a large scale.

Electric Appliances (Catalog 44-A). 32 pp., 8½ x 11 ins. Deals with accessories for home use.

### ELEVATORS

**Otis Elevator Company**, 260 Eleventh Ave., New York, N. Y.  
Otis Push Button Controlled Elevators. Descriptive leaflets, 8½ x 11 ins. Illustrated. Full details of machines, motors and controllers for these types.

Otis Geared and Gearless Traction. Elevators of All Types. Descriptive leaflets, 8½ x 11 ins. Illustrated. Full details of machines, motors and controllers for these types.

Escalators. Booklet, 8½ x 11 ins., 22 pp. Illustrated. Describes use of escalators in subways, department stores, theaters and industrial buildings. Also includes elevators and dock elevators.

**Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Elevators. Booklet, 8½ x 11 ins., 24 pp. Illustrated. Describes complete line of "Ideal" elevator door hardware and checking devices, also automatic safety devices.

**Sedgwick Machine Works**, 151 West 15th St., New York, N. Y.  
Catalog and descriptive pamphlets, 4¼ x 8¼ ins., 70 pp. Illustrated. Descriptive pamphlets on hand power freight elevators, sidewalk elevators, automobile elevators, etc.

Catalog and pamphlets, 8½ x 11 ins. Illustrated. Important data on different types of elevators.

### ESCALATORS

**Otis Elevator Company**, 260 Eleventh Ave., New York, N. Y.  
Escalators. Booklet, 32 pp., 8½ x 11 ins. Illustrated. A valuable work on an important item of equipment.

### FIREPROOFING

**Concrete Engineering Co.**, Omaha, Neb.  
Handbook of Fireproof Construction. Booklet, 54 pp., 8½ x 11 ins. Valuable work on methods of fireproofing.

**Concrete Steel Company**, 42 Broadway, New York.  
Economical Fireproof Floors for Suburban Buildings. Folder, 4 pp., 8½ x 11 ins. Illustrated.

**National Fire Proofing Company**, Fulton Building, Pittsburgh.  
Natco; The Complete Line of Structural Clay Tile. Booklet, 48 pp., 8½ x 11 ins. Illustrated.

### FLOODLIGHTING

**National Terra Cotta Society**, 230 Park Avenue, New York, N. Y.  
Terra Cotta Buildings Are Superior for Floodlighting. Brochure, 16 pp., 8½ x 11 ins. Illustrated.

### FLOOR HARDENERS (CHEMICAL)

**Minwax Company**, 11 West 42nd Street, New York, N. Y.  
Concrete Floor Treatments. Folder, 4 pp., 8½ x 11 ins. Illustrated.

**Toch Brothers**, New York, Chicago, Los Angeles.  
Handbook of R. L. W. Protective Products. Booklet, 40 pp., 4¼ x 7½ ins.

### FLOORS—STRUCTURAL

**Concrete Steel Company**, 42 Broadway, New York.  
Structural Economies for Concrete Floors and Roofs. Brochure, 32 pp., 8½ x 11 ins. Illustrated.

**Truscon Steel Co.**, Youngstown, Ohio.  
Truscon Floretyle Construction. Booklet, 8½ x 11 ins., 16 pp. Illustrations of actual jobs under construction. Lists of properties and information on proper construction. Proper method of handling and tables of safe loads.

**Structural Gypsum Corporation**, Linden, N. J.  
Gypsteel Pre-cast Fireproof Floors. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Data on flooring.  
Service Sheet No. 3. Specifications and Details of Design and Construction for Gypsteel Pre-Cast Floors and Ceilings. Folder, 8½ x 11 ins. Illustrated.

### FLOORING

**Armstrong Cork Co. (Linoleum Division)**, Lancaster, Pa.  
Armstrong's Linoleum Floors. Catalog, 8½ x 11 ins., 44 pp. Color plates. A technical treatise on linoleum, including table of gauges and weights and specifications for installing linoleum floors. Newly revised, February, 1929.

Armstrong's Linoleum Pattern Book, 1929. Catalog, 9 x 12 ins., 44 pp. Color plates. Reproduction in color of all patterns of linoleum and cork carpet in the Armstrong line.

Linoleum Layer's Handbook. 5 x 7 ins., 36 pp. Instructions for linoleum layers and others interested in learning most satisfactory methods of laying and taking care of linoleum.

Enduring Floors of Good Taste. Booklet, 6 x 9 ins., 48 pp. Illustrated in color. Explains use of linoleum for offices, stores, etc., with reproductions in color of suitable patterns, also specifications and instructions for laying.

**Blabon-Sandura Company, Inc.**, Finance Building, Philadelphia.  
Blabon's Linoleum Styles for 1930. Booklet, 64 pp., 6¼ x 8½ ins. Illustrated.  
Detailed Instructions for Handling and Laying Linoleum. Brochure, 40 pp., 3¼ x 5¾ ins. Illustrated.

Blabon's Linoleum Floors and Where You Will Find Them. Booklet, 8 pp., 8½ x 11 ins. Illustrated.  
Comparison of Tests. Folder, 8½ x 11 ins. Illustrated.

**Cellized Oak Flooring**, Memphis, Tenn.  
Style in Oak Floors. Booklet, 16 pp., 6 x 9 ins. Illustrated.

**Congoleum-Nairn, Inc.**, 195 Belgrave Drive, Kearny, N. J.  
Facts you should know about Resilient Floors. A series of booklets on floors for (1) schools, (2) hospitals, (3) offices, (4) stores, (5) libraries, (6) churches, (7) Clubs and Lodges, (8) apartments and hotels. Illustrated.  
Specifications for Resilient Floors. Booklet, 12 pp. A reprint from Sweet's.  
A New Kind of Floor Service. Brochure, 8 pp. Data on Bonded Floors.

Sealex Battleship Linoleum. Booklet, 12 pp. Illustrated. Shows typical installations.

Sealex Treadlite Tiles. Two booklets, 8 and 16 pp. Illustrated.  
Colonial Planks. Brochure, 8 pp. Illustrated.

**Goodyear Tire & Rubber Co., Inc.**, Akron, Ohio.  
Beautiful Floors, Architects' Reference Book. Brochure, 32 pp., 8½ x 11 ins. Illustrated. Valuable data on flooring.  
Rubber Flooring News. Monthly publications, 8½ x 11 ins. Illustrated. Giving data on flooring for buildings of many types.  
Manual of Goodyear Rubber Tile Installation Booklet. 7¾ x 10¾ ins. Illustrated.

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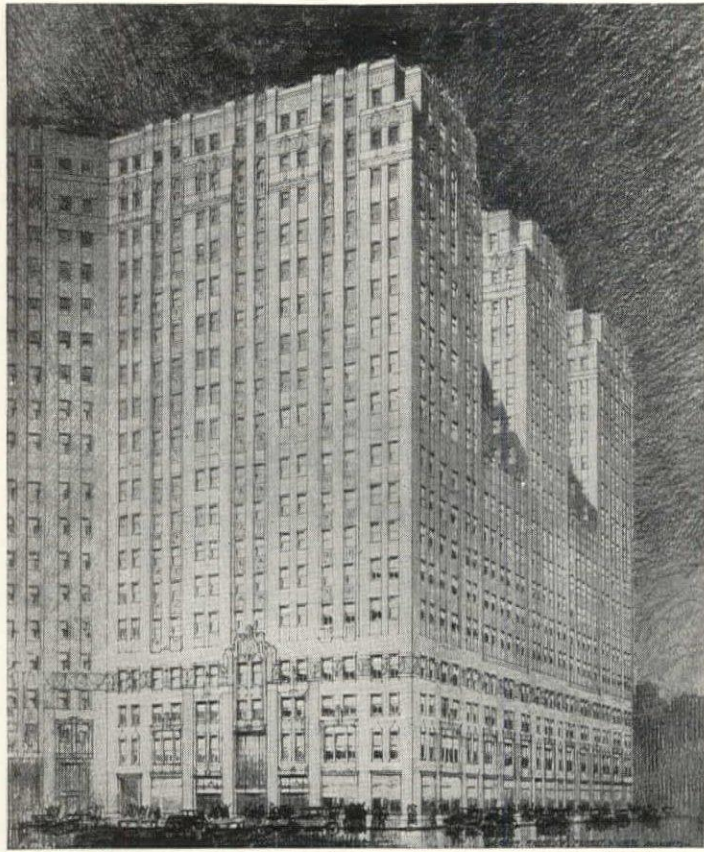
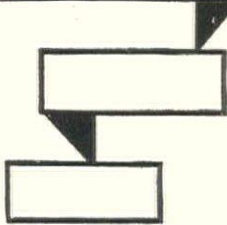
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- C. Pardee Works**, 101 Park Ave., New York, N. Y., and 1600 Walnut St., Philadelphia, Pa.  
Pardee Tiles. Bound Volume, 48 pp., 8½ x 11 ins. Illustrated.
- Stedman Rubber Flooring Company**, South Braintree, Mass.  
Stedman Ray-Proof Rubber. Booklet, 12 pp., 5½ x 8 ins. Illustrated. For X-ray Rooms.
- Stedman Tile, The Original Reinforced Rubber Floor. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Valuable data on flooring.
- Structural Gypsum Corporation**, Linden, N. J.  
Gypsteel Pre-cast Fireproof Floors. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Data on floorings.
- U. S. Gypsum Co.**, Chicago.  
Pyrobar Floor Tile. Folder, 8½ x 11 ins. Illustrated. Data on building floors of hollow tile and tables on floor loading.

### FURNITURE

- American Seating Co.**, 14 E. Jackson Blvd., Chicago, Ill.  
Art Ecclesiastical Booklet, 6 x 9 ins., 48 pp. Illustrations of church fittings in carved wood.
- Theatre Chairs. Booklet, 6 x 9 ins., 48 pp. Illustrations of theatre chairs.
- Kittinger Co.**, 1893 Elmwood Ave., Buffalo, N. Y.  
Kittinger Club & Hotel Furniture. Booklet, 20 pp., 6¼ x 9½ ins. Illustrated. Deals with fine line of furniture for hotels, clubs, institutions, schools, etc.
- Kittinger Club and Hotel Furniture. Booklet, 20 pp., 6 x 9 ins. Illustrated. Data on furniture for hotels and clubs.
- A Catalog of Kittinger Furniture. Booklet, 78 pp., 11 x 14 ins. Illustrated. General Catalog.

### GLASS CONSTRUCTION

- Adamson Flat Glass Co.**, Clarksburg, W. Va.  
Quality and Dependability. Folder, 2 pp., 8½ x 11 ins. Illustrated. Data in the company's product.
- Libbey-Owens Sheet Glass Co.**, Toledo, Ohio.  
Flat Glass. Brochure, 12 pp., 5¼ x 7¾ ins. Illustrated. History of manufacture of flat, clear, sheet glass.

### GREENHOUSES

- King Construction Company**, North Tonawanda, N. Y.  
King Greenhouses for Home or Estate. Portfolio of half-tone prints, varnishes, 8¼ x 10½ ins.
- William H. Lutton Company**, 267 Kearney Ave., Jersey City, N. J.  
Greenhouses of Quality. Booklet, 50 pp., 8½ x 11 ins. Illustrated. Conservatories making use of Lutton Patented Galvanized Steel V-Bar.

### GYPSUM

- Structural Gypsum Corporation**, Linden, N. J.  
Service Sheet No. 1. Specifications and Details of Design and Construction for Gypsteel Pre-Cast Long-Span Roofs. Folder, 8½ x 11 ins. Illustrated. Service Sheet No. 2. Specifications and Details of Design and Construction for Gypsteel Pre-Cast Short-Span Roofs. Folder, 8½ x 11 ins. Illustrated.

### HARDWARE

- P. & F. Corbin**, New Britain, Conn.  
Early English and Colonial Hardware. Brochure, 8½ x 11 ins. An important illustrated work on this type of hardware.
- Locks and Builders' Hardware. Bound Volume, 486 pp., 8½ x 11 ins. An exhaustive, splendidly prepared volume.
- Colonial and Early English Hardware. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Data on hardware for houses in these styles.
- Cutler Mail Chute Company**, Rochester, N. Y.  
Cutler Mail Chute Model F. Booklet, 4 x 9¼ ins., 8 pp. Illustrated.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Distinctive Garage Door Hardware. Booklet, 8½ x 11 ins., 66 pp. Illustrated. Complete information accompanied by data and illustrations on different kinds of garage door hardware.
- Distinctive Elevator Door Hardware. Booklet, 90 pp., 10½ x 16 ins. Illustrated.
- Russell & Erwin Mfg. Co.**, New Britain, Conn.  
Hardware for the Home. Booklet, 24 pp., 3½ x 6 ins. Deals with residence hardware.
- Door Closer Booklet. Brochure, 16 pp., 3½ x 6 ins. Data on a valuable detail.
- Garage Hardware. Booklet, 12 pp., 3½ x 6 ins. Hardware intended for garage use.
- Famous Homes of New England. Series of folders on old homes and hardware in style of each.

