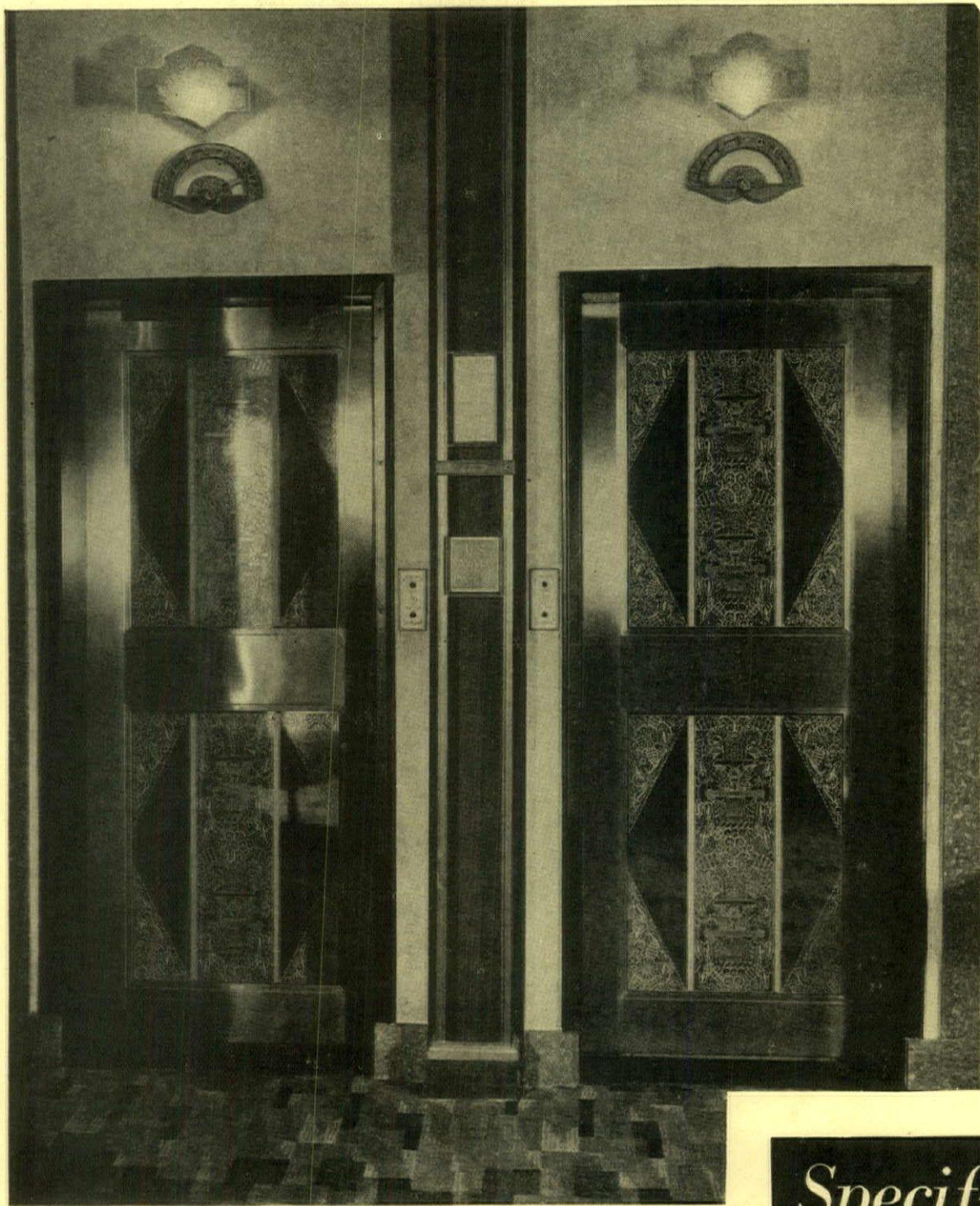




THE AMERICAN ARCHITECT

FOUNDED 1876

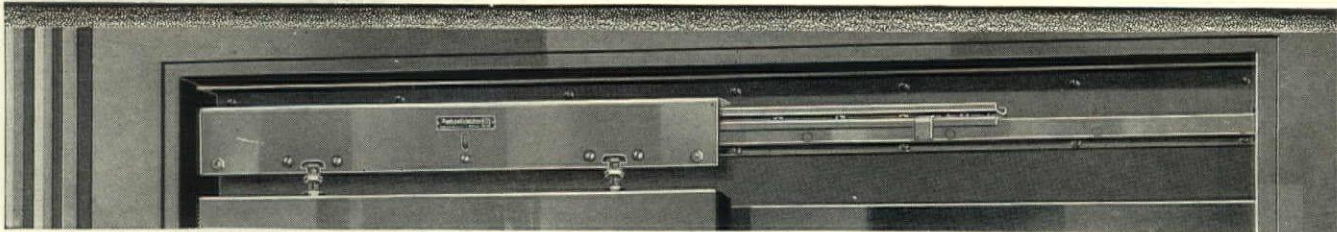
March 1931



IN MONEL METAL Elevator entrances, Wm. Len Hotel, Memphis, Tennessee—Eugene Stern, Little Rock, Arkansas, Architect. All first and second floor elevator enclosures and stairway doors—hollow door construction with etched Monel Metal. Frames finished in black enamel. All other floors, elevator enclosures enameled stippled bronze—two speed type. Doors furnished and erected in building by Thorp.

Specify
**THORP
DOORS**

THORP FIREPROOF DOOR COMPANY., *Minneapolis, Minnesota*



Illustrating Rich-Wil Elevator Door Hanger No. 827 for single doors

Quiet~

The quietest thing we know (next to a cat stalking a mouse!) is a Rich-Wil Elevator Door Hanger in operation.

It is because the suspended weight of the elevator doors is equally distributed throughout their full travel. That is because the Rich-Wil hanger rides on over-size ball bearings extending the full width of the door, providing perfect alignment.

Extreme quiet and long service are thus assured. Friction is reduced

to a minimum. Adjustments are quickly and easily made by simply loosening two nuts.

R-W equipment meets every elevator door requirement. R-W closers pay for themselves in valuable space saved. Standardize on R-W hangers, closers, checks, interlocks, the PowR-Way elevator door operator, and R-W signal systems of all modern types.

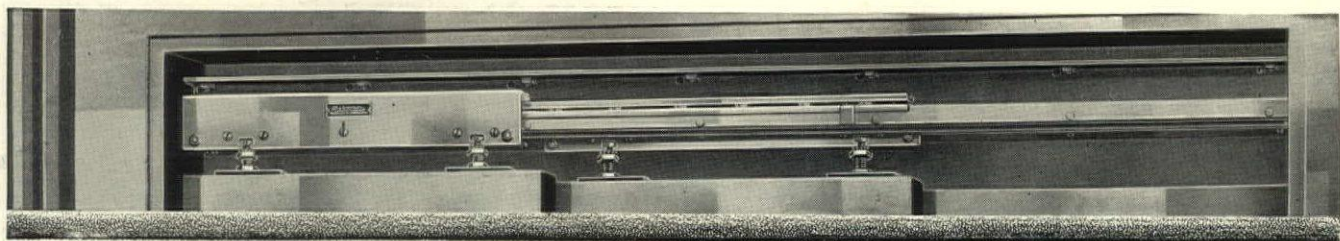
Consult an R-W engineer at any time without obligation. Send for R-W catalog No. 44.

Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A.

Branches: New York Chicago Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines Minneapolis
Kansas City Los Angeles San Francisco Omaha Seattle Detroit Atlanta Richards-Wilcox Canadian Co., Ltd., London, Ont. Montreal Winnipeg

Illustrating Rich-Wil Elevator Door Hanger No. 828 for 2-speed doors



SMITH & WESSON FLUSH VALVES



STANDING ALONE
... IN QUALITY



A Flush Valve whose quality is high enough to be outstanding, must meet with overwhelming popularity. Smith & Wesson *QUALITY* makes this valve capable of accomplishing any task, whether the installation be large or small — without breakdown, and without servicing.