### HARDWARE—Continued

- Todhunter, Inc.**, 119 East 57th St., New York, N. Y.  
Colonial Hardware. Booklet, 12 pp., 8½ x 11 ins. Illustrated. Deals with hardware of the best type for exterior and interior use.

### HEATING EQUIPMENT

- American Blower Co.**, 6004 Russell St., Detroit, Mich.  
Heating and Ventilating Utilities. A binder containing a large number of valuable publications, each 8½ x 11 ins., on these important subjects.
- American Radiator Company, The**, 40 West 40th St., N. Y. C.  
Ideal Boilers for Oil Burning. Catalog 5½ x 8½ ins., 36 pp. Illustrated in 4 colors. Describing a line of Heating Boilers especially adapted to use with Oil Burners.
- Corto—The Radiator Classic. Brochure, 5½ x 8½ ins., 16 pp. Illustrated. A brochure on a space-saving radiator of beauty and high efficiency.
- Ideal Arcola Radiator Warmth. Brochure, 6¼ x 9½ ins. Illustrated. Describes a central all-on-one-floor heating plant with radiators for small residences, stores, and offices.
- How Shall I Heat My Home? Brochure, 16 pp., 5¼ x 8½ ins. Illustrated. Full data on heating and hot water supply.
- New American Radiator Products. Booklet, 44 pp., 5 x 7¾ ins. Illustrated. Complete line of heating products.
- A New Heating Problem. Brilliantly Solved. Broadside, 4 pp., 10¼ x 15 ins. Illustrated. Data on the IN-AIRID invisible air valve.
- In-Airid, the Invisible Air Valve. Folder, 8 pp., 3½ x 6 ins. Illustrated. Data on a valuable detail of heating.
- The 999 ARC Packless Radiator Valve. Folder, 8 pp., 3½ x 6 ins. Illustrated.
- James B. Clow & Sons**, 534 S. Franklin St., Chicago, Ill.  
Clow Gasteam Vented Heating System. Brochure, 24 pp., 8½ x 11 ins. Illustrated. Deals with a valuable form of heating equipment for using gas.
- C. A. Dunham Company**, 450 East Ohio St., Chicago, Ill.  
Dunham Radiator Trap. Bulletin 101, 8 x 11 ins., 12 pp. Illustrated. Explains working of this detail of heating apparatus.
- Dunham Packless Radiator Valves. Bulletin 104, 8 x 11 ins., 8 pp. Illustrated. A valuable brochure on valves.
- Dunham Return Heating System. Bulletin 109, 8 x 11 ins. Illustrated. Covers the use of heating apparatus of this kind.
- Dunham Vacuum Heating System. Bulletin 110, 8 x 11 ins., 12 pp. Illustrated.
- The Dunham Differential Vacuum Heating System. Bulletin 114. Brochure, 12 pp., 8 x 11 ins. Illustrated. Deals with heating for small buildings.
- The Dunham Differential Vacuum Heating System. Bulletin 115. Brochure, 12 pp., 8 x 11 ins. Illustrated. Deals with heating for large buildings.
- The Fulton Syphon Company**, Knoxville, Tenn.  
Syphon Temperature Regulators. Illustrated brochures, 8½ x 11 ins., dealing with general architectural and industrial applications; also specifically with applications of special instruments.
- Syphon Heating Specialties. Catalog No. 200, 192 pp., 3¼ x 6¼ ins. Important data on heating.
- Grinnell Company**, Providence, R. I.  
Grinnell Discovers a Superior Heating Trap. Folder, 4 pp., 8½ x 11 ins. Illustrated.
- Hoffman Specialty Company, Inc.**, 25 West 45th St., New York, N. Y.  
Heat Controlled With the Touch of a Finger. Booklet, 46 pp., 5¼ x 8¼ ins. Illustrated.
- How to Lock Out Air, the Heat Thief. Brochure, 48 pp., 5 x 7¼ ins. Illustrated.
- Janette Manufacturing Company**, 556 West Monroe Street, Chicago.  
More Heat from Any Hot Water System on Less Fuel. Folder. 4 pp., 8½ x 11 ins. Illustrated. Deals with use of the "Hydro-lator."
- S. T. Johnson Co.**, Oakland, Calif.  
Johnson Oil Burners. Booklet, 9 pp., 8½ x 11 ins. Illustrated
- Bulletin No. 4A. Brochure, 8 pp., 8½ x 11 ins. Illustrated. Data on different kinds of oil-burning apparatus.
- Bulletin No. 31. Brochure, 8 pp., 8½ x 11 ins. Illustrated. Deals with Johnson Rotary Burner with Full Automatic Control.
- Kewanee Boiler Corporation**, Kewanee, Ill.  
Kewanee on the Job. Catalog, 8½ x 11 ins., 80 pp. Illustrated. Showing installations of Kewanee boilers, water heaters, radiators, etc.
- Catalog No. 78, 6 x 9 ins. Illustrated. Describes Kewanee Fire-box Boilers with specifications and setting plans.
- Catalog No. 79, 6 x 9 ins. Illustrated. Describes Kewanee power boilers and smokeless tubular boilers with specifications.

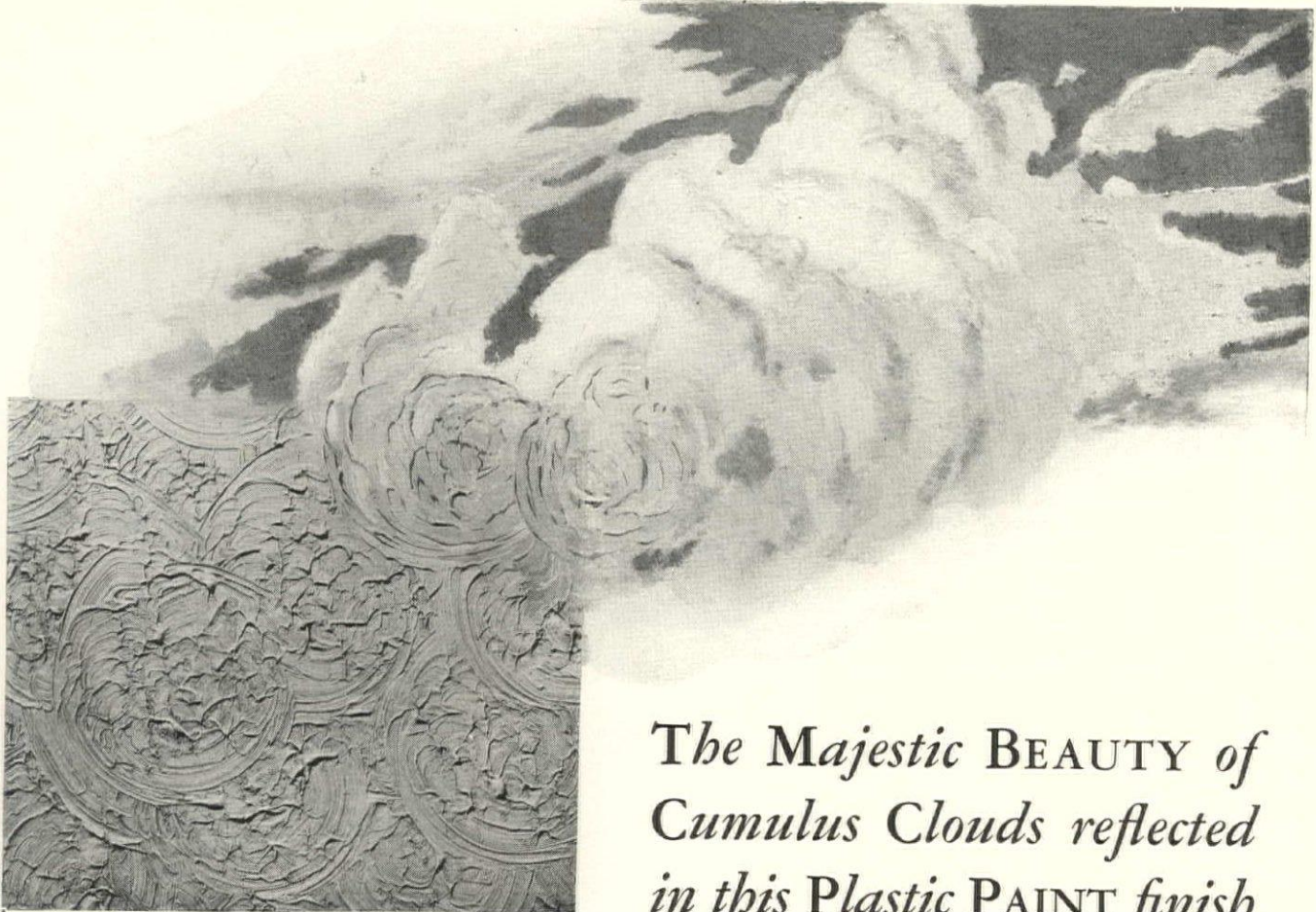
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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 82

### HEATING EQUIPMENT—Continued

- McQuay Radiator Corporation**, 35 East Wacker Drive, Chicago, Ill.  
**McQuay Visible Type Cabinet Heater.** Booklet, 4 pp., 8½ x 11 ins. Illustrated. Cabinets and radiators adaptable to decorative schemes.  
**McQuay Concealed Radiators.** Brochure, 4 pp., 8½ x 11 ins. Illustrated.  
**McQuay Unit Heater.** Booklet, 8 pp., 8½ x 11 ins. Illustrated. Gives specifications and radiator capacities.
- Modine Mfg. Co.**, Racine, Wisc.  
**Modine Copper Radiation.** Booklet, 28 pp., 8½ x 11 ins. Illustrated. Deals with industrial, commercial and domestic heating.  
**A Few Short Years.** Folder, 4 pp., 8½ x 11 ins. Illustrated. Heating for garages.  
**Dairy Plant Heating.** Folder, 4 pp., 8½ x 11 ins. Illustrated.  
**Industrial Heating.** Folder, 4 pp., 8½ x 11 ins. Illustrated.  
**Modine Unit Heater.** Folder, 6 pp., 8½ x 11 ins. Illustrated.
- Nash Engineering Company**, South Norwalk, Conn.  
**Bulletin 85.** Booklet, 12 pp., 10¼ x 7½ ins. Illustrated in color. Describes construction and operation of the Jennings Return Line Vacuum Heating Pump.  
**Bulletin 87.** Brochure, 8 pp., 10¼ x 7½ ins. Illustrated in color. Deals with Sizes T and U Jennings Vacuum Heating Pump for 2500 and 5000 square feet equivalent direct radiation.  
**Bulletin 63.** Booklet, 4 pp., 10¼ x 7½ ins. Illustrated. Describes in detail the Unit Type Motor Driven Jennings Condensation Pump.
- National Radiator Corporation**, Johnstown, Pa.  
**The Crimson Flame.** Folder, 6 pp., 4½ x 7 ins. Illustrated.  
**Contento Brings Contentment to Your Home.** Folder, 12 pp., 3½ x 6 ins. Illustrated.  
**National Jacketed Boiler.** Folder, 4 pp., 8½ x 11 ins. Illustrated.  
**National Super-Smokeless Boiler.** Folder, 4 pp., 8½ x 11 ins. Illustrated.  
**Aero, the National Radiator Sizes and Ratings.** Booklet, 16 pp., 5 x 7½ ins. Illustrated.
- Prometheus Electric Corporation**, 360 West 13th St., New York.  
**Electric Heating Specialties.** Booklet, 24 pages, 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.
- Rome Brass Radiator Corporation**, 1 East 42nd Street, New York.  
**Proof of the Pudding.** Booklet, 24 pp., 8½ x 10½ ins. Illustrated. Describes Robras, 20-20 concealed-within-the-walls, lightweight, all-brass radiators.  
**Within the Walls.** Brochure, 16 pp., 4 x 9 ins. Illustrated. Gives facts regarding modern, out-of-sight, lightweight, Robras 20-20 radiators.  
**Engineering Data.** Booklet, 16 pp., 8½ x 10½ ins. Illustrated. Full data and tables to facilitate selection and installation of Robras 20-20 concealed radiators for steam, water and vapor heating systems.  
**Small Bathrooms Made More Spacious.** Brochure, 4 pp. Illustrated. Gives descriptions, sizes and prices of Robras lightweight cabinet radiators to be installed under wash basins.
- Rome Brass Radiator Corp.**, (Aul-Brass Heater Division) 1 East 42nd St., New York.  
**Aulbras Hot Water Heaters.** Booklet, 12 pp., 8½ x 11 ins. Illustrated in color.
- Sarco Company, Inc.**, 183 Madison Ave., New York City, N. Y.  
**Steam Heating Specialties.** Booklet, 6 pp., 6 x 9 ins. Illustrated. Data on Sarco Packless Supply Valves and Radiator Traps for vacuum and vapor heating systems.  
**Equipment Steam Traps and Temperature Regulations.** Booklet, 6 pp., 6 x 9 ins. Illustrated. Deals with Sarco Steam Traps for hospital, laundry and kitchen fixtures and the Sarco Self-contained Temperature Regulation for hot water service tanks.
- Spencer Heater Co.**, Williamsport, Pa.  
**Catalog.** Booklet, 20 pp., 6½ x 9 ins. Illustrated. Complete line of magazine feed cast iron sectional and steel tubular heaters.  
**Spencer Magazine Heaters, for Steam, Vapor or Hot Water.** Brochure, 28 pp., 5¼ x 9 ins. Illustrated.  
**The Fire that Burns Uphill.** Brochure, 24 pp., 6½ x 9¼ ins. Illustrated in color. Magazine feed heaters for steam, vapor and hot water heating.
- B. F. Sturtevant Company**, Hyde Park, Boston, Mass.  
**Tempervane Heating Units.** Catalog 363. Booklet, 44 pp., 8½ x 11 ins. Illustrated. Data on "Heating Every Corner with Maximum Economy."
- Trane Co., The**, La Crosse, Wis.  
**Bulletin 14.** 16 pp., 8½ x 10½ ins. Covers the complete line of Trane Heating Specialties, including Trane Bellows Traps, and Trane Bellows Packless Valves.  
**Bulletin 20.** 24 pp., 8½ x 10½ ins. Explains in detail the operation and construction of Trane Condensation. Vacuum, Booster, Circulating, and similar pumps.  
**How to Cut Heating Costs.** Booklet, 18 pp., 8½ x 11 ins. Illustrated.

### HOISTS, TELESCOPIC

- Gillis & Geoghegan, Inc.** 535 West Broadway, New York.  
**G & G Telescopic Hoist.** Booklet, 24 pp., 8½ x 11 ins. Illustrated. Complete data on hoists.  
**Ash Removal.** Folder, 8½ x 11 ins. Illustrated. Hoists for removing ashes from basements.

### HOSPITAL EQUIPMENT

- The Frink Co., Inc.**, 369 Lexington Ave., New York City.  
**Catalog 426.** 7 x 10 ins., 16 pp. A booklet illustrated with photographs and drawings, showing the types of lights for use in hospitals, as operating table reflectors, linolite and multilite concentrators, ward reflectors, bed lights and microscopic reflectors, giving sizes and dimensions, explaining their particular fitness for special uses.
- Holophane Company**, 342 Madison Avenue, New York.  
**Lighting Specific for Hospitals.** Booklet, 30 pp., 8½ x 11 ins. Illustrated.
- The International Nickel Company**, 67 Wall St., New York, N. Y.  
**Hospital Applications of Monel Metal.** Booklet, 8½ x 11½ ins., 16 pp. Illustrated. Gives types of equipment in which Monel Metal is used, reasons for its adoption, with sources of such equipment.
- Prometheus Electric Corporation**, 360 West 13th St., New York.  
**Electric Heating Specialties.** Booklet, 24 pages, 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.
- Wilmot Castle Company**, Union Trust Bldg., Rochester, N. Y.  
**The Hospital Sterilizer Data Sheets.** Booklet, 16 pp., 8½ x 11 ins. Illustrated. Data on planning sterilizer installations.

### HOTEL EQUIPMENT

- Pick-Barth Company, Inc., Albert**, 1200 West 35th St., Chicago, and 34 Cooper Square, New York.  
**Some Thoughts on Furnishing a Hotel.** Booklet, 7½ x 9 ins. Data on complete outfitting of hotels.

### INCINERATORS

- Home Incinerator Co.**, Milwaukee, Wis.  
**The Decent Way.** Burn it with Gas. Brochure, 30 pp., 5¼ x 7¼ ins., inside. Illustrated. Incinerator sanitation equipment for residence use.
- A. I. A. File**, 12 pp., 8¼ x 10¼ ins., inside. Suggestions for architect on incineration, showing installation and equipment.
- Specialized Home Comforts Service Plan Book.** 40 pp., 8½ x 11 ins., inside. Illustrated. A complete outline of the many advantages of incineration.
- Blue Star Standards in Home Building.** 16 pp., 5½ x 8½ ins., inside. Illustrated. Explaining fully the Blue Star principles, covering heat, incineration, refrigeration, etc.
- Josam Mfg. Co.**, Michigan City, Ind.  
**Josam-Graver Incinerators.** Folder, 4 pp., 8½ x 11 ins. Illustrated.
- Kerner Incinerator Company**, 715 E. Water St., Milwaukee, Wis.  
**Incinerators (Chimney-fed).** Catalog No. 15 (Architect and Builders' Edition). Size 8½ x 11 ins., 16 pp. Illustrated. Describes principles and design of Kernerator Chimney-fed Incinerators for residences, apartments, hospitals, schools, apartment hotels, clubs and other buildings. Shows all standard models and gives general information and working data.
- Sanitary Elimination of Household Waste.** Booklet, 4 x 9 ins., 16 pp. Illustrated. Gives complete information on the Kernerator for residences.
- Garbage and Waste Disposal for Apartment Buildings.** Folder, 8½ x 11 ins., 16 pp. Illustrated. Describes principle and design of Kernerator Chimney-fed Incinerator for apartments and gives list of buildings where it has been installed.
- Sanitary Disposal of Waste in Hospitals.** Booklet, 4 x 9 ins., 12 pp. Illustrated. Shows how this necessary part of hospital service is taken care of with the Kernerator. Gives list of hospitals where installed.
- The Kernerator (Chimney-fed) Booklet.** Catalog No. 17, 20 pp., 8½ x 11 ins. Illustrated. Data on a valuable detail of equipment.

### INSULATION

- Armstrong Cork & Insulation Co.**, Pittsburgh, Pa.  
**The Insulation of Roofs with Armstrong's Corkboard.** Booklet. Illustrated. 7½ x 10½ ins., 32 pp. Discusses means of insulating roofs of manufacturing or commercial structures.
- Insulation of Roofs to Prevent Condensation.** Illustrated booklet, 7½ x 10½ ins., 36 pp. Gives full data on valuable line of roof insulation.
- Filing Folder for Pipe Covering Data.** Made in accordance with A. I. A. rules.
- The Cork-lined House Makes a Comfortable Home.** 5 x 7 ins., 32 pp. Illustrated.
- Armstrong's Corkboard.** Insulation for Walls and Roofs of Buildings. Booklet, 66 pp., 9½ x 11¾ ins. Illustrates and describes use of insulation for structural purposes.
- Structural Gypsum Corporation**, Linden, N. J.  
**Heat Insulation Value of Gypsteel.** Folder, 4 pp., 8½ x 11 ins. Brochure, by Charles L. Norton, of M. I. T.

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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 84

### JOISTS

- Concrete Steel Company**, 42 Broadway, New York, N. Y.  
Structural Economics for Concrete Floors and Roofs. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
- Modern Concrete Reinforcement. Brochure, 32 pp., 8½ x 11 ins. Illustrated.
- Construction Details for Installing Havemeyer Trusses. Data sheets, 8½ x 11 ins. Illustrated.
- Standard Practice for Placing Havemeyer Reinforcement in Columns, Beams and Slabs. Data sheets, 8½ x 11 ins. Illustrated.

### KITCHEN EQUIPMENT

- The International Nickel Company**, 67 Wall St., New York, N. Y.  
Hotels, Restaurants and Cafeteria Applications of Monel Metal. Booklet, 8½ x 11 ins., 32 pp. Illustrated. Gives types of equipment in which Monel Metal is used, with service data and sources of equipment.
- Prometheus Electric Corporation**, 360 West 13th St., New York.  
Electric Heating Specialties. Booklet, 24 pages, 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.
- John Van Range Co.**, Cincinnati.  
Practical Planning for Church Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
- Practical Planning for Club Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
- Practical Planning for School Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
- Planning Restaurants That Make Money. Booklet, 78 pp., 8½ x 11 ins. Illustrated. Excellent work on equipment.

### LABORATORY EQUIPMENT

- Alberene Stone Co.**, 153 West 23rd Street, New York City.  
Booklet, 8¾ x 11¼ ins., 26 pp. Stone for laboratory equipment, shower partitions, stair treads, etc.
- Duriron Company**, Dayton, Ohio.  
Duriron Acid, Alkali and Rust-proof Drain Pipe and Fittings. Booklet, 8½ x 11 ins., 20 pp. Full details regarding a valuable form of piping.

### LANTERNS

- Todhunter, Inc.**, 119 East 57th St., New York, N. Y.  
Lanterns. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Deals with a fine assortment of fixtures for exterior and interior use.

### LATH, METAL AND REINFORCING

- Milwaukee Corrugating Co.**, Milwaukee.  
The Milcor Manual. Booklet, 96 pp., 8½ x 11 ins. Illustrated. Data on metal lath and similar materials.
- Milcor Metal Ceiling Catalog. Booklet, 288 pp., 8½ x 11 ins. Illustrated. Data on metal ceiling and wall construction.
- National Steel Fabric Co.**, Pittsburgh, Pa.  
Better Walls for Better Homes. Brochure, 16 pp., 7¼ x 11¼ ins. Illustrated. Metal lath, particularly for residences.
- Steelex for Floors. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Combined reinforcing and form for concrete or gypsum floors and roofs.
- Steelex Data Sheet No. 1. Folder, 8 pp., 8½ x 11 ins. Illustrated. Steelex for floors on steel joists with round top chords.
- Steelex Data Sheet No. 2. Folder, 8 pp., 8½ x 11 ins. Illustrated. Steelex for floors on steel joists with flat top flanges.
- Steelex Data Sheet No. 3. Folder, 8 pp., 8½ x 11 ins. Illustrated. Steelex for folders on wood joists.
- Truscon Steel Company**, Youngstown, Ohio.  
Truscon ¾-inch Hy-Rib for Roofs, Floors and Walls. Booklet, 8½ x 11 ins., illustrating Truscon ¾-inch Hy-Rib as used in industrial buildings. Plates of typical construction. Progressive steps of construction. Specification and load tables.

### LAUNDRY MACHINERY

- American Laundry Machinery Co.**, Norwood Station, Cincinnati, O.  
Functions of the Hotel and Hospital Laundry. Brochure, 8 pp., 8½ x 11 ins. Valuable data regarding an important subject.
- Laundry Equipment of Small Hotels, Hospitals and Institutions. Booklet, 36 pp., 8½ x 11 ins. Illustrated.
- General Laundry Machinery Corporation**, 608 South Dearborn St., Chicago, Ill.  
General All-Metal Washer. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Timken-equipped Monel metal washer with one-lever control.

### LAUNDRY MACHINERY—Continued

- General Dry Tumbler. Brochure, 16 pp., 8½ x 11 ins. Illustrated. Specifications and details of Up-Draft Dry Tumbler with automatic temperature control.
- Troy Laundry Machinery Co., Inc.**, 9 Park Place, New York City.  
Laundry Machinery for Large Institutions. Loose-leaf booklet, 50 pp., 8½ x 11 ins. Illustrated.
- Laundry Machinery for Small Institutions. Loose-leaf brochure, 50 pp., 8½ x 11 ins. Illustrated.
- Accessory Equipment for Institutional Laundries. Leather bound book, 50 pp., 8½ x 11 ins. Illustrated.
- Dry Cleaning Equipment for Institutional Purposes. Brochure, 50 pp., 8½ x 11 ins. Illustrated.

### LIGHTING EQUIPMENT

- The Frink Co., Inc.**, 369 Lexington Ave., New York, N. Y.  
Catalog 415, 8½ x 11 ins., 46 pp. Photographs and scaled cross-sections. Specialized bank lighting, screen and partition reflectors, double and single desk reflectors and Polaralite Signs.
- Gleason Tiebout Glass Company**, 67 West 44th St., New York, N. Y.  
Fragrant of Celestialite. Booklet, 24 pp., 7 x 10 ins. Illustrated. Data on lighting for offices, schools, hospitals, etc.
- Celestialite Catalog 727. Booklet, 18 pp., 8½ x 11 ins. Illustrated. Valuable brochure on lighting.
- Holophane Company, Inc.**, 342 Madison Ave., New York, N. Y.  
The Lighting of Schools; A Guide to Good Practice. Booklet, 24 pp., 8½ x 11 ins. Illustrated.
- Lighting Specifications for Hospitals. Brochure, 30 pp., 8½ x 11 ins. Illustrated.
- Industrial Lighting. Bulletin 448A. Booklet, 24 pp., 8½ x 11 ins. Illustrated.
- Holophane Catalog. Booklet, 48 pp., 8½ x 11 ins. Combination catalog and engineering data book.
- The Lighting of Schools. A Guide to Good Practice. Booklet, 24 pp., 8½ x 11 ins. Illustrated.
- Smyser-Royer Co.**, 1700 Walnut Street, Philadelphia, Pa.  
Catalog "J" on Exterior Lighting Fixtures. Brochure, illustrated, giving data on over 300 designs of standards, lanterns and brackets of bronze or cast iron.
- Todhunter**, 119 East 57th St., New York, N. Y.  
Lighting Fixtures, Lamps and Candlesticks. 24 pp., 8½ x 11 ins. Illustrated. Fine assortment of lighting accessories.
- Westinghouse Electric & Manufacturing Co.**, East Pittsburgh, Pa.  
Industrial Lighting Equipment. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
- Commercial Lighting. Brochure, 24 pp., 8½ x 11 ins. Illustrated.
- Airport and Floodlighting Equipment. Booklet, 20 pp., 8½ x 11 ins. Illustrated.