SMITH & WESSON
Flush Valve Division
SPRINGFIELD MASSACHUSETTS

Alcoa Aluminum

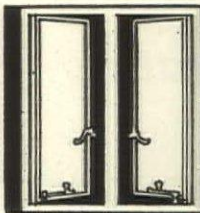
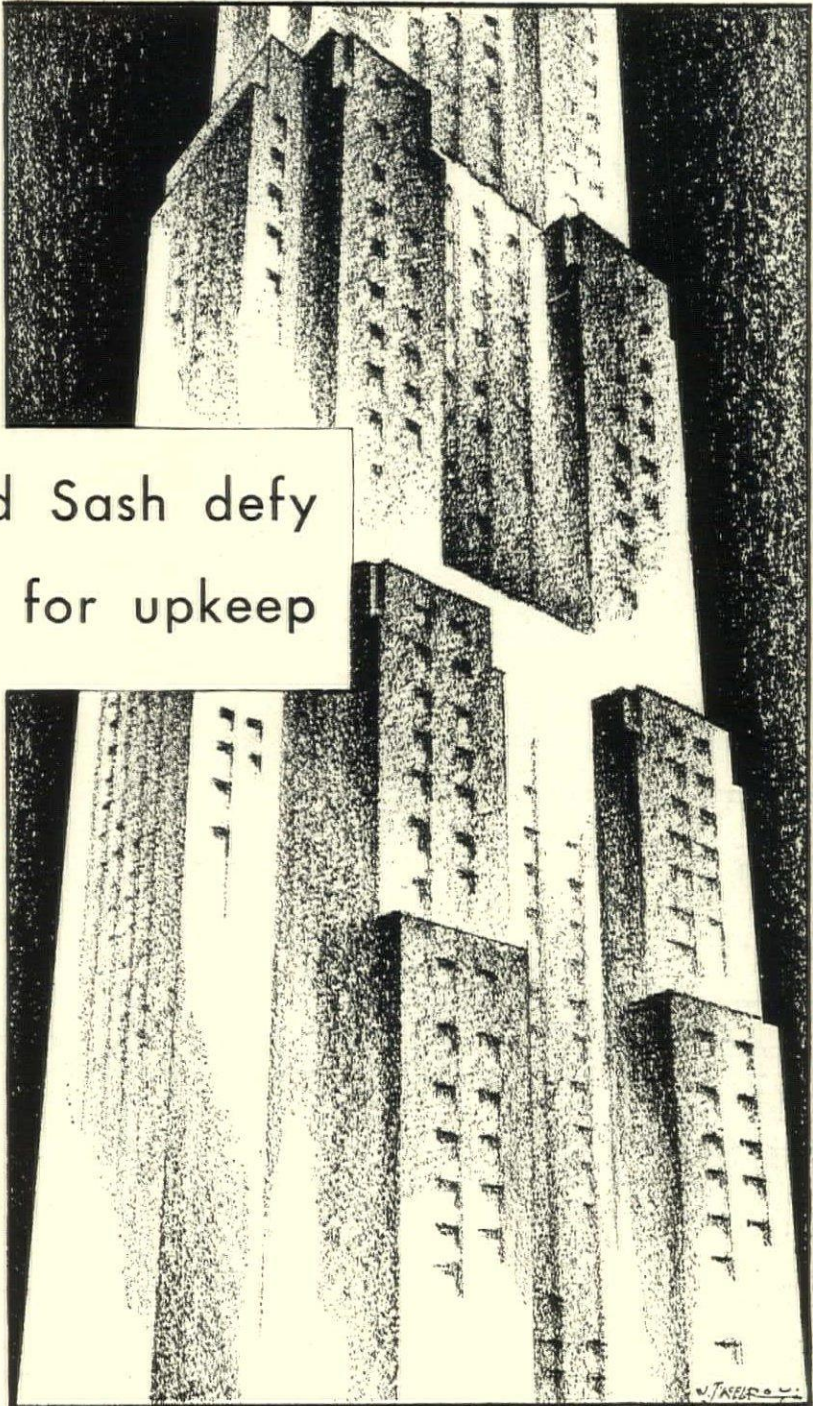
Window Frames and Sash defy
time — cost nothing for upkeep

Window frames and sash that last a lifetime; that can not rust, warp or split—of metal—but only 1/3 the weight of old-fashioned metals.

As for upkeep, check that expense off the list and forget it. Unless you wish, you need not paint them; although Alcoa Aluminum window frames and sash take and hold paint well. Because aluminum resists corrosion, there is neither scale nor rust particle to “push off” the paint. These frames deposit no mineral salts to streak adjoining surfaces.

Light, tough, durable, Alcoa Aluminum window frames and sash are low in cost—lower than frame and sash made of other corrosion-resisting material.

Alcoa Aluminum double-hung windows, casement and factory sash are regularly made by most leading manufacturers. We will be glad to put you in touch with them. Address your inquiry to ALUMINUM COMPANY of AMERICA; 2440 Oliver Building, PITTSBURGH, PENNSYLVANIA.



WINDOW FRAMES
AND SASH MADE OF

ALCOA ALUMINUM



Comparative

tests . . .

Do
they show
how good
the new
thing is
or how poor
the old
one was?

If you
want to
establish
confidence
in your
automobile or

radio
or heating
system
just
compare
it with
one of
an earlier
vintage.
It may
give you
a lot of
satisfaction
but it
doesn't
prove
anything
except
the
shortcomings
of the
older models.

If you must judge from comparative tests, make sure the contestants are at least fairly evenly matched in every respect. This is particularly necessary in considering heating system performance. No less than 45 separate factors must be checked before any safe conclusion can be reached. We have prepared a "Check-List" of these 45 variable factors and have offered to send a copy gratis to anybody interested. Hundreds of copies of the "Check-List" have been distributed as a result of this series of advertisements and scores of leading engineers have commented favorably on it. If you have not already requested your copy, do so at once as the supply will soon be exhausted.

Heating System Control

The steam consumption of heating systems is very definitely related to the method of controlling the system.

Engineers, architects and heating contractors will find the control methods offered by Warren Webster & Company to be of vital interest. A request for further details will bring a Web-

ster steam heating specialist to discuss with you this vitally important subject of heating system control.

A Heating System for Every Need and Every Purpose

Heating requirements vary so widely that no one type of heating system can be expected to provide the greatest return on the dollar invested in the heating equipment for all types and sizes of buildings. Realizing this, Warren Webster & Company have consistently developed an entire group of Webster Systems of steam heating to provide a *heating system for every need and every purpose.*

Webster MODERATOR System provides "Controlled - by - the - Weather" heating and makes possible new methods of operation and new standards of economy. Can be applied to any existing steam heating system of sufficient size.

IMPROVED Webster Vacuum System provides distribution balanced from the start—the supply of steam to each radiator is so equalized that all radiators get steam at the same time and in substantially the same proportion, regardless of distance from the boiler. May be supplemented by HYLO Vacuum Variator, permitting manual control by building operator. Applicable to new or existing installations.

IMPROVED Type "R" System for residences and larger buildings as well, combines advantages of steam heating with advantages of hot water, but without limitations. Meets fully the operating requirements of newer fuels, newer types of radiation and newer thermostatic controls. Also provides better-than-ever heating service with old radiation and old controls.

Full details of any or all of these systems will be furnished on request.

Warren Webster & Company, Camden, N.J.
Pioneers of the Vacuum System of Steam Heating
Branches in 60 Principal U. S. Cities
Darling Bros., Ltd., Montreal, Canada

- since 1888
Webster
Systems of
Steam Heating

This is one of a series of advertisements discussing the factors affecting heating steam consumption. The purpose of the series is to call attention to the methods of heating steam consumption analysis, estimate and heating cost accounting developed by Warren Webster & Company to provide a reliable basis for comparing heating system efficiency. Actual detailed facts and figures of steam consumption of a number of Webster Systems of Steam Heating, prepared in accordance with these methods, are available for your examination.



Residence at Middletown, New Jersey

Charles H. Higgins, Architect


Tudor Stone Roofs
 and Flagging
 

Tudor Stone roofing slate is endowed by nature with every quality essential to the ideal roofing material. Beautiful—enduring—fireproof, this product, with its rugged texture and wide variety of colors, offers countless possibilities with stone, stucco, or shingle construction.

Rising and Nelson Slate Company

WEST PAWLET, VERMONT

Architects' Service Department: 101 Park Avenue, New York City

CHICAGO

DETROIT

BALTIMORE

PHILADELPHIA

BOSTON

In the Modern "Home of the Horse"

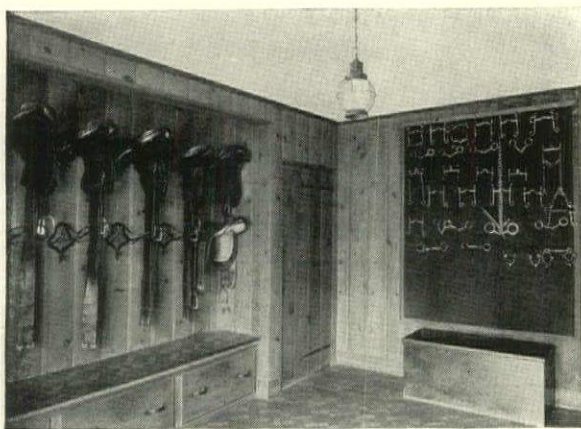


Interior view of box stalls

"Stable Fittings by FISKE"

THE Judge William P. Hungerford stable at New Britain, Conn., is another modern "Home of the Horse" the stable fittings of which have been executed by FISKE.

Tack room fittings by FISKE



*Judge Wm. P. Hungerford Stable, New Britain, Conn.
A. Raymond Ellis, Architect*

ARCHITECTS know that FISKE experience of over 72 years is largely responsible for the complete satisfaction enjoyed by the owners of FISKE installed stables.

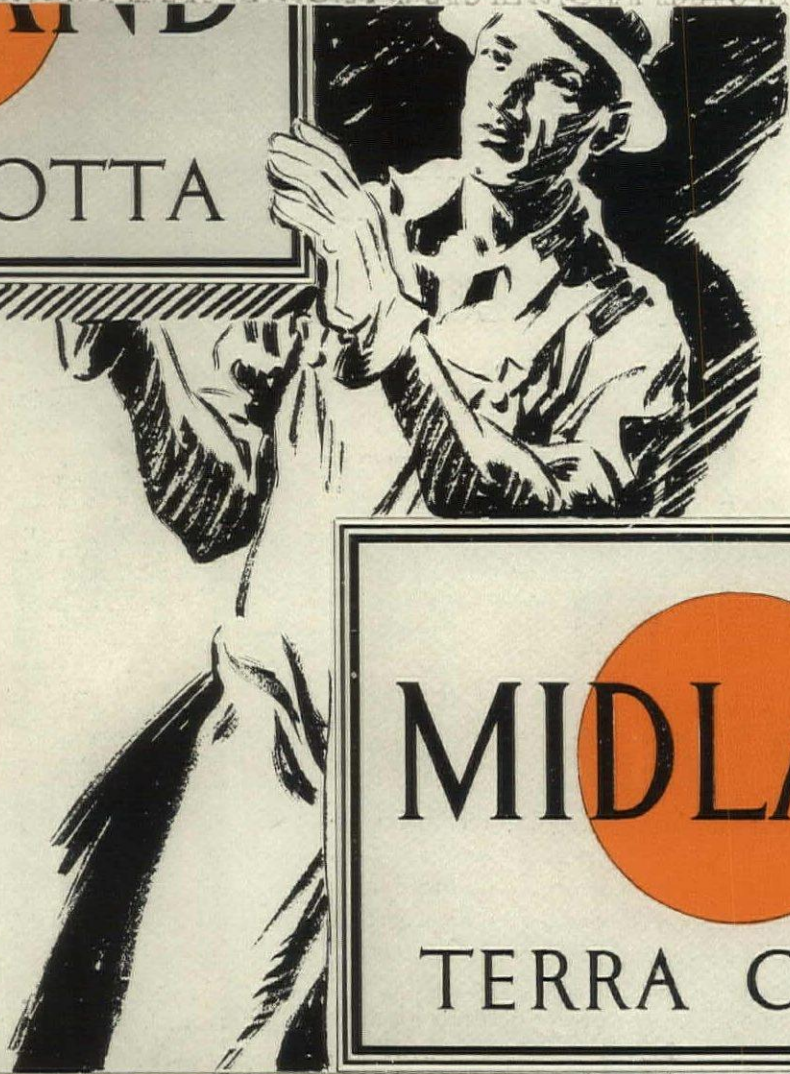
FISKE offers to architects through its consultatory and design services the experience of years in this highly specialized work. These special departments are always available to architects interested in stable installation.