### MAIL CHUTES

- Cutler Mail Chute Company**, Rochester, N. Y.  
Cutler Mail Chute Model F. Booklet, 4 x 9¼ ins., 8 pp. Illustrated.

### MANTELS

- Henry Klein & Co., Inc.**, 40-46 West 23rd Street, New York.  
Driwood Mantels. Booklet, 12 pp., 8½ x 11 ins. Illustrated. Fine line of eighteenth century English and American mantels.
- Todhunter, Inc.**, 119 East 57th St., New York, N. Y.  
Georgian Mantels. Brochure, 12 pp., 8½ x 11 ins. Illustrated. Illustrates and describes an excellent assortment of fine mantels based on Georgian precedent.

### MARBLE

- The Georgia Marble Company**, Tate, Ga.; New York Office, 1328 Broadway.  
Why Georgia Marble Is Better. Booklet, 3½ x 6 ins. Gives analysis, physical qualities, comparison of absorption with granite, opinions of authorities, etc.
- Convincing Proof. 3½ x 6 ins., 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of Architects and Sculptors.
- Hurt Building, Atlanta; Senior High School and Junior College, Muskegon, Mich. Folders, 4 pp., 8½ x 11 ins. Details.

### METALS

- Aluminum Company of America**, Pittsburgh.  
Architectural Aluminum. Brochure, 30 pp., 8½ x 11 ins. Illustrated. An excellent booklet on the subject.
- Central Alloy Steel Corporation**, Massillon, Ohio.  
Sheet Iron Primer. Booklet, 64 pp., 5¼ x 7¾ ins. Illustrated.
- The Path to Permanence. Brochure, 52 pp., 8½ x 11 ins. Illustrated. Data on sheet iron.

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an Investment  
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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 86

### METALS—Continued

**The International Nickel Company**, 67 Wall St., New York, N. Y.  
Monel Metal Primer. 8 folders, 4 pp., 8½ x 11 ins. Illustrated.  
Valuable data on use of monel in kitchens, laundries, etc.

### MILL WORK—See also Wood

**Curtis Companies Service Bureau**, Clinton, Iowa.  
Your Dream Kitchen, Booklet, 11 pp., 7¼ x 10½ ins. Illustrated.  
Fine line of fittings for kitchens, breakfast alcoves, etc.

**Hartmann-Sanders Company**, 2155 Elston Ave., Chicago, Ill.  
Column Catalog, 7½ x 10 ins., 48 pp. Illustrated. Contains prices on columns 6 to 36 ins. diameter, various designs and illustrations of columns and installations.

The Pergola Catalog, 7½ x 10 ins., 64 pp. Illustrated. Contains illustrations of pergola lattices, garden furniture in wood and cement, garden accessories.

**Klein & Co., Inc., Henry**, 11 East 37th St., New York, N. Y.  
Two Driwood Interiors, Folder, 4 pp., 6¼ x 9 ins. Illustrated.  
Use of moulding for paneling walls.

A New Style in Interior Decoration. Folder, 4 pp., 6¼ x 9 ins. Illustrated. Deals with interior woodwork.

Driwood Period Mouldings in Ornamented Wood. Booklet, 28 pp., 8½ x 11 ins. Illustrated.

How Driwood Period Mouldings in Ornamented Wood Set a New Style in Decoration. Folder.

**Roddis Lumber and Veneer Co.**, Marshfield, Wis.  
Roddis Doors. Brochure, 24 pp., 5¼ x 8½ ins. Illustrated price list of doors for various types of buildings.

Roddis Doors, Catalog G. Booklet, 184 pp., 8½ x 11 ins. Completely covers the subject of doors for interior use.

Roddis Doors for Hospitals. Brochure, 16 pp., 8½ x 11 ins. Illustrated work on hospital doors.

Roddis Doors for Hotels. Brochure, 16 pp., 8½ x 11 ins. Illustrated work on doors for hotel and apartment buildings.

### MORTAR AND CEMENT COLORS

**Clinton Metallic Paint Co.**, Clinton, N. Y.  
Clinton Mortar Colors. Folder, 8½ x 11 ins., 4 pp. Illustrated in colors, gives full information concerning Clinton Mortar Colors with specific instructions for using them.

Color Card. 3¼ x 6½ ins. Illustrates in color the ten shades in which Clinton Mortar Colors are manufactured.

Something New in Stucco. Folder, 3½ x 6 ins. An interesting folder on the use of coloring matter for stucco coated walls.

### PAINTS, STAINS, VARNISHES AND WOOD FINISHES

**Minwax Company, Inc.**, 11 West 42nd St., New York.  
Color Card and Specifications for Minwax Brick and Cement Coating. Folder, 4 pp., 8½ x 11 ins. Illustrated.

**National Lead Company**, 111 Broadway, New York, N. Y.  
Handy Book on Painting. Book, 5½ x 3¼ ins., 100 pp. Gives directions and formulæ for painting various surfaces of wood, plaster, metals, etc., both interior and exterior.

Red Lead in Paste Form. Booklet, 6¼ x 3½ ins., 16 pp. Illustrated. Directions and formulæ for painting metals.

Came Lead. Booklet, 6 x 8¼ ins., 12 pp. Illustrated. Describes various styles of lead cames.

**Sherwin-Williams Company**, 601 Canal Rd., Cleveland, Ohio.  
Complete Architectural Specifications for painting, varnishing and lacquering, reprinted from the Sherwin-Williams Architectural Catalogue as it appears in Sweet's Architectural Catalogue. Form Number B 303. 8½ x 11, bound in paper, thirty pages of specifications and color chips; carries A. I. A. file number.

**Toch Brothers**, New York, Chicago, Los Angeles.  
Architects' Specification Data. Sheets in loose leaf binder, 8½ x 11 ins., dealing with an important line of materials.

### PARTITIONS

**Circle A. Products Corporation**, New Castle, Ind.  
Circle A. Partitions Sectional and Movable. Brochure. Illustrated. 8½ x 11¼ ins., 32 pp. Full data regarding an important line of partitions, along with Erection Instructions for partitions of three different types.

**Irving Hamlin**, Evanston, Ill.  
Hamlinized Folding Partitions Made from Hamlin's Evanston Soundproof Doors, Sectional and Movable. Folder, 4 pp., 8½ x 11 ins. Illustrated.

**Hauserman Company, E. F.**, Cleveland, Ohio.  
Hollow Steel Standard Partitions. Various folders, 8½ x 11 ins. Illustrated. Give full data on different types of steel partitions, together with details, elevations and specifications.

### PARTITIONS—Continued

**Henry Klein & Co.**, 25 Grand Street, Elmhurst, L. I., N. Y.  
Telesco Partition. Catalog, 8¼ x 11 ins., 14 pp. Illustrated. Shows typical offices laid out with Telesco partitions, cuts of finished partition units in various woods. Gives specifications and cuts of buildings using Telesco.

Detailed Instructions for Erecting Telesco Partitions. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Complete instructions, with cuts and drawings, showing how easily Telesco Partition can be erected.

**Improved Office Partition Co.**, 25 Grand St., Elmhurst, L. I., N. Y. (See Henry Klein & Co.)

**Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Partitions. Booklet, 7 x 10 ins., 32 pp. Illustrated. Describes complete line of track and hangers for all styles of sliding parallel, accordion and flush-door partitions.

**Structural Gypsum Corporation**, Linden, N. J.  
Service Sheet No. 4. Specifications for Gypsteel Partition File. Folder, 8½ x 11 ins. Illustrated.

**Telesco Office Partition**, 25 Grand St., Elmhurst, L. I., N. Y. (See Henry Klein & Co.)

**U. S. Gypsum Co.**, Chicago, Ill.  
Pyrobar Partition and Furring Tile. Booklet, 8½ x 11 ins., 24 pp. Illustrated. Describes use and advantages of hollow tile for inner partitions.

### PIPE

**American Brass Company**, Waterbury, Conn.  
Bulletin B-1. Brass Pipe for Water Service. 8½ x 11 ins., 28 pp. Illustrated. Gives schedule of weights and sizes (I.P.S.) of seamless brass and copper pipe, shows typical installations of brass pipe, and gives general discussion of the corrosive effect of water on iron, steel and brass pipe.

**American Rolling Mill Company**, Middletown, Ohio.  
How ARMCO Dredging Products Cut Costs. Booklet, 16 pp., 6 x 9 ins. Data on dredging pipe.

**Clow & Sons, James B.**, 534 S. Franklin St., Chicago, Ill.  
Catalog A. 4 x 16½ ins., 700 pp. Illustrated. Shows a full line of steam, gas and water works supplies.

**Duriron Company**, Dayton, Ohio.  
Duriron Acid, Alkali, Rust-proof Drain Pipe and Fittings. Booklet, 20 pp., 8½ x 11 ins. Illustrated. Important data on a valuable line of pipe.

**Maurice A. Knight**, Akron, Ohio.  
Knightware in the Princeton Chemical Laboratory. Booklet, 16 pp., 6¼ x 8½ ins. Illustrated.

**National Tube Co.**, Frick Building, Pittsburgh, Pa.  
"National" Bulletin No. 2. Corrosion of Hot Water Pipe, 8½ x 11 ins., 24 pp. Illustrated. In this bulletin is summed up the most important research dealing with hot water systems. The text matter consists of seven investigations by authorities on this subject.

"National" Bulletin No. 3. The Protection of Pipe Against Internal Corrosion, 8½ x 11 ins., 20 pp. Illustrated. Discusses various causes of corrosion, and details are given of the deactivating and deaerating systems for eliminating or retarding corrosion in hot water supply lines.

"National" Bulletin No. 25. "National" Pipe in Large Buildings. 8½ x 11 ins., 88 pp. This bulletin contains 254 illustrations of prominent buildings of all types, containing "National" Pipe, and considerable engineering data of value to architects, engineers, etc.

Modern Welded Pipe. Book of 88 pp., 8½ x 11 ins., profusely illustrated with halftone and line engravings of the important operations in the manufacture of pipe.

### PLASTER

**Best Bros. Keene's Cement Co.**, Medicine Lodge, Kans.  
Information Book. Brochure, 24 pp., 5 x 9 ins. Lists grades of plaster manufactured; gives specifications and uses for plaster.

Plasterers' Handbook. Booklet, 16 pp., 3½ x 5½ ins. A small manual for use of plasterers.

Interior Walls Everlasting. Brochure, 20 pp., 6¼ x 9¼ ins. Illustrated. Describes origin of Keene's Cement and views of buildings in which it is used.

### PLUMBING EQUIPMENT

**Clow & Sons, James B.**, 534 S. Franklin St., Chicago, Ill.  
Catalog M. 9¼ x 12 ins., 184 pp. Illustrated. Shows complete line of plumbing fixtures for Schools, Railroads and Industrial Plants.

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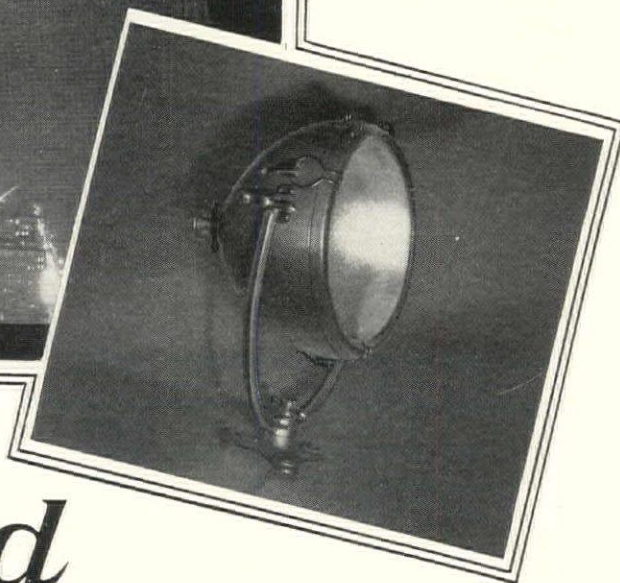
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*Gulf Building, Houston, Texas. Architect, Kenneth Franzheim, New York. Associate Architect, A.C. Finn, Houston. Electrical Contractor, A.T. Vick Company, Houston. Floodlighted by General Electric. (Below) Type L-30 G-E Novalux all-copper-bronze floodlighting units*



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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 88

### PLUMBING EQUIPMENT—Continued

- Crane Company**, 836 S. Michigan Ave., Chicago, Ill.  
Plumbing Suggestions for Home Builders. Catalog, 3 x 6 ins., 80 pp. Illustrated.
- Plumbing Suggestions for Industrial Plants. Catalog, 4 x 6½ ins., 34 pp. Illustrated.
- Planning the Small Bathroom. Booklet, 5 x 8 ins. Discusses planning bathrooms of small dimensions.
- Duriron Company**, Dayton, Ohio.  
Duriron Acid, Alkali and Rust-Proof Drain Pipe and Fittings. Booklet, 8½ x 11 ins., 20 pp. Full details regarding a valuable form of piping.
- Imperial Brass Mfg. Co.**, 1200 W. Harrison St., Chicago, Ill.  
Watrous Patent Flush Valves, Duojet Water Closets, Liquid Soap Fixtures, etc. 8½ x 11 ins., 136 pp., loose-leaf catalog, showing roughing-in measurements, etc.
- Speakman Company**, Wilmington, Del.  
Catalog K. Booklet, 150 pp., 8½ x 10½ ins. Illustrated. Data on showers and equipment details.

### PNEUMATIC TUBE SYSTEMS

- G & G Atlas Systems, Inc.**, 544 West Broadway, New York.  
12 pp., 8½ x 11. Illustrated booklet of tube systems for retail stores and other buildings.
- 4 pp., 8½ x 11. Data Sheet showing schematic diagrams for hotel, bank, factory and wholesale buildings, table of sizes, space requirements and preliminary layout steps. A.I.A. 35h21.

### PUMPS

- Kewanee Private Utilities Co.**, 442 Franklin St., Kewanee, Ill.  
Bulletin E. 7¼ x 10¼ ins., 32 pp. Illustrated. Catalog. Complete descriptions, with all necessary data, on Standard Service Pumps, Indian Brand Pneumatic Tanks, and Complete Water Systems, as installed by Kewanee Private Utilities Co.
- Nash Engineering Company**, South Norwalk, Conn.  
Bulletin 52. Brochure. 6 pp., 10¼ x 7½ ins. Illustrated in color. Devoted to Jennings Standard Centrifugal Pumps for house service, boosting city water pressure to supply top stories, for circulating warm water, etc.
- Bulletin. 97. Booklet. 16 pp., 10¼ x 7½ ins. Illustrated in color. Describes the design, construction and operation of the Jennings Suction Sump Pump.
- Bulletin 11. Brochure. 8 pp., 10¼ x 7½ ins. Illustrated in color. Deals with Nash Hytor Vacuum Pumps for air and gases.
- The Trane Co.**, La Crosse, Wis.  
Trane Small Centrifugal Pumps. Booklet, 3¼ x 8 ins., 16 pp. Complete data on an important type of pump.
- Yeomans Brothers Company**, 1433 Dayton Street, Chicago.  
Yeomans Horizontally Split Case Centrifugal Pumps. Booklet, 12 pp., 8½ x 11 ins. Illustrated.

### RAMPS

- Ramp Buildings Corporation**, 21 East 40th St., New York, N. Y.  
Building Garages for Profitable Operation. Booklet, 8½ x 11 ins., 16 pp. Illustrated. Discusses the need for modern mid-city, parking garages, and describes the d'Humy Motoramp system of design, on the basis of its superior space economy and features of operating convenience. Gives cost analyses of garages of different sizes, and calculates probable earnings.
- Garage Design Data. Series of informal bulletins issued in loose-leaf form, with monthly supplements.

### REFRIGERATION

- The Fulton Syphon Company**, Knoxville, Tenn.  
Temperature Control of Refrigeration Systems. Booklet, 8 pp., 8½ x 11 ins. Illustrated. Deals with cold storage, chilling of water, etc.

### REINFORCED CONCRETE—See also Construction, Concrete

- Longspan** ¼-inch Rib Lath. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with a new type of V-Rib expanded metal.
- Truscon Steel Company**, Youngstown, Ohio.  
Shearing Stresses in Reinforced Concrete Beams. Booklet, 8½ x 11 ins., 12 pp.

### RESTAURANT EQUIPMENT

- John Van Range Company**, Cincinnati.  
Planning Restaurants That Make Money. Booklet, 78 pp., 8½ x 11 ins. Illustrated. Excellent work on equipment.

### ROOFING

- Federal Cement Tile Co.**, 608 S. Dearborn Street, Chicago.  
Catalog and Roof Standards. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Describes Featherweight Concrete Insulating Roof Slabs, including complete data, weights and dimensions, specifications and detail drawings. Also includes complete information on Featherweight Nailing Concrete Roof Slabs for use with ornamental slate or copper covering. The catalog is profusely illustrated and contains also a partial list of users.
- Examples of Theaters and Theater Roofs. Brochure, 16 pps., 8½ x 11 ins., Illustrated. Contains views of theaters designed by some of the country's leading architects.
- Federal Interlocking Tile and Glass Tile. 4 pp., 8½ x 11 ins. Illustrates and describes complete roof or precast concrete slabs requiring no composition covering.
- Heinz Roofing Tile Co.**, 1925 West Third Avenue, Denver, Colo.  
Plymouth-Shingle Tile with Sprocket Hips. Leaflet, 8½ x 11 ins. Illustrated. Shows use of English shingle tile with special hips.
- Italian Promenade Floor Tile. Folder, 2 pp., 8½ x 11 ins. Illustrated. Floor tiling adapted from that of Davanzati Palace.
- Mission Tile. Leaflet, 8½ x 11 ins. Illustrated. Tile such as are used in Italy and Southern California.
- Georgian Tile. Leaflet, 8½ x 11 ins. Illustrated. Tiling as used in old English and French farmhouses.
- Johns-Manville Corporation**, New York.  
The New Book of Roofs. Brochure, 24 pp., 8½ x 11 ins. Illustrated. Roofing from the Architect's point of view.
- Ludowici-Celadon Company**, 104 So. Michigan Ave., Chicago, Ill.  
"Ancient" Tapered Mission Tiles. Leaflet, 8½ x 11 ins., 4 pp. Illustrated. For architects who desire something out of the ordinary this leaflet has been prepared. Describes briefly the "Ancient" Tapered Mission Tiles, hand-made with full corners and designed to be applied with irregular exposures.
- Milwaukee Corrugating Co.**, Milwaukee.  
Milcor Architectural Sheet Metal Guide. Booklet. 72 pp., 8½ x 11 ins. Illustrated. Metal tile roofing, skylights, ventilators, etc.
- Milcor Sheet Metal Handbook. Brochure. 128 pp., 8½ x 11 ins. Illustrated. Deals with rain-carrying equipment, etc.
- Structural Gypsum Corporation**, Linden, N. J.  
Relative Effectiveness of Various Types of Roofing Construction in Preventing Condensation of the Under Surface. Folder, 4 pp., 8½ x 11 ins. Important data on the subject.
- Gypsteel Pre-cast Fireproof Roofs. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Information regarding a valuable type of roofing.
- U. S. Gypsum Co.**, Chicago, Ill.  
Pyrobar Roof Construction. Booklet, 8 x 11 ins., 48 pp. Illustrated. Gives valuable data on the use of tile in roof construction.
- Sheetrock Pyrofill Roof Construction. Folder, 8½ x 11 ins. Illustrated. Covers use of roof surfacing which is poured in place.

### SCHOOL EQUIPMENT

- John Van Range Co.**, Cincinnati.  
Practical Planning for School Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

### SEWAGE DISPOSAL

- Kewanee Private Utilities**, 442 Franklin St., Kewanee, Ill.  
Specification Sheets. 7¼ x 10¼ ins., 40 pp. Illustrated. Detailed drawings and specifications covering water supply and sewage disposal systems.
- Nash Engineering Company**, South Norwalk, Conn.  
Bulletin 67. Booklet. 16 pp. 10¼ x 7½ ins. Illustrated in color. Describes Type A Jennings Sewage Ejector for handling Unscreened sewage and raising it from basements below sewer level.
- Bulletin 103. Brochure. 16 pp. 10¼ x 7½ ins. Illustrated in color. Deals with small size Type B Jennings Sewage Ejector.
- Yeomans Brothers Company**, 1433 Dayton Street, Chicago.  
The Shone System of Pneumatic Sewage Ejectors (Screenless). Brochure. 20 pp., 8½ x 11 ins. Illustrated.
- Yeomans Heavy Duty Screenless Submerged Type Sewage Ejectors. Booklet. 12 pp., 8½ x 11 ins. Illustrated.

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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 90

### SCREENS

- American Brass Co., The, Waterbury, Conn.**  
Facts for Architects About Screening. Illustrated folder, 9½ x 11¾ ins., giving actual samples of metal screen cloth and data on fly screens and screen doors.
- Athey Company, 6015 West 65th St., Chicago, Ill.**  
The Athey Perennial Window Shade. An accordion pleated window shade, made from translucent Herringbone woven Coutil cloth, which raises from the bottom and lowers from the top. It eliminates awnings, affords ventilation, can be dry-cleaned and will wear indefinitely.

### SHELVING-STEEL

- David Lupton's Sons Company, Philadelphia, Pa.**  
Lupton Steel Shelving. Catalog E. Illustrated brochure, 40 pp., 8½ x 11 ins. Deals with steel cabinets, shelving, racks, doors, partitions, etc.

### STEEL PRODUCTS FOR BUILDING

- Bethlehem Steel Company, Bethlehem, Pa.**  
Steel Joists and Stanchions. Booklet, 72 pp., 4 x 6¼ ins. Data for steel for dwellings, apartment houses, etc.
- Steel Frame House Company, Pittsburgh, Pa. (Subsidiary of McClintic-Marshall Corp.)**  
Steel Framing for Dwellings. Booklet, 16 pp., 8½ x 11 ins. Illustrated.
- Steel Framing for Gasoline Service Stations. Brochure, 8 pp., 8½ x 11 ins. Illustrated.
- Steel Frame Standard Gasoline Service Stations. Booklet, 8 pp., 8½ x 11 ins. Illustrated. Three standard designs of stations.
- Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.**  
The Arc Welding of Structural Steel. Brochure, 32 pp., 8½ x 11 ins. Illustrated. Deals with an important structural process.

### STONE, BUILDING

- Indiana Limestone Company, Bedford, Ind.**  
Volume 3. Series A-3. Standard Specifications for Cut Indiana Limestone work, 8½ x 11 ins., 56 pp. Containing specifications and supplementary data relating to the best methods of specifying and using this stone for all building purposes.
- Volume 1. Series B. Indiana Limestone Library. 6 x 9 ins., 36 pp. Illustrated. Giving general information regarding Indiana Limestone, its physical characteristics, etc.
- Volume 4. Series B. Booklet. New Edition, 8½ x 11 ins., 64 pp. Illustrated. Indiana Limestone as used in Banks.
- Volume 5. Series B. Indiana Limestone Library. Portfolio, 11¾ x 8¾ ins. Illustrated. Describes and illustrates the use of stone for small houses with floor plans of each.
- Volume 6. Series B. Indiana Limestone School and College Buildings. 8½ x 11 ins., 80 pp. Illustrated.
- Volume 12. Series B. Distinctive Homes of Indiana Limestone. 8½ x 11 ins., 48 pp. Illustrated.
- Old Gothic Random Ashlar. 8½ x 11 ins., 16 pp. Illustrated.

### STORE FRONTS

- Brasco Manufacturing Co., 5025-35 South Wabash Ave., Chicago, Ill.**  
Catalog No. 33. Series 500. All-Metal Construction. Brochure, 20 pp., 8½ x 11 ins. Illustrated. Deals with store fronts of a high class.
- Catalog No. 34. Series 202. Standard construction. Booklet, 16 pp., 8½ x 11 ins. Illustrated, complete data on an important type of building.
- Detail Sheets. Set of seven sheets, 8½ x 11 ins., printed on tracing paper, giving full-sized details and suggestions for store front designs.
- Davis Solid Architectural Bronze Sash. Set of six sheets, 8½ x 11 ins., printed on tracing paper. Full-sized details and suggestions for designs of special bronze store front construction.
- The Kawneer Company, Niles, Mich.**  
Catalog M, 1929 Edition, 64 pages, 8½ x 11 ins., with the A.I.A. File No., profusely illustrated. General Catalog.
- Detail Sheet and descriptive folder, 8½ x 11 ins., with A.I.A. File No. featuring "B" Store Front Construction, designed along modernistic lines.
- National Terra Cotta Society, 230 Park Avenue, New York, N. Y.**  
Terra Cotta Stores and Store Fronts. Booklet, 15 pp., 8½ x 11 ins. Illustrated.

### TELEPHONE SERVICE ARRANGEMENTS

- All Bell Telephone Companies.** Apply nearest Business Office, or American Telephone and Telegraph Company, 195 Broadway, New York.
- Planning for Home Telephone Conveniences. Booklet, 52 pp., 8½ x 11 ins. Illustrated.
- Planning for Telephones in Building. Brochure, 74 pp., 8½ x 11 ins. Illustrated.

### TERRA COTTA

- National Terra Cotta Society, 19 West 44th St., New York, N. Y.**  
Standard Specifications for the Manufacture, Furnishing and Setting of Terra Cotta. Brochure, 8½ x 11 ins., 12 pp. Complete Specification, Glossary of Terms Relating to Terra Cotta and Short Form Specification for incorporating in Architects' Specification.
- Color in Architecture. Revised Edition. Permanently bound volume, 9½ x 12¾ ins., containing a treatise upon the basic principles of color in architectural design, illustrating early European and modern American examples. Excellent illustrations in color.