J.W. Fiske IRON WORKS
80 Park Place ~ New York
ESTABLISHED 1858

SPECIALISTS IN
ORNAMENTAL METAL WORK

MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA
MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA
MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA
MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA MIDLAND TERRA COTTA

COTTA



MIDLAND
TERRA COTTA

MIDLAND
TERRA COTTA

MIDLA
TERRA C

Midland Terra Cotta Company

105 West Monroe Street, Chicago, Illinois

EXTERIOR LIGHTING FIXTURES

by
SMYSER-ROYER



IN choosing exterior lighting fixtures for important structures, architects and owners regard craftsmanship in stock patterns and dependable reproduction of original designs as the first requisites. The growing preference for Smyser-Royer fixtures is proof of dependability and craftsmanship established through their 91 years of unflinching service to architects, builders and owners.

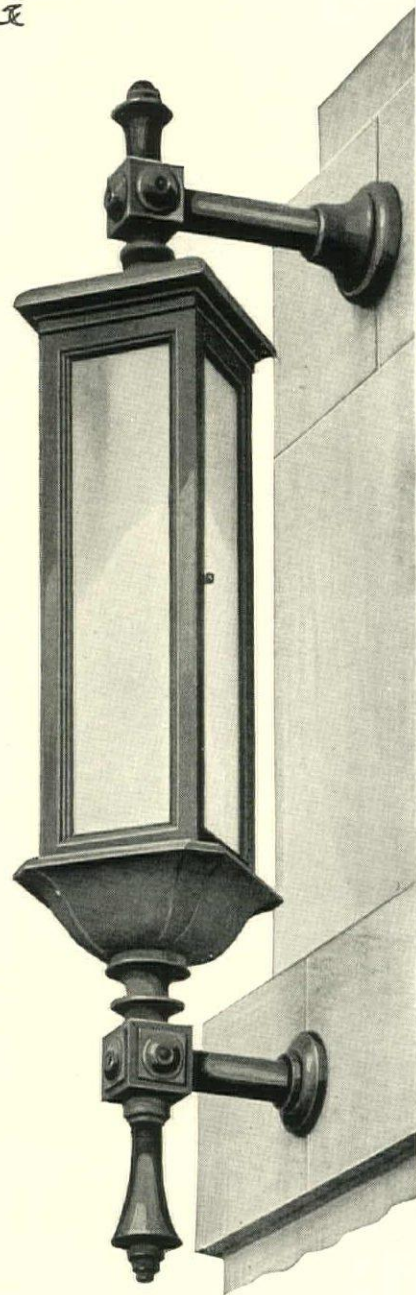
When either stock or original designs are desired, the name "Smyser-Royer" written into the specifications is sound insurance of the craftsmanship and permanence of the exterior lighting fixtures.

Smyser-Royer metal workers can faithfully reproduce the most difficult designs in iron, bronze or aluminum. Or, if stock designs are desirable, over 200 of them are shown in Sweet's Architectural Catalogue for 1931 (Section D, Pages 6034 to 6044) and in the Smyser-Royer Catalogue.

Ask for catalogue "J" for your files

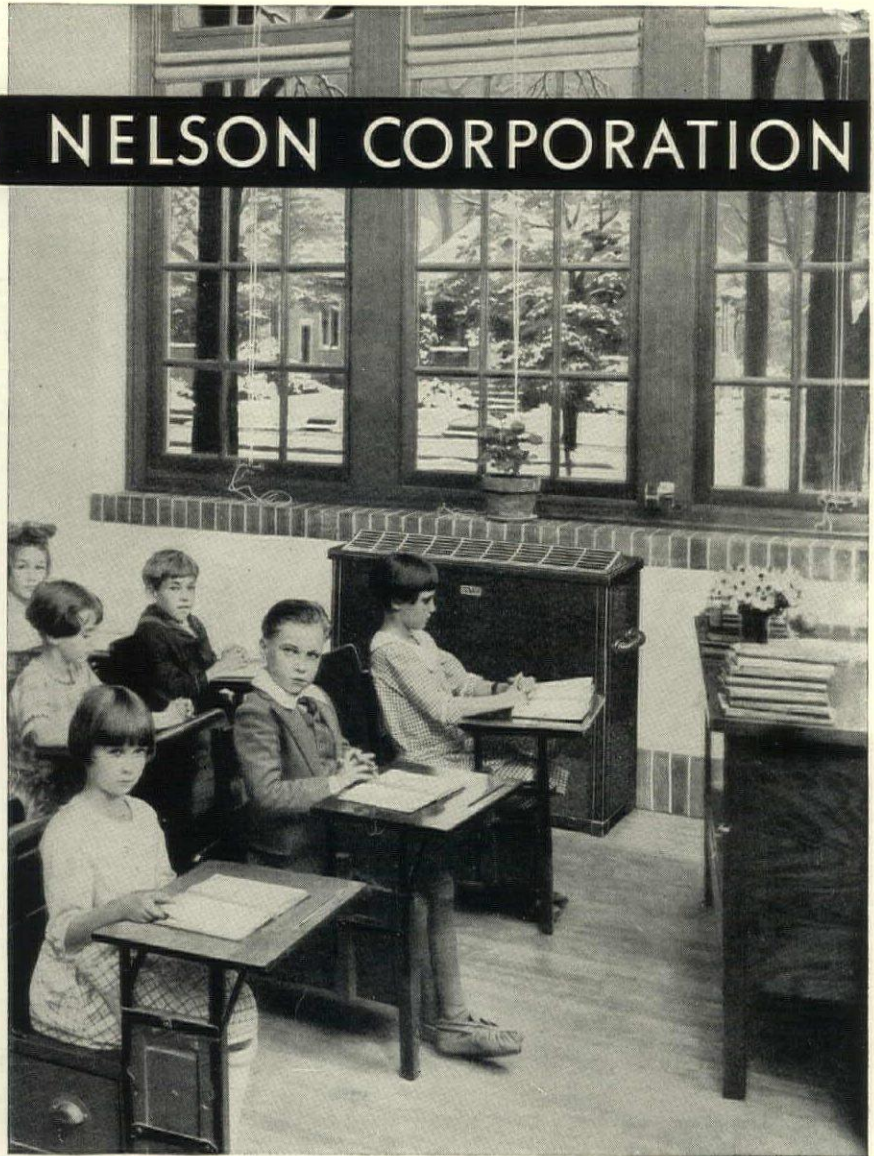
SMYSER-ROYER COMPANY

MAIN OFFICES AND WORKS, YORK, PA.
PHILA. OFFICE, 1700 WALNUT STREET



Cast Bronze Lantern, North Wing, New Pennsylvania R. R. Station, Phila., Pa. Lantern Design by Paul P. Cret, Architect. Graham, Anderson, Probst and White, Architects for the main station building.

THE HERMAN NELSON CORPORATION



Univent Ventilation because of definite results it achieved in the schoolroom, established the popularity of Unit Ventilation. But only the Univent can give Univent Ventilation.

Where the ventilation requirement is: a continuous supply of outdoor air to every pupil in the room, the Univent gives the proper atmospheric conditions in the simplest, most effective and economical manner.

It brings in outdoor air—cleans it, heats it to the right temperature and distributes it throughout the room with gentle air motion but without draft.

Over ten years of Univent Ventilation in schools throughout the country have demonstrated the fact that the architect or engineer who specifies Univent Ventilation is taking no chances.

Write for the book—"Univent Ventilation".

A HERMAN NELSON PRODUCT

Factory at Moline, Illinois • Sales and Service Offices in All Principal Cities

BELFAST, ME.	SCRANTON	GRAND RAPIDS	DES MOINES	MIAMI	SAN FRANCISCO
BOSTON	KINGSTON, PA.	SAGINAW, MICH.	MILWAUKEE	DALLAS	LOS ANGELES
SPRINGFIELD, MASS.	HARRISBURG	DETROIT	APPLETON, WIS.	OMAHA	VANCOUVER, B. C.
PROVIDENCE, R. I.	PITTSBURGH	CLEVELAND	MINNEAPOLIS	EMPORIA, KAN.	TORONTO, ONT.
HARTFORD, CONN.	JOHNSTOWN, PA.	COLUMBUS	DULUTH	KANSAS CITY	WINNIPEG, MAN.
NEW YORK CITY	ALLENTOWN, PA.	CINCINNATI	ST. LOUIS	DENVER	CALGARY, ALTA.
SYRACUSE	ERIE, PA.	TOLEDO	BIRMINGHAM	SALT LAKE CITY	LONDON
ALBANY	WHEELING, W. VA.	INDIANAPOLIS	NASHVILLE	BUTTE, MONT.	OSLO
ROCHESTER	WASHINGTON, D. C.	EVANSVILLE, IND.	CHATTANOOGA	SPOKANE	MELBOURNE
BUFFALO	BALTIMORE, MD.	CHICAGO	MEMPHIS	PORTLAND, ORE.	TOKIO, OSAKA
PHILADELPHIA	CHARLOTTE, N. C.	PEORIA, ILL.	NEW ORLEANS	SEATTLE	BUENOS AIRES

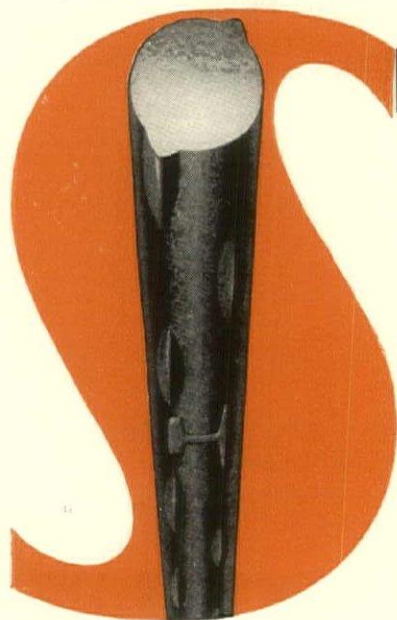
HERMAN NELSON

UNIVENT

(TRADE MARK)

VENTILATION

The Herman Nelson Corporation are makers of the *Univent System of Ventilation*, the *Her-Nel-Co System of Ventilation*, the *Herman Nelson Invisible Radiator*, the *Herman Nelson hiJet Heater*, and other heating and ventilating equipment.