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- R. Guastavino Co., 40 Court Street, Boston.**  
Timbrel Arch Construction. Booklet, 8 pp., 8½ x 11 ins.

### TILE, HOLLOW

- National Fire-Proofing Co., 250 Federal Street, Pittsburgh.**  
Natco. The Complete line of Structural Clay Tile. Booklet, 39 pp., 8½ x 11 ins. Illustrated. A General Catalog.
- Natco Double Shell Load Bearing Tile Bulletin. 8½ x 11 ins., 6 pp. Illustrated.
- Natco Face Tile for the Up-to-Date. Farm Bulletin. 8½ x 11 ins.
- Natco Header Backer Tile Bulletin. 8½ x 11 ins., 4 pp. Illustrated.
- Natco Unibacker Tile Bulletin. 8½ x 11 ins., 4 pp. Illustrated.
- Natcofloor Bulletin. 8½ x 11 ins., 6 pp. Illustrated.

### TILE, STRUCTURAL CLAY

- National Fireproofing Corporation, Fulton Building, Pittsburgh, Pa.**  
Natco. The Complete Line of Structural Clay Tile. Booklet, 48 pp., 8½ x 11 ins. Illustrated. A General Catalog.
- Natco Vitritile Bulletin No. 164. 40 pp., 8½ x 11 ins. Illustrated. Shows color charts, sizes and shapes, actual installations, etc.
- Natco Header Backer Tile Bulletin. 8½ x 11 ins., 4 pp. Illustrated.
- Natco Unibacker Tile Bulletin. 8½ x 11 ins., 4 pp. Illustrated.
- Natcofloor Bulletin. 8½ x 11 ins., 6 pp. Illustrated.

### TILES

- Flint Faience & Tile Co., Flint, Mich.**  
Vitreous Tiles, Unglazed. Folder, 4 pp., 8½ x 11 ins. Illustrated. Details of patterns in full color. Ask for Form A-322.
- Faience Tiles for Bathrooms. Folder, 4 pp., 8½ x 11 ins. Illustrated. Ask for Form A-303.
- Faience and Vitreous Tiles, Unglazed. Folder, 4 pp., 8½ x 11 ins. Illustrated. Views of installations. Ask for Form A-304.
- Flintcraft Tiles. Folder, 4 pp., 8½ x 11 ins. Illustrated. Machine-made floor or wall tile. Ask for Form A-363.
- Hanley Company, Bradford, Pa.**  
Hanley Quarry Tile. Folder. 4 pp., 5 x 8 ins. Illustrated.
- C. Pardee Works, 101 Park Ave., New York, N. Y., and 1600 Walnut St., Philadelphia, Pa.**  
Pardee Tiles. Bound volume, 48 pp., 8½ x 11 ins. Illustrated.

### TRUSSES

- McKeown Bros. Company, 523 South Keeler Avenue, Chicago.**  
Truth in Architecture. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with use of trusses of wood.
- Factory Built Bowstring Trusses. Folder, 4 pp., 8½ x 11 ins. Illustrated.
- Timber Trusses. Folder, 4 pp., 8½ x 11 ins. Illustrated.

### VALVES

- Crane Co., 836 S. Michigan Ave., Chicago, Ill.**  
No. 51. General Catalog. Illustrated. Describes the complete line of the Crane Co.
- C. A. Dunham Co., 450 East Ohio St., Chicago, Ill.**  
The Dunham Packless Radiator Valve. Brochure, 12 pp., 8 x 11 ins. Illustrated. Data on an important type of valve.

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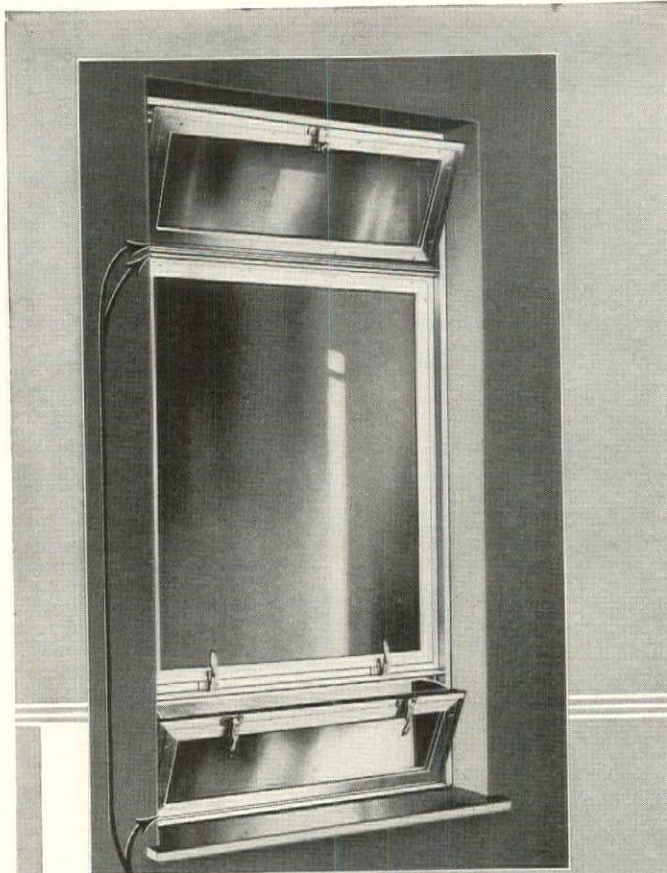
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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 92

### VALVES—Continued

**Jenkins Brothers**, 80 White Street, New York.  
Office Buildings Yesterday and Today. Folder, 8½ x 11 ins. Illustrated. Valves for use in office buildings.

### VENETIAN BLINDS

**Burlington Venetian Blind Co.**, Burlington, Vt.  
Venetian Blinds. Booklet, 7 x 10 ins., 24 pp. Illustrated. Describes the "Burlington" Venetian blinds, method of operation, advantages of installation to obtain perfect control of light in the room.

### VENTILATION

**American Blower Co.**, Detroit, Mich.  
American H. S. Fans. Brochure, 28 pp., 8½ x 11 ins. Data on an important line of blowers.

**Duriron Company**, Dayton, Ohio.  
Acid-proof Exhaust Fans. Folder, 8 x 10½ ins., 8 pp. Data regarding fans for ventilation of laboratory fume hoods.  
Specification Form for Acid-proof Exhaust Fans. Folder, 8 x 10½ ins.

### WATERPROOFING

**Minwax Company, Inc.**, 11 West 42nd St., New York.  
Waterproofing Stadia. Folder, 4 pp., 8½ x 11 ins. Illustrated.  
Transparent Waterproofings for All Masonry Walls and Surfaces. Folder, 4 pp., 8½ x 11 ins. Illustrated.

Data Sheet on Membrane Waterproofing. Folder, 4 pp., 8½ x 11 ins. Illustrated.

**Toch Brothers**, New York, Chicago, Los Angeles.  
Architects' Specification Data. Sheets in loose leaf binder, 8½ x 11 ins., dealing with an important line of materials.

### WEATHER STRIPS

**Athey Company**, 6035 West 65th St., Chicago, Ill.  
The Only Weatherstrip with a Cloth to Metal Contact. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Data on an important type of weather stripping.

### WINDOW GLASS

**Pittsburgh Plate Glass Company**, Grant Building, Pittsburgh, Pa.  
Pennvern Window Glass With the New Flatter Surface. Booklet, 16 pp., 8½ x 11 ins. Illustrated.

### WINDOWS

**William Bayley Co.**, 147 North Street, Springfield, Ohio.  
Bayley Pivoted Windows. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Sections, hardware, and other details, and illustrations of installations.

**Detroit Steel Products Co.**, 2250 E. Grand Boulevard, Detroit.  
Fenestra Blue Book. Brochure, 75 pp., 8½ x 11 ins. Illustrated. Data on steel windows.

**The Kawneer Company**, Niles, Mich.  
Circular, 8½ x 11 with A.I.A. File No. featuring full size details and specifications of Heavy Type Sealair Independent Balanced Sash Window.

Circular, 8½ x 11 with A.I.A. File No. featuring full size details and specifications of Light Independent Balanced Sash Sealair Windows.

Circular, 8½ x 11 with A.I.A. File No. featuring full size details and specifications of In-swinging Sash Sealair Windows. The above to be furnished in non-ferrous metal and steel.

**David Lupton's Sons Company**, Philadelphia, Pa.  
Lupton Pivoted Sash. Catalog 12-A. Booklet, 48 pp., 8¾ x 11 ins. Illustrates and describes windows suitable for manufacturing buildings.

Lupton Commercial Projected Windows. Brochure. 24 pp., 8½ x 11 ins. Illustrated. Details and specifications.

### WINDOWS, CASEMENT

**Detroit Steel Products Co.**, 2250 E. Grand Boulevard, Detroit.  
Fenestra Casements. Booklet, 14 pp., 8½ x 11 ins. Illustrated. Discusses casements, particularly for residences.

Fenestra Screen Casements. Brochure, 16 pp., 8½ x 11 ins. Illustrated.

Decorating With Casements. Booklet, 18 pp., with inserts in color 6 x 8½ ins. Deals with use of decorations, particularly draperies, with casement windows.

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**SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 94**

**WINDOWS, CASEMENT—Continued**

- Hope & Sons, Henry**, 103 Park Ave., New York, N. Y.  
Catalog, 12¼ x 18½ ins., 30 pp. Illustrated. Full-size details of outward and inward opening casements.
- David Lupton's Sons Company**, Philadelphia, Pa.  
Lupton Casement of Copper Steel. Catalog C-217. Booklet, 24 pp., 8½ x 11 ins. Illustrated brochure on casements, particularly for residences.
- Lupton Creates a Complete Casement. Folder, 8½ x 11 ins. Illustrated data on a casement providing for screens, shades and draperies.
- Lupton Heavy Casements. Detail Sheet No. 101, 4 pp., 8½ x 11 ins. Details and specifications only.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Casement Window Hardware. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Shows typical installations, detail drawings, construction details, blue-prints if desired. Describes AIR-way Multifold Window Hardware.
- Architectural Details. Booklet, 8½ x 11 ins., 16 pp. Tables of specifications and typical details of different types of construction.
- List of Parts for Assembly. Booklet, 8½ x 11 ins., 16 pp. Full lists of parts for different units.

**WINDOW SCREENS**

- Detroit Steel Products Co.**, 2250 E. Grand Boulevard, Detroit.  
Fenestra Screen Casements. Brochure, 16 pp., 8½ x 11 ins. Illustrated.
- William Bayley Co.**, 147 North Street, Springfield, Ohio.  
Bayley Pivoted Windows Screened. Booklet, 8 pp., 8½ x 11 ins. Data on screening and window ventilation.

**WINDOWS, STEEL AND BRONZE**

- William Bayley Co.**, 147 North Street, Springfield, Ohio.  
Bayley Steel Window Inserts. Brochure, 8 pp., 8½ x 11 ins. Illustrated Suggestions on correct use of inserts.
- David Lupton's Sons Company**, Philadelphia, Pa.  
A Rain-shed and Ventilator of Glass and Steel. Pamphlet, 4 pp., 8½ x 11 ins. Deals with Pond Continuous Sash. Sawtooth Roofs, etc.
- How Windows Can Make Better Homes. Booklet, 3¾ x 7 ins., 12 pp. An attractive and helpful illustrated publication on use of steel casements for domestic buildings.
- Truscon Steel Company**, Youngstown, Ohio.  
Drafting Room Standards. Book, 8½ x 11 ins., 120 pages of mechanical drawings showing drafting room standards, specifications and construction details of Truscon Steel Windows, Steel Lintels, Steel Doors and Mechanical Operators.
- Truscon Solid Steel Double-Hung Windows. 24 pp. Booklet, 8½ x 11 ins. Containing illustrations of buildings using this type of window. Designs and drawings of mechanical details.
- Continuous Steel Windows and Mechanical Operators. Catalog 126. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

**WOOD—See also Millwork**

- American Walnut Mfrs. Association**, 618 So. Michigan Boulevard, Chicago, Ill.  
American Walnut. Booklet, 7 x 9 ins., 46 pp. Illustrated. A very useful and interesting little book on the use of walnut in Fine Furniture with illustrations of pieces by the most notable furniture makers from the time of the Renaissance down to the present.
- American Walnut for Interior Woodwork and Paneling. 7 x 9 ins. Illustrated. Discusses interior woodwork, giving costs, specifications of a specimen room, the different figures in Walnut wood, Walnut floors, finishes, comparative tests of physical properties and the advantages of American Walnut for woodwork.

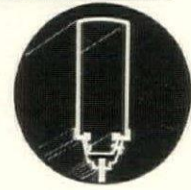
**WOOD FINISH**

- Minwax Company**, 11 West 42nd St., New York.  
Color card and specification for Minwax Flat Finish. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with a penetrative, preservative stain finish giving stain and soft wax effect.

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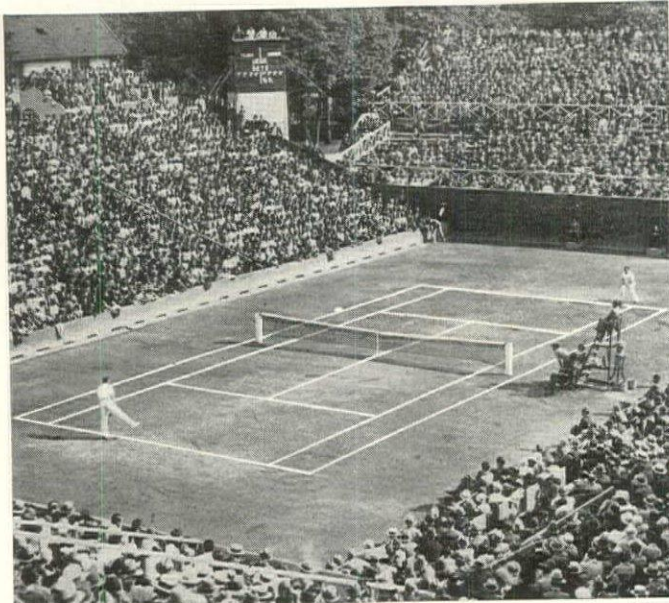
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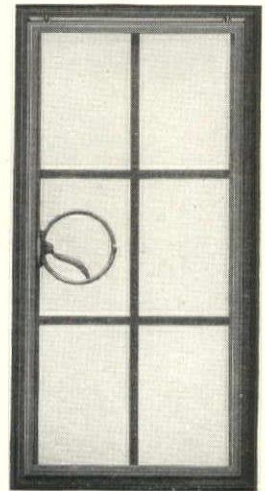
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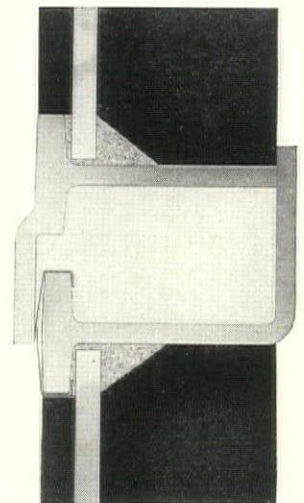
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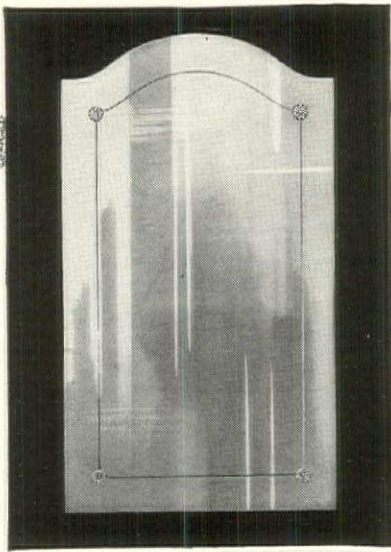
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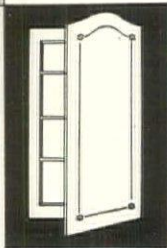
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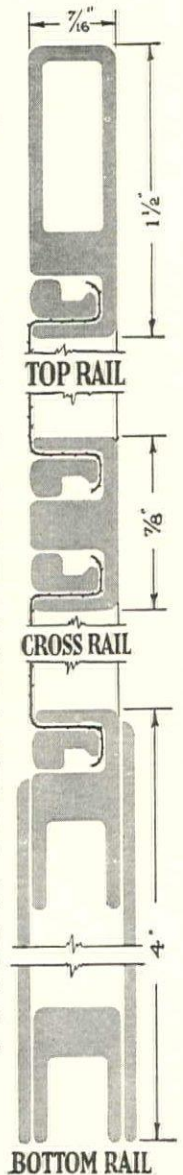
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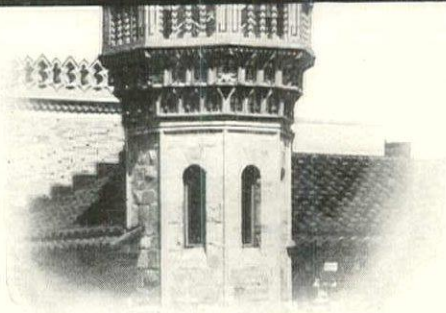
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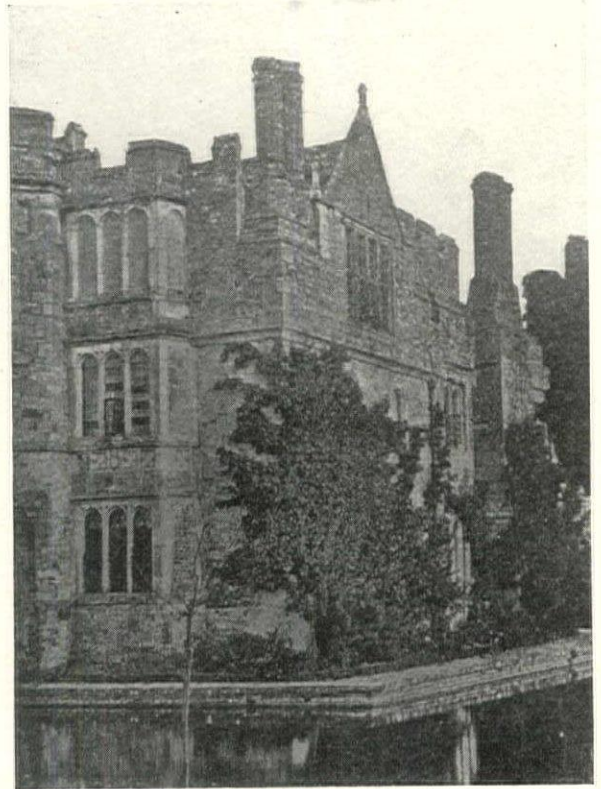
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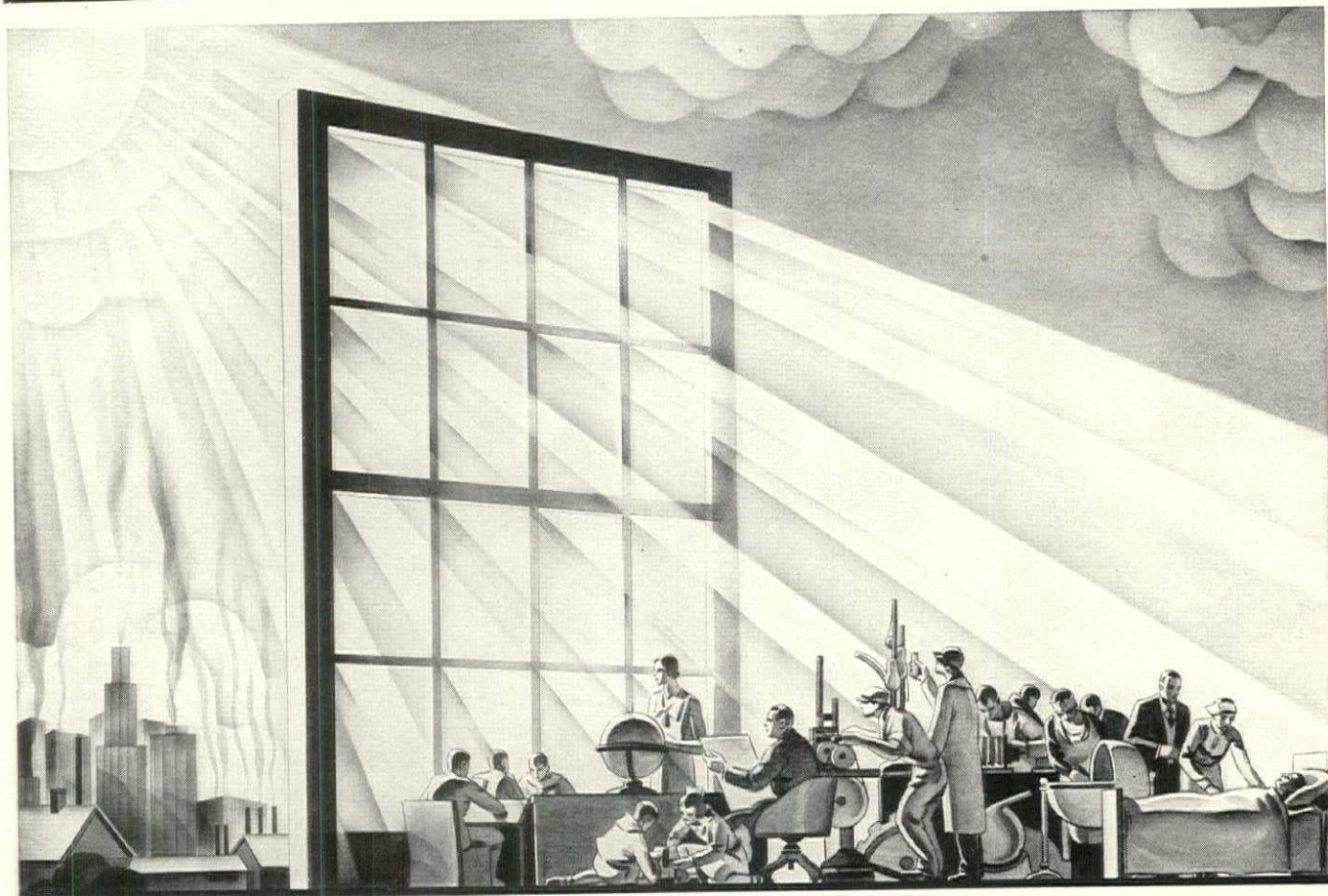


In Mrs. Archibald M. Brown's studio at Southampton, Long Island, the interior has been finished in heavy spruce timbers with Johns-Manville Insulating Board between. The architects were Peabody, Wilson & Brown.



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### CURTIS COMPANIES SERVICE BUREAU, Clinton, Iowa. "Your Dream Kitchen." A valuable brochure on kitchens.

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"In this booklet, there will be found suggestions for making kitchen dreams come true in the modern trend, with a consideration for any limitations that may be imposed by the available space. It pictures dream kitchens made from kitchens originally built without much regard for the work to be done there, and modern kitchens from new houses. The illustrations have been sketched from photographs of actual kitchens. They show how several housewives have arranged things to suit themselves without exceeding cost limits or sacrificing the good impressions a beautiful kitchen always makes. The selection of kitchen cabinets and cupboards can be as easy and as fascinating as arranging a child's picture blocks. Have the local Curtis dealer bring a set of miniature units, one for each unit in the Curtis group with walls, doors, stoves, windows, and refrigerators scaled for measuring. Then arrange and re-arrange the units until there is devised just the combination that will meet one's desires if planning a new kitchen, or fit the space if the work is remodeling a house already built.

### BATCHELDER-WILSON CO., Los Angeles, San Francisco, Chicago, New York. "Patina Glazed Tiles."

When one realizes what marvelously beautiful effects may be had by use of tile, and that they are to be had at no great cost, it is hard to understand why they are not more extensively made use of. The making of tile has been practiced in many countries, and almost every tribe of the human race has lavished upon the making of tile whatever of skill in design it possessed. The present-day manufacturers of tile have not failed to draw heavily upon this rich store of design, and they have encouraged their designers to exert their highest skill in emulation. This brochure suggests many beautiful uses for tile,—in bathrooms, of course, since views show use of tile upon floors, walls and ceilings, and also for wall fountains and drinking fountains. The booklet likewise gives data regarding sizes and shapes of tile, discusses their design and color, and it gives other details which it is important to have if tile are to be intelligently specified. The booklet should be had by every architect and decorator.

### TODHUNTER, INC., 119 East 57th Street, New York. "Fuel Holders." Several different types suited to domestic use.

Whether the fireplace burns wood or coal, there must be provided a receptacle of some sort for holding it. During centuries there have been devised details of different kinds to serve this highly practical purpose, and even the skill of modern designers has not been equal to producing anything in the way of an improvement upon these time-honored types. This folder or leaflet illustrates 16 different holders of fuel. Those for the use of wood are naturally of the "open" type,—racks or baskets of metal or wicker in which small logs may be laid, while the receptacles for coal may be either open or closed with covers. The metallic receptacles may of course be had in various attractive finishes, while those of wicker are to be had in finishes either brown or green. The Todhunter firm also supplies other accessories.