SKYLINES OF STRENGTH

Rail Steel bars have reinforced the largest and finest concrete structures of our modern skylines—chosen for strength and toughness as rolled by:

Buffalo Steel Company . Tonawanda, N. Y.	Laclede Steel Company . St. Louis, Mo.
Calumet Steel Company . . Chicago, Ill.	Missouri Rolling Mill Corp., St. Louis, Mo.
Connors Steel Company . Birmingham, Ala.	Pollak Steel Company . Cincinnati, Ohio
Franklin Steel Works . . Franklin, Pa.	West Virginia Rail Co., Huntington, W. Va.

Mills in Canada:

Burlington Steel Co., Ltd. Hamilton, Ont. Canadian Tube and Steel Products Ltd., Montreal

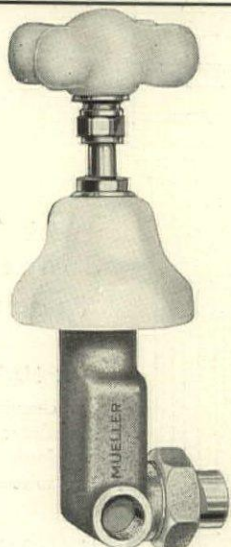
For further information write

Rail Steel Bar Association, Builders Bldg., Chicago

RAIL STEEL

for concrete reinforcing

A Mueller Built-in Valve made for peerless service in smartest homes!

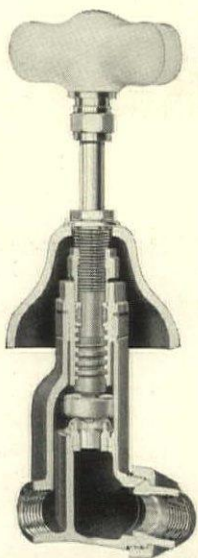


Corner Valve
H-5360

Size 1/2" 3/4"

H-5360 Mueller Built-in Corner Valve with 4-arm indexed China handle, deep China escutcheon, ground joint union coupling on inlet, loose, disc stem and renewable seat.

H-5361 Same as above but all metal. Finish: Exposed parts chromium plate only.



IT WOULD take a long time to tell you about each of the many precision methods used by Mueller in turning out these Built-in Valves. We would have to show diagrams, machines, and gauges, to say nothing about testing devices. And that isn't all—we would have to show you scores of the fine workmen Mueller has—men like you whose entire lives are devoted to doing a job in a fine manner.

Because we haven't space, let it suffice that way back—since 1857—Mueller has been working on just such a schedule—designing, discarding the unfit and refining the best. That's why when you install a Mueller Built-in Valve you install the finest the industry offers—equipment which is complementary to the finest home.

Insist on Mueller equipment for new buildings and replacements—it guarantees satisfaction.

MUELLER CO. (Established 1857), Decatur, Illinois;
Branches: New York, Dallas, Atlanta, San Francisco,
Los Angeles, Chicago; *Canadian Factory:* MUELLER,
Limited, Sarnia.

MUELLER

PLUMBING BRONZE AND VITREOUS WARE

L. SONNEBORN SONS, Inc.

GUARANTEE:



Lignophol is easily and quickly applied with a long-handled brush.

LIGNOPHOL

For Preserving and Finishing Wood Floors

**Penetrates Deep into Wood Fibres and
Fills Cells with Life-Giving Oils . . . Keeps
Floors from Splintering, Wearing, Rotting**

YOU can get a good floor finish from other companies than Sonneborn. You can also get a floor preservative. But a quality *floor finish* which also *preserves—that's Lignophol*.

When an architect specifies Lignophol, he helps the client *keep* his floors *new* and attractive. At very small cost—only one to two cents a square foot—the floor that is Lignophol-treated takes on an excellent finish and remains free from upkeep expense for years.

Lignophol excels other wood floor treatments because of its great penetrating power. It can't evaporate like floor oil, can't wear off like varnish. It works deeply into the wood, fills the cells with natural life-giving gums and oils, binds the fibres firmly together. Prevents splintering, warping, rotting and drying out.

Lignophol is furnished in penetrating and wax finish and in four standard colors—natural, light brown, medium brown or dark brown. Easily applied with a long-handled three-knot brush. A trained Sonneborn service crew will apply it, if desired, at no extra cost to the contractor.

Sonneborn Consulting Service, backed by 26 years of experience, will gladly aid you and your contractor in any problem of preserving floors, walls, foundations. Send for information and demonstration samples.

S

Some Other Sonneborn Products

LAPIDOLITH

Liquid chemical concrete floor hardener welds loose particles into a close-grained mass, granite-hard.

HYDROCIDÉ NO. 633

Plaster bond and damp-proofing paint for interior of exterior walls above ground.

HYDROCIDÉ NO. 648

Mastic, Semi-Mastic

For waterproofing and damp-proofing foundation walls and footings.

HYDROCIDÉ INTEGRAL

Paste, Powder

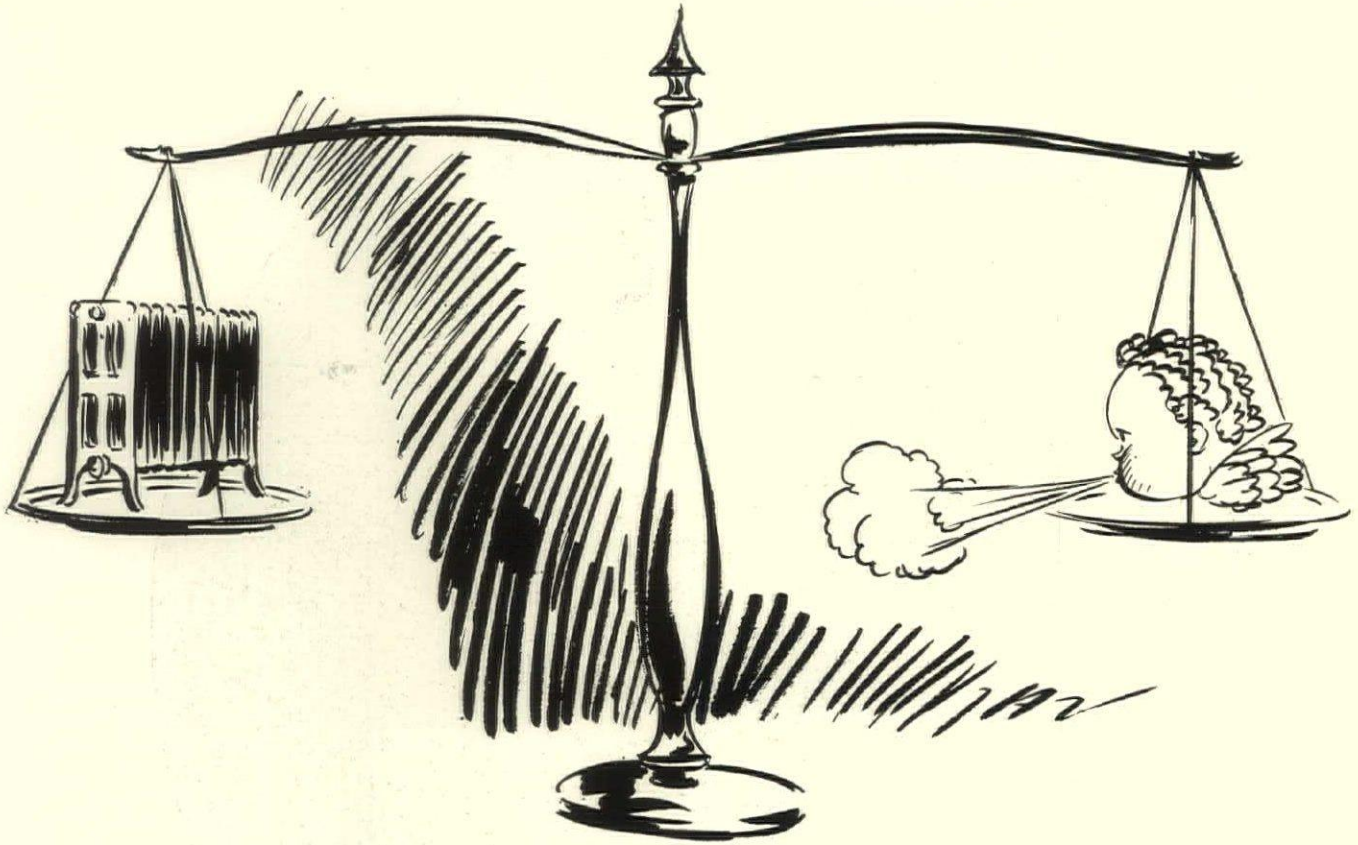
For waterproofing mass concrete, stucco, cement plaster and brick mortar.

CEMCOAT FLOOR ENAMEL

For all types of floors where attractive finish is important. Produces dustless, sanitary, high-gloss finish. Extremely durable. Comes in colors.



L. SONNEBORN SONS, Inc., 114 FIFTH AVENUE, NEW YORK



BALANCE

Satisfactory heating is a problem of balance. The supply should balance the demand, and this balance should be maintained throughout any variations of outside weather. The need for exact balance is not alone in the interests of comfort and health, though this is increasingly important. When the supply exceeds the demand by so little as to raise building temperature one degree, fuel consumption increases approximately 3 per cent, and cost likewise. Temperature, sun and wind create wide and

sometimes extremely sudden fluctuations on the demand for heat. The Dunham Differential Vacuum Heating System provides a controlled supply that is equally variable.

Hot steam, cool steam or warm steam under accurate control balance changing demand due to weather variations.

DUNHAM DIFFERENTIAL HEATING

THE HEATING SYSTEM THAT
"CHANGES GEARS WITH THE
WEATHER"

"Cool" Steam (133° F.)
"Warm" Steam (138° to 212° F.)
"Hot" Steam (above 212° F.)

Existing vacuum return line systems can easily be changed over to Differential operation at a cost which will be paid out of the fuel savings.

C. A. DUNHAM CO.

450 East Ohio Street
Chicago, Ill.



IT STICKS TO THE BRICK

The unusual plasticity that makes Brixment mortar stick to the brick assures certain structural advantages as well as neat, economical brickwork. It allows a more thorough bedding of the brick because the mortar spreads out more uniformly, giving an increased area of contact between the surface of the brick and the mortar. This results in a better bond and a wall of higher compression strength. Also the brick can be laid more accurately to the line and shoved joints, when specified, can be more easily obtained.

LOUISVILLE CEMENT COMPANY, *Incorporated*, LOUISVILLE, KY.

Mills: Brixment, N. Y. and Speed, Ind.

BRIXMENT

A Cement for Masonry and Stucco



NO ARCHITECT is sold by *Claims of Superiority*

He will judge a new material
for himself

WE believe you will be interested in learning about Bi-Flax, the only material of its kind. We believe further, that any claims for the superiority of Bi-Flax must be substantiated by your own judgment of the material itself.

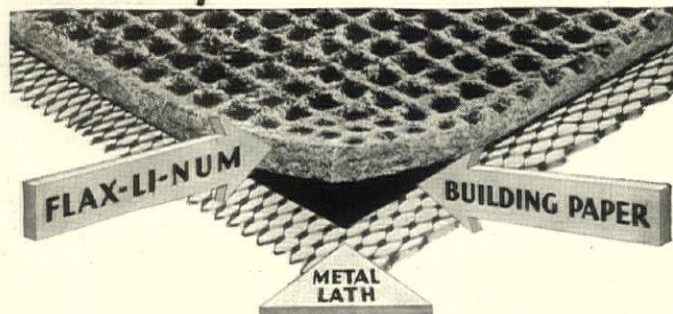
When you examine Bi-Flax, we are confident you will recognize Bi-Flax as an insulating plaster base, possessing many superior advantages. That Bi-Flax, because it is the only insulated plaster base in which the insulating material functions as insulation only,

gives maximum insulation value. That Bi-Flax combines the high insulating value of Flax-li-num with flat expanded painted metal lath, and is the only insulating plaster base of steel that provides a positive mechanical key.

These facts alone, justify the claim that Bi-Flax has superior insulating value, and is a superior plaster base. However, we feel Bi-Flax will only gain your approval and acceptance when you have examined it yourself.

The attached coupon is for your convenience. It will bring you a sample of Bi-Flax, that you may examine this new building material . . . the only one of its kind.

BI-FLAX The *Only* Material of Its Kind



Please give individual name as well as name of firm that samples may be mailed to your personal attention.



FLAX-LI-NUM INSULATING COMPANY, ST. PAUL, MINNESOTA
Please send for my inspection a sample of BI-FLAX. AA-2

NAME _____

FIRM NAME _____

ADDRESS _____

An open letter

To all writers of heating specifications
Architects...Engineers...Heating Contractors

Gentlemen:

When you come to the boiler part of a heating specification your purpose is to write in a name that stands for these things: (1) complete extraction of heat energy from the fuel; (2) transfer of that heat into the heating system, not only without loss, but also in the quickest possible time; (3) sound, rugged construction; (4) space-saving compactness; (5) easy installation; (6) continued reliability; (7) durability.

And it makes no difference what fuel or what heating system is to be used, or what may be the size of the project, these same conditions govern boiler selection, if *complete heating satisfaction at lowest cost* is to be a feature of the finished project.

Pick any one of our line of steel boilers and you will be sure that every one of these basic requirements will be absolutely covered. Plenty of proof is available in numerous projects similar to any one you may be working on.

Yes, our line is complete. It covers a range of types and sizes that meet the specifications of any heating project from the small home to the gigantic modern skyscraper.

If you do not have complete data in your files, write and we will send you descriptive literature.

Yours for the BEST in Steel Boiler Heat,

FITZGIBBONS BOILER CO., Inc.

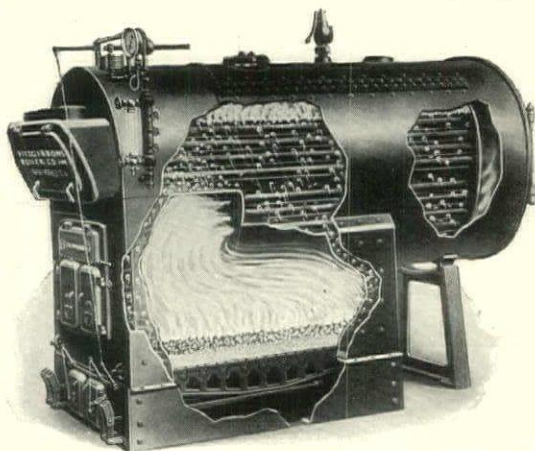
*Central, Southern and
Western States*

General Offices: 570 Seventh Ave., New York, N. Y.—Works: Oswego, N. Y.

Branches and Representatives in Principal Cities

KEWANEE BOILER CO., Inc.

*New England, Middle Atlantic States,
Virginia and District of Columbia*

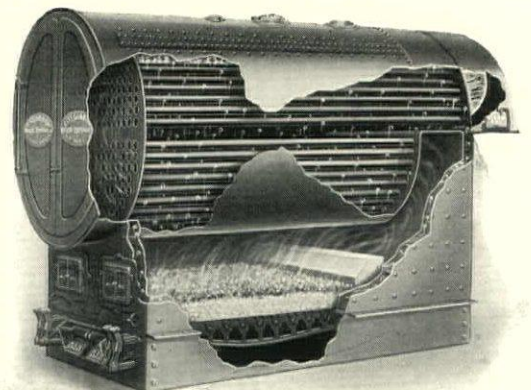


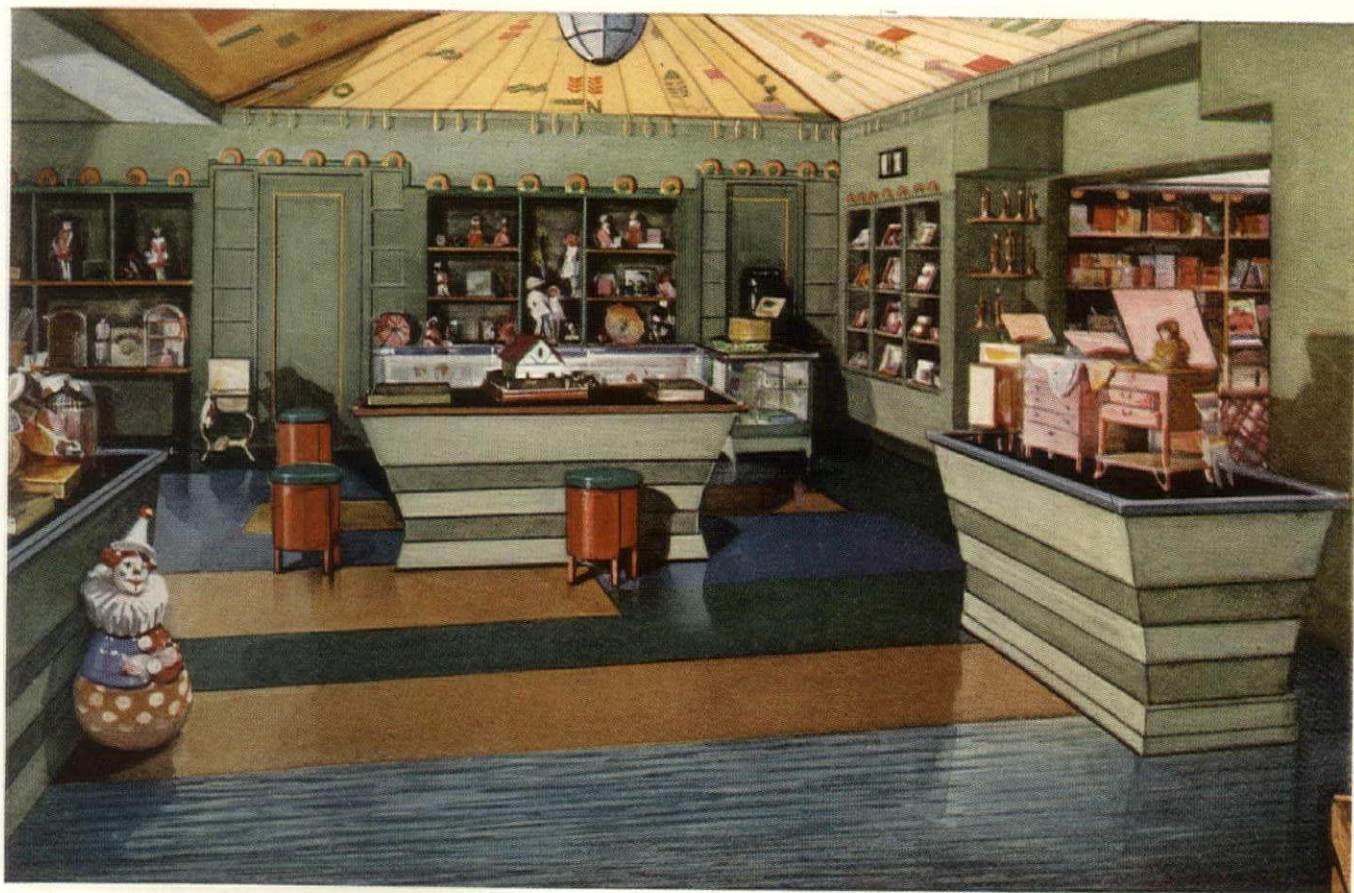
The Z-U Boiler

Left—One of the members of our complete line that has won widespread popularity because of its improvement over the conventional firebox boiler in design and performance. Write for the Z-U Catalog.

The R-Z-U Boiler

Right—This is the Z-U adapted for installations where conditions make it desirable to have the smoke outlet at the rear.





Bullock's-Wilshire, Los Angeles, Cal.—an original design in Armstrong's blue Jaspé and plain tan linoleum.

Create YOUR OWN Design in this modern, resilient floor material

MODERN shops and display rooms have found that Armstrong's Linoleum Floors serve them well in building up sales. From coast to coast, you'll find the smart, colorful patterns in this twentieth century floor material doing their share to add to the appearance and sales effectiveness of business houses.

There are more than three hundred designs of Armstrong's Linoleum to choose from—yet you need not be limited even to these standard patterns if your client wants an individualized floor—a floor that's his exclusively.


Plain colors and Jaspé shades and allover marbles can be combined to form striking floor designs of your own creation—just as the floor above was planned for the new Bullock's-Wilshire store in Los Angeles.

You can utilize ready-made figured insets (Linosets) and narrow border strips (Linostrips)—or have original insets created to your own design. The Armstrong Line of linoleum floors is versatile enough to fit practically any color scheme or decorative effect you may plan.

Protected by the Accolac Process, the surfaces of these modern linoleum floors are spot-proof and stain-proof. Easy, indeed, to wipe away spilled things with a damp cloth. And you can tell business clients that where heavy foot traffic may make frequent washing necessary (in lobbies, corridors, entrance halls), an occasional relacquering will keep the

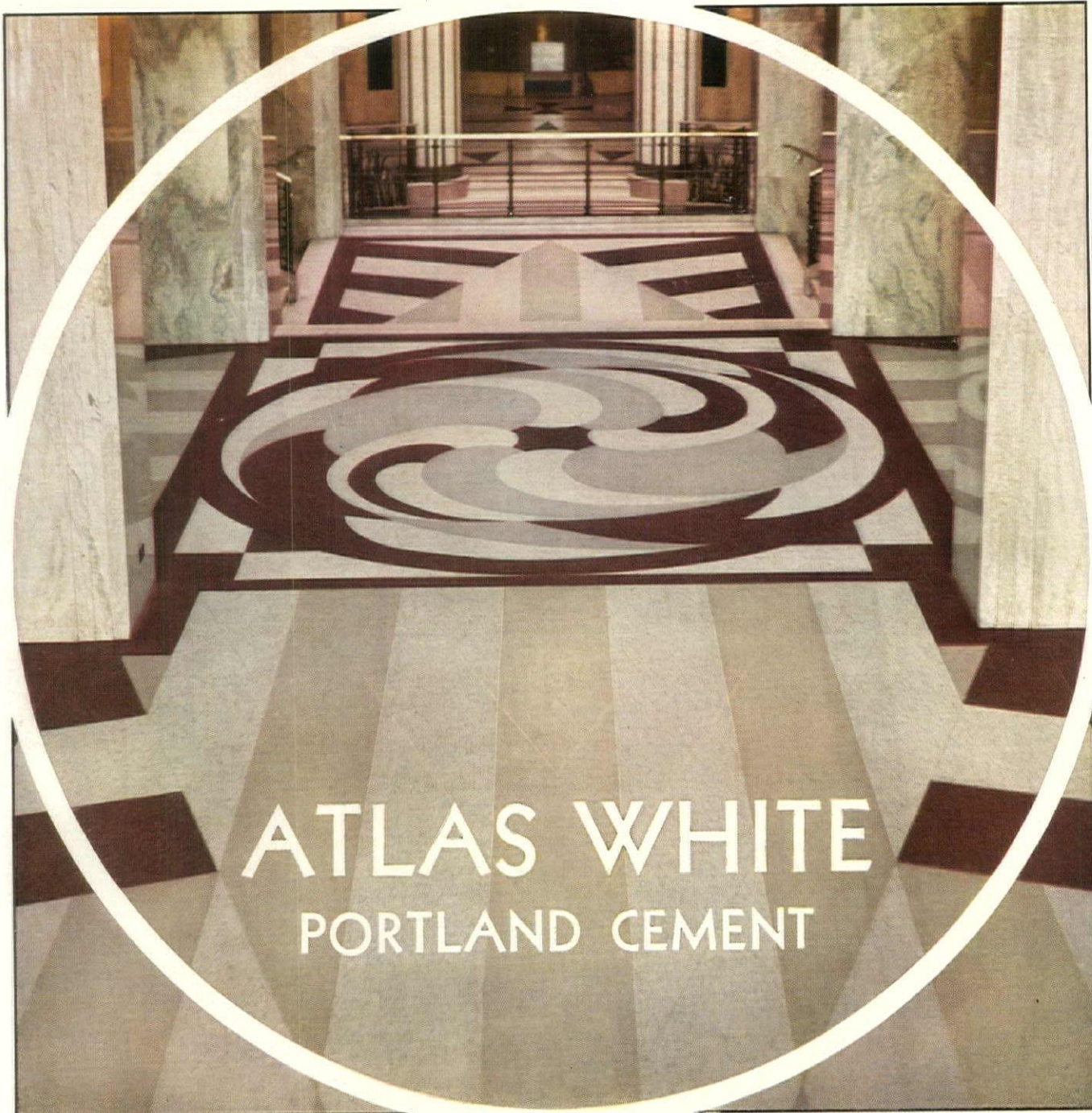
Armstrong Floors always youthful and attractive. It's really easy!

Armstrong Floors are moderate in price, too. The low cleaning costs and long wear make them available for every size and type of shop and store.

May we send full specification details and pattern colorplates? Write for our file-size specification book which contains a lot of good floor information. Also samples, if you wish. Just address Armstrong Cork Company, Floor Division, Lancaster, Pennsylvania. (We are also represented in *Armstrong's* Sweet's Architectural  Catalog.)
Product

Armstrong's Linoleum Floors for every room in the house

PLAIN · INLAID · EMBOSSED · JASPÉ · PRINTED · LINOTILE and ARMSTRONG'S CORK TILE



ATLAS WHITE PORTLAND CEMENT

Lobby of Michigan Square Bldg., Chicago
Holabird & Root, architects

Western Mosaic & Terrazzo Co.,
terrazzo contractor, Chicago

For Striking Terrazzo Floors

THE clear rose, light buff and ivory tones of the terrazzo floors in the Michigan Square lobby were secured by using Atlas White portland cement as a base for colored pigments.

Atlas White brings out in sharp relief each marble chip and preserves its identity and full color value.

Being pure white Atlas White also insures a clear, true color tone in the matrix itself, no matter what pigment tint is used.

The striped art marble columns in the background of the above illustration are also made with Atlas White. Booklets detailing the many uses of this true portland cement will be sent on request.

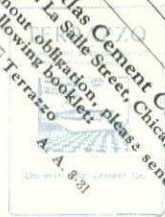
Name _____

Address _____

208 South La Salle Street, Chicago, Ill.

Without obligation, please send me the following booklet:

Terrazzo



A. A. 8-21

UNIVERSAL ATLAS CEMENT CO.

Subsidiary of United  States Steel Corporation

Concrete for Permanence



FOUNDED 1876



This Month's Cover
EMPIRE STATE BUILDING

AT early morning, when the exploring rays of the rising sun are turning the canyon-like streets of New York into planes of lights and shadows, the metal verticals of the Empire State Building capture the beauty of dawn and turn the structure into a captivating shaft of light. This picture, seldom seen by New Yorkers, is the one caught by A. C. Webb from his hotel window and transferred with water colors and pencil to a green paper background.

¶ Mr. Webb was born in Nashville, Tenn. He practiced architecture in Chicago and New York, and was connected with the office of the late Donn Barber. Mr. Webb won the Municipal Arts Prize given by the Society of Beaux Arts Architects in 1916. Following his discharge from the A. E. F., he established himself in Paris as etcher and architect. He will shortly exhibit at the Architectural League of New York and in the galleries of Kennedy & Co., New York.

Next Month

ADVERTISING—Indiana architects organize entire local building industry.

MATERIALS—Concrete as used on the Pacific Coast.

MODELS—How to build architectural models.

BENJAMIN FRANKLIN BETTS, A.I.A., *Editor*
ERNEST EBERHARD, *Managing Editor* HARRY F. CAHILL, *Advertising Manager*
RAY W. SHERMAN, *Editorial Director* EARLE H. MCHUGH, *General Manager*

IN THIS ISSUE

Cover—A watercolor by A. C. Webb

Can We Sell Architecture to the Small House Buyer? <i>By Benjamin F. Betts</i>	21
Maple Shade—Photograph and Poem <i>By H. LeRoi Ames</i>	22
Paper Architecture <i>By Simon Breines</i>	24
Bird-Houses in the Gable—House of Harry A. Logan, Warren, Pa. <i>Frank J. Forster, architect</i>	26
How Architects Should be Selected When the Government Builds <i>By Albert O. Larson</i>	30
An Architect's Studio in a Town of 20,000 <i>Office of Werking & Son, Richmond, Indiana</i>	32
Do We Make It Too Easy to Fall Out of Windows? <i>By Francis S. Onderdonk</i>	34
Sketches—France and Germany; England and California <i>By Max Feldman, L. A. Lamoreux, Stanley Johnson</i>	36
Fireproof Structures Are Not Fireproof <i>By Herbert E. Maxson</i>	38
Accurate Estimates <i>By J. R. Smith</i>	40
New Decorative Effects Possible in Murals by Photography <i>By H. S. Thomas</i>	42
The "How" and "Why" of Tomorrow's Building Codes <i>By George N. Thompson</i>	46
Drypoints <i>By A. C. Webb</i>	48
Measured Details of Early American Pine Paneling <i>By Harry Wagner</i>	50
"You Can't Add 4 Stories to a 5-Story Building" <i>By Edwin W. Byers</i>	56
Costs Cut for Partition Walls.....	59
What Architects Are Talking About.....	60
Modern French—Metal and Glass.....	62
As It Looks to the Editors.....	64
The Partnership Was Dissolved But You Have to Pay <i>By George F. Kaiser</i>	66
The Readers Have a Word to Say.....	68
Books.....	76
New Materials.....	80

THE AMERICAN ARCHITECT, *Published monthly by* INTERNATIONAL PUBLICATIONS, INC.
Fifty-seventh Street at Eighth Avenue, New York, N. Y.

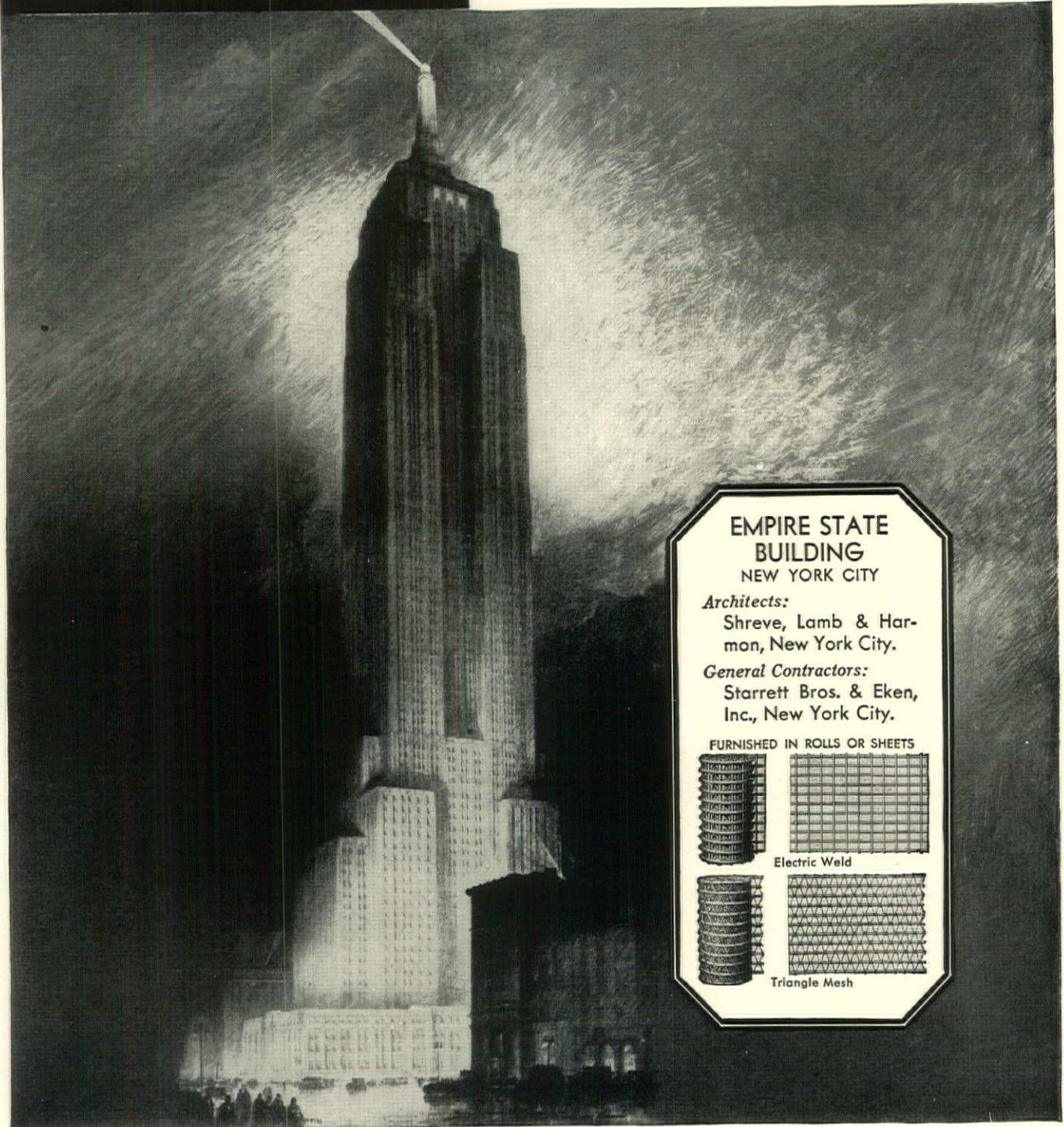
William Randolph Hearst, President; Ray Long, Vice President; Thomas J. White, Vice President; Arthur S. Moore, Secretary; Austin W. Clark, Treasurer. Copyright, 1931, by International Publications, Inc. Trade-mark registered. Single copies, 50 cents. Subscription price: United States and Possessions, \$5.00 per year; \$7.00 for two years; Canada, \$1.00 extra; foreign countries, \$2.00 extra. Entered as second-class matter, April 5, 1926, at the Post Office at New York, N. Y., under the act of March 3, 1879. THE AMERICAN ARCHITECT is fully protected by copyright and nothing that appears in it may be reproduced either wholly or in part without permission.

AMERICAN STEEL & WIRE COMPANY

WIRE FABRIC

TURNING VISION INTO REALITY

When the raising of steel and concrete turns plans into reality — then protection against fire, load and vibration is of vital importance. Such protection is best found in the short span concrete floor arch, Wire Fabric Reinforced. Leading engineers and contractors, seeking an even and effective distribution of steel — specify American Steel & Wire Company Wire Fabric for its uniform strength and dependability. We will gladly send you complete details on request.



EMPIRE STATE BUILDING NEW YORK CITY

Architects:

Shreve, Lamb & Harmon, New York City.

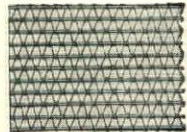
General Contractors:

Starrett Bros. & Eken, Inc., New York City.

FURNISHED IN ROLLS OR SHEETS



Electric Weld



Triangle Mesh

1831



1931

AMERICAN STEEL & WIRE COMPANY

208 South La Salle Street, Chicago

SUBSIDIARY OF UNITED



STATES STEEL CORPORATION

And All Principal Cities

Pacific Coast Distributors: Columbia Steel Company, Russ Building, San Francisco

Export Distributors: United States Steel Products Company, New York

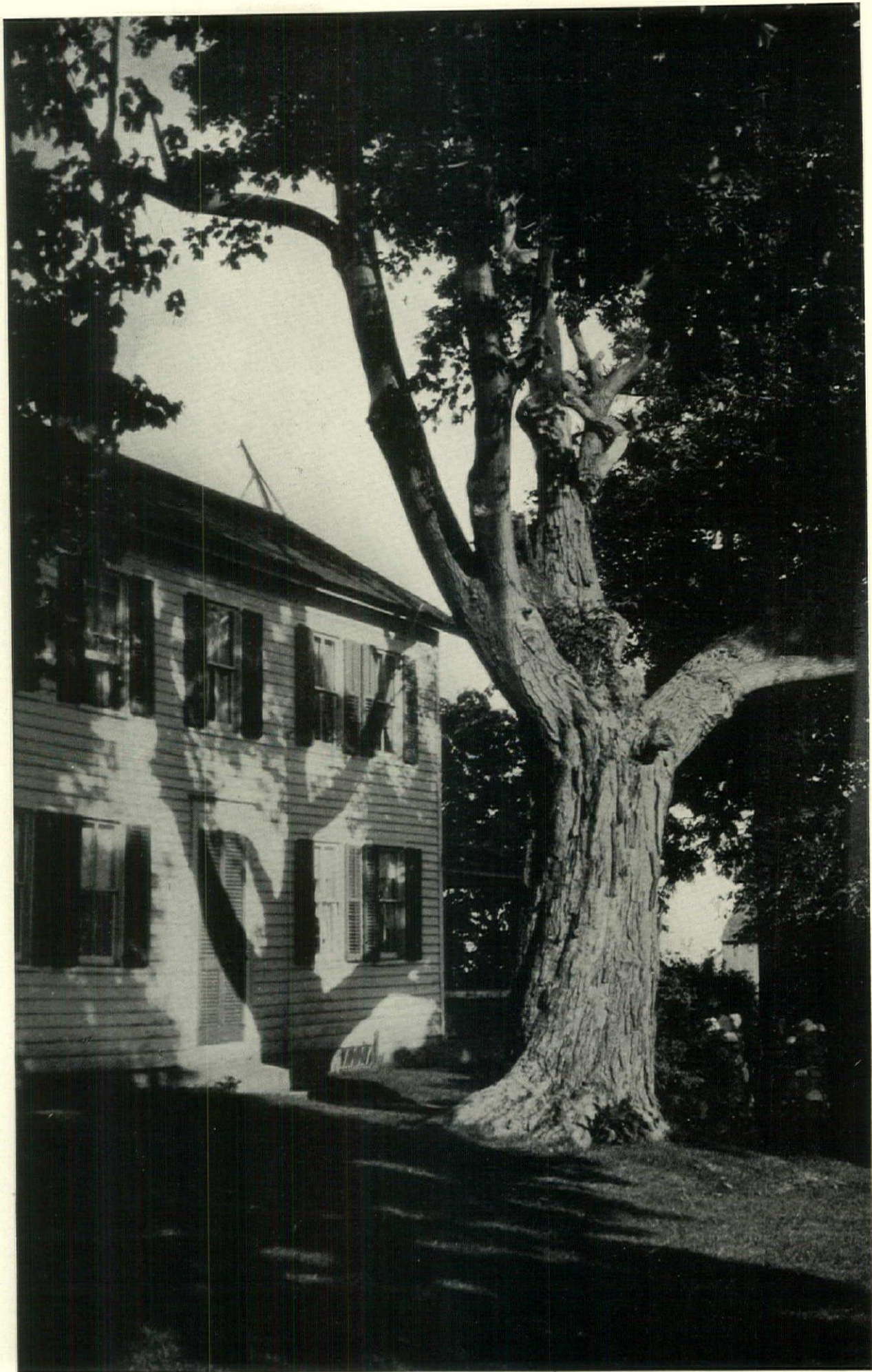
Can we sell architecture to THE SMALL HOUSE BUYER?

By Benjamin F. Betts, A.I.A.

CAN we induce the small house buyer to employ an architect and build instead of buying a ready-built house done by a developer or contractor? Perhaps . . . if we do it the way the house buyer wants it done. Evidently we have not been doing it right or there would be more small houses built to individual needs under architectural supervision.

Starting out to build under existing conditions the small house owner usually purchases a piece of property through a real estate broker; obtains a set of plans through some stock plan agency, or contractor; arranges the financing through a lending institution; engages a builder upon a price basis; goes to an agent for insurance; probably watches construction as best he can; hires some one to build the driveway; and buys a few shrubs from a nursery and sets them out himself. Is it any wonder that he is easily induced to purchase a ready-built house and be done with the bother of dealing with many individuals, and looking after numerous details? In addition, he knows immediately the cost of the house completed and financed. To forego many irritations he is willing to sacrifice many conveniences, as well as assurance that the house is properly built.

RECOGNIZING this fact, isn't it incumbent upon the architectural profession to solve the problem of making it easy for the prospective small house owner to build his own house under architectural supervision? Architects are qualified and capable of handling all of the details essential to the acquiring of a site and completed house. Yet, how many architects intelligently combine all of these functions into one service that gives an owner what he wants with a minimum of effort and annoyance? If many do so, the public does not know it. Some will reply, "Can it be done ethically?" or "The builders of small houses will not pay what this service costs and is worth." This is true in part, but a way should be found to convince the public of the value of this service, today available in practically every community, and to make it possible for the average American family to obtain the benefit of architectural talent. The public will then make use of it and pay a fair price for it.



MAPLE SHADE

photograph and poem

by H. LeRoi Ames

O, Maple Shade,
No changes have you made
Since that first day,
When as a child
I played beneath your shade.

Your green-leaved, out-stretched,
Towering arms.
Have always reached to God
In attitude of prayer.
On memory's page, are sketched,
Veritable swarms
Of play-days on the sod
In your shadow there.

O, Maple Shade,
Into the world of trade,
I go away;
First having smiled
And played, beneath your shade.

We are fooling ourselves and
deceiving our clients with

PAPER ARCHITECTURE

By SIMON BREINES



Ralph Walker, of Voorhees, Gmelin & Walker, conducted a meeting on architectural education at the Architectural League of New York some weeks ago. Among the speakers was Mr. Breines, whose ideas caused so much discussion and comment that he was asked to write this article covering what he had said. . . . The American Architect asked Mr. Walker for his comments on this article, as he had led the discussion. Mr. Walker, appreciating the importance of the subject, instead of commenting briefly, expressed his own ideas in an article which will be published in next month's issue

THAT there is something wrong with American architectural education was the consensus of opinion advanced at a recent discussion held at the Architectural League of New York. I would add to that—there is something wrong with American architecture. It is inevitable that the work in the schools should be affected to a great extent by current trends of the profession itself. Students are immature and impressionable. Their teachers, usually architects, are influenced by contemporary design and practice. Therefore, if there is something fundamentally amiss in our methods of education, we may look for its cause in the architectural profession.

But beyond architecture are the social and economic systems under which we live and build. The evils that beset our architecture spring more or less directly from the evils of our time. Business competition, modern systems of finance and credit, and the philosophy of the day are factors which shape our architecture. Over these forces we have no control and only as they change will mutations take place in building.

I have stated these ideas in order to place the main subject in its proper perspective. As an element in de-

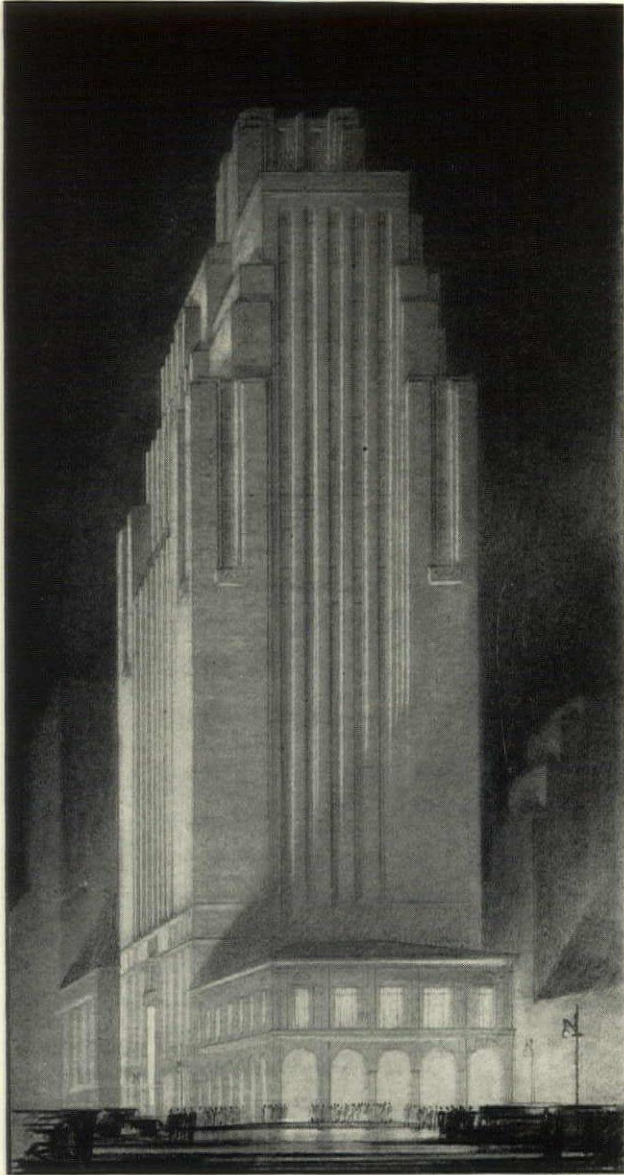
termining the direction of architecture, what I shall discuss in this article is relatively small. But at least its control is within the hands of the architects. The other and more deep-rooted forces are beyond their reach.

At the meeting mentioned above, I stated that one of the chief faults with the work of the students in the Beaux Arts system, and this system is practically the basis of our architectural education, is the preponderance of "paper architecture." By "paper architecture" I mean the products of an attitude which conceives of design as a two-dimensional coating to a three dimensional structure; as a "front" to the building; and, in increasing frequency, as an advertisement. Before I go into this issue I wish to indicate that what I have to say concerns not only the schools but the architects as well.

In this country we accept rendering as a natural concomitant of modern architectural design. To glance through foreign periodicals is to see how peculiarly local such a development is. This difference is significant and has its roots in the diverse conditions, here and abroad, under which architects work. Much of our building is so standardized that an engineer or builder often makes the plans. In such highly specialized and efficient structures as office buildings and industrial buildings, the architect is frequently employed merely to "dress up" the visible surfaces.

I believe that the architect is in large part to blame for having neglected to incorporate in his role that of engineer also. This is to be regretted not only from the standpoint of the architect but from that of architecture. I hear frequently of owners giving the job to builders and engineers who, in turn, call in an architect. The latter becomes more and more the "artist" and more and more removed from the vital part of architecture, the construction. If architects become concerned with the aesthetic only, they are in danger of losing their importance in the business of building and at the same time falling into a situation where "paper architecture" is the inevitable result.

The rapid development of rendering is perhaps only a symptom of this position of the architect but I think it is to some extent a factor in the devitalizing of design.



A TYPICAL RENDERING OF A TYPICAL BUILDING

To illustrate his criticism of "paper architecture," Mr. Breines took the photograph of a completed building and made a rendering which idealizes its constituent features, emphasizing certain reveals and masses and subordinating other details. This type of presentation is an everyday affair

I hold no brief against rendering per se. It is when architects use renderings to misrepresent or obfuscate reality; when conditions are introduced into the pictorial composition that do not and will not exist; when natural phenomena such as color and the elements are so romantically distorted that the architect and client alike believe they will get something which in truth can never be realized; and finally, and most important, when facile rendering is used to solve real problems, and paint to cover architectural sore-spots, it is time to examine this supposedly innocent "handmaiden of architecture."

Strangely enough, I am a renderer. In the course of my work, I have often had occasion to make renderings of weed-like apartment houses which have fire-escapes on the exterior. Invariably the architect will tell me to omit these appendages. "They would spoil the picture," he confesses. He also makes other suggestions to "im-

prove" the design. Now this picture is supposed to show the client and the loaning agent how the building will look. It also, the architect blissfully claims, helps in studying the building. What building? Certainly not the one for which he is preparing plans.

I feel that if we could not sit back and smugly satisfy ourselves with romantic pictures, that the problems which they so neatly avoid would become too obvious to side-step. The electric sign, for example, by its very nature is the first thing one sees and yet it seldom is considered as a factor in the architectural composition. I daresay that the average passerby recognizes various theatres by their electrical displays rather than by their architecture. If the architect is supposed to determine the final appearance of the building why does he not also control the design of such an important feature? There is no excuse for such evasion (Continued on page 82)



a final touch of rural life
BIRD-HOUSES in the GABLE



House of
Harry A. Logan
at
Warren, Pa.

Frank J. Forster
architect