### CROUSE-HINDS COMPANY, Syracuse. "Floodlights and Industrial Lighting Units." A bulletin on the subject.

A tall building today,—particularly a structure of the "tower" type,—is more than likely to be designed with a view to making use of what is known as "floodlighting." If the building is situated in a locality where the surrounding structures are of small or medium height, the tall building will rise with a majesty which architecturally completely dominates the neighborhood, and its dominance is emphasized even more forcibly when at night its upper stories are illuminated against the surrounding darkness. Perhaps for this reason the upper parts of such structures are often given design which by architectural character lends itself to floodlighting. An interesting use of floodlighting is to be seen in Boston. When the gifted Bulfinch designed the famous "state house" which crowns the summit of Beacon Hill, he could scarcely have had in mind the use of floodlighting, and yet his beautiful gilded dome, illuminated by lights placed on neighboring buildings, dominates at night the historic Boston Common and the top of Beacon Hill,—a locality which as yet has seen but little change from what it was many decades ago. Then too, floodlighting is used for many purposes other than illuminating buildings. Parking areas and filling stations, statues and fountains, tennis courts and swimming pools, and industrial areas of many kinds are often given prominence and increased usefulness by being lighted during at least part of the night. This booklet, issued by a firm well known for the excellence of its floodlighting equipment, covers this subject well. It contains views of many well known buildings or other objects which are thus floodlighted, and for the benefit of architects, engineers, builders and others there are included data likely to be needed when such an installation is to be made. Countless details are required for such an installation, and quite naturally close attention must be given to the amount of power or current which the installation will require and to the sizes of the lamps to be used therein.

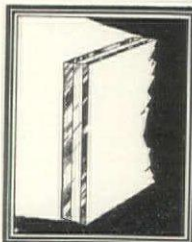
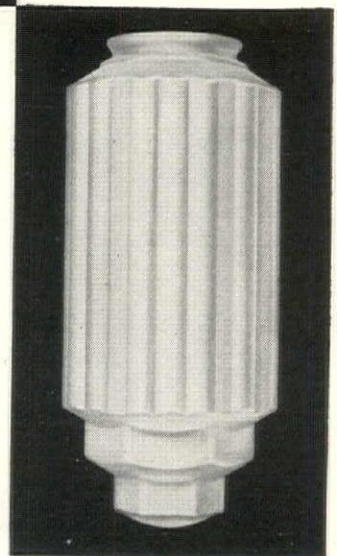
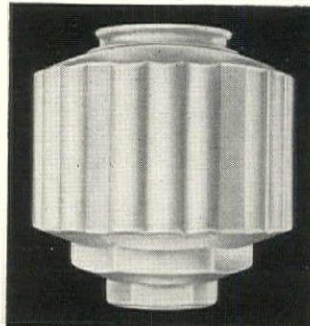
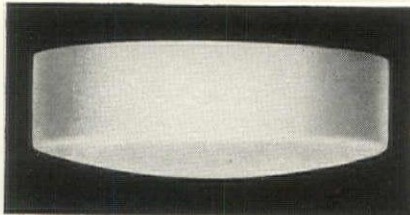
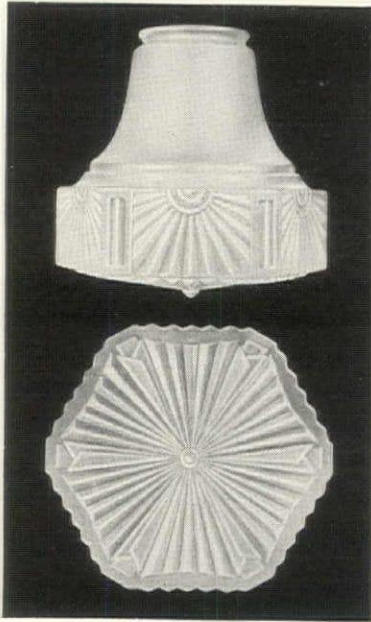


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## REVIEWS OF MANUFACTURERS' PUBLICATIONS

CLINTON METALLIC PAINT COMPANY, Clinton, N. Y.  
"Color Suggestions for Brickwork." Their practical value.

Writers on architecture and building have frequently pointed out the fact that the excellence of brickwork depends upon a number of factors. One of these factors has to do with the size, shape, color, and texture of the brick used; another with the bond selected; and another with the joints, their width, their character, and the color of the mortar with which they are filled,—not unreasonable when it is remembered that one fifth of a brick wall's surface is made up of these joints. To prove this, one need only take a few bricks, enough to build up a small section of wall,—brick of any color, perhaps some one of the grays now so popular,—experimenting with mortar mixed with some one of the excellent colors of which samples are given in this small folder issued by the Clinton Metallic Paint Company. With brick of a rich gray one might use mortar of a color which would afford a good contrast,—black, brown, red, maroon, chocolate or olive green, or if the color and texture of the brick would permit, choice might be made of a dark buff which is almost orange. This folder is full of suggestions which would be valuable to any architect or builder interested in getting all possible character into brickwork of any sort.

McKEOWN BROS. COMPANY, 5235 South Keeler Avenue,  
Chicago. "Installations of Real Timber Trusses."

For interiors which are large and lofty, such as those in churches, in certain rooms of country clubs, and sometimes for interiors of auditoriums and lecture halls, architects depend largely for securing appropriate effects upon use of exposed trusses of wood, timbers which support the roofs. Particularly in churches, the use of trusses of steel or other metals is being discouraged. Sometimes they are used for their structural advantages, but are skillfully camouflaged to resemble wood, a practice which suggests, to paraphrase an ancient saying, "the homage which the imitation pays to the genuine." In this folder the McKeown Bros. Company illustrates the different forms of wood trusses which it is prepared to supply. Quite a number of illustrations show interiors in which trusses of different forms support roofs of various types, and the architect interested in roof structure will recognize many of the forms of trusses which have been used for centuries. The folder says that in some instances trusses can be shipped completely assembled, and one of the illustrations gives a view of the interior of the firm's manufacturing plant showing trusses during the process of manufacture. The brochure has high design value.

NATIONAL TERRA COTTA SOCIETY, 230 Park Avenue,  
New York. "The Use of Terra Cotta."

Two things are of outstanding interest to the architect,—design, and construction details. Design distinguishes the architect's work, while well considered construction insures his work permanence and satisfactory performance. The National Terra Cotta Society has had prepared an extensive series of construction detail plates covering those traditional elements of design which may almost be called the "alphabet of architecture." These details are largely taken from work actually executed, the construction having been studied and checked in a nation-wide effort to present the best in terra cotta construction practice. Many architectural periods and a multitude of construction details are included in the series. The so-called "*art moderne*" is still largely unfixed in form, and therefore no attempt has been made at the impossible task of reducing it to "standard" detail construction drawings. The National Terra Cotta Society, however, is continually receiving from its members copies of the photographs of the clay models they submit to architects for approval. These, naturally, are all for contemporary work, and represent a fair cross section of modern trends in design. These will be grouped into photographic plates and mailings made from time to time during the year. Obviously, the construction for "modern" design will be the same as that shown in the detail drawings for conventional elements having the same structural character, or occupying about the same positions.

THE J. G. WILSON CORPORATION, 9 East 38th Street,  
New York. "Sectionfold and Rolling Partitions, Catalog 38."

The practical value of buildings of many types is often vastly increased by the use of rolling or folding partitions. By their use a large room may be easily and quickly divided into several. The dining room or restaurant of a club may be converted into several private dining rooms for small parties, or a large schoolroom may be turned into a number of small class or lecture rooms. The uses to which such partitions lend themselves are indeed legion. "In 1876 James G. Wilson realized the need in schools, churches and public buildings for products that would increase the utility of floor area. That Wilson Sectionfold and Rolling Partitions, described in this catalog, fill that need is proved by their widespread use in all parts of the country." The booklet which is issued by this firm deals fully with its excellent product. The brochure is replete with illustrations showing use of the firm's partitions in schools, gymnasiums, churches, auditoriums, banks, clubs, Y.M.C.A. buildings and elsewhere, and other pages present in concise form all the details of data likely to be required for designing such an installation and for preparing the specifications for erecting it. The usefulness of the brochure should secure it wide use.

KERNER INCINERATOR COMPANY, 1225 N. Water  
Street, Milwaukee. "Estate Type Kernerator."

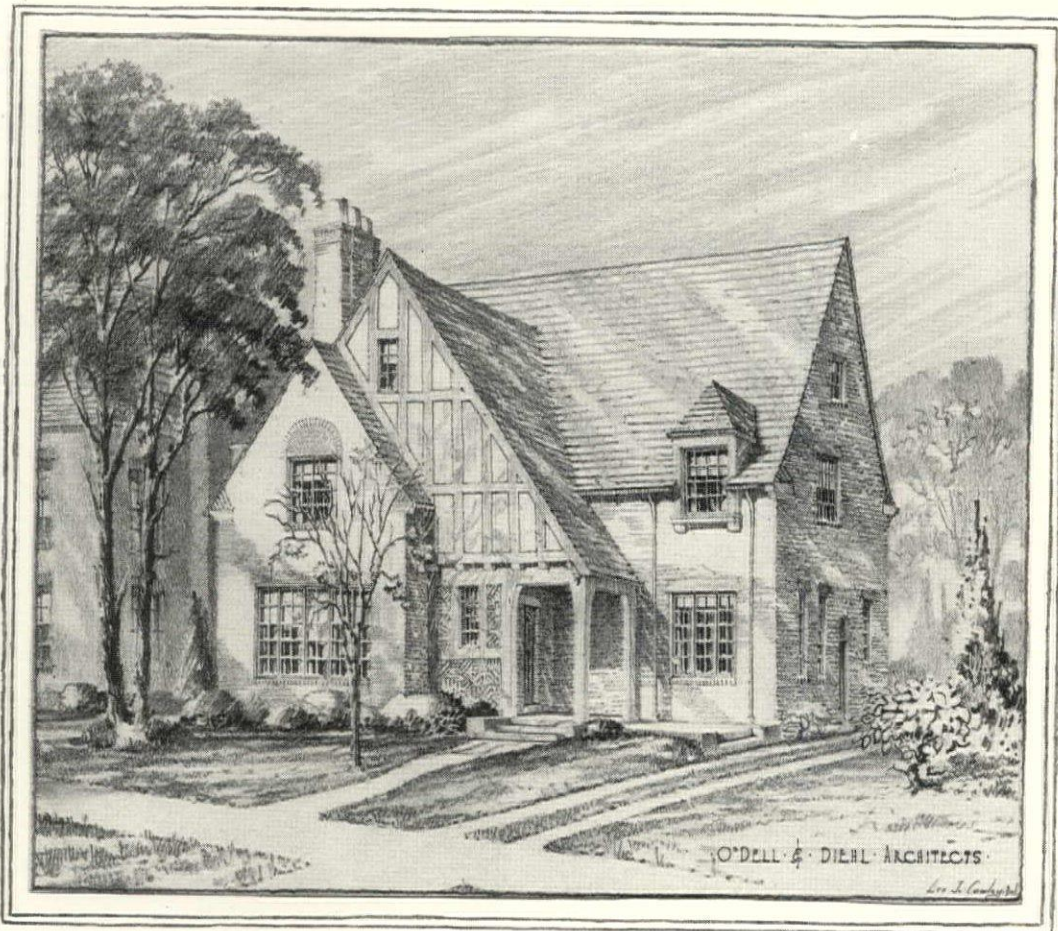
The custom of burning garbage and refuse instead of disposing of it other ways now prevails almost everywhere. Originally used in hotels, hospitals, restaurants, and other places where large quantities of refuse must be handled, the custom quickly found a place in homes, whether the homes were individual houses or apartment buildings, and then in schools, garages, and buildings of other types. The Kerner Incinerator Company has long been in the front rank of firms manufacturing and installing equipment of this type, and its excellent advertising and helpful booklets and brochures have done much to further the use of incinerators. This particular publication deals with the "Estate Type Kernerator," and is intended for circulation among owners of country estates. It "shows solution of waste disposal problems on estates, country homes, summer homes, winter homes, lake homes, shore residences, and similar types where the standard Kernerator will not take care of requirements." Other booklets issued by the firm are entitled "Incinerators, Chimney-fed"; "Sanitary Eliminators of Household Waste"; "Garbage and Waste Disposal for Apartment Buildings"; "Sanitary Disposal of Waste in Hospitals, Schools, etc."

ROME BRASS RADIATOR CORPORATION, 1 East 42nd  
Street, New York. "Proof of the Pudding."

Although highly skilled designers have done their utmost to improve the appearance of the heating radiator, it cannot be claimed that their efforts have led to great improvement over what was the appearance of the radiator several decades ago. Its benefits are well known and universally acknowledged, but it must be concealed, where, to paraphrase an old saying, it must be felt but neither seen nor heard. This booklet deals well with the problem of the radiator. The Rome Brass Radiator Corporation is fortunate in its arrangement for concealing the radiator, often in sills under windows, with openings below for the entrance of air, and in the sill proper for its escape, though several illustrations show interiors of banking rooms, assembly halls, or large office areas where radiators are placed not *under* but *between* windows, concealed by grilles or screens which may be painted to agree with the finish of walls or woodwork. Apart from this, however, note should be made of the improved plan upon which the ROBRAS Radiator is built, a principle which provides the greatest possible amount of radiating surface by the use of fins. Air is drawn over the bottom of the radiator and then passes over the highly heated metal fins, which are really tiny flues or chimneys which greatly accelerate the upward movement of heated air. After leaving the radiator the warm air rises rapidly until it is deflected by the baffle, which directs the air into the room.



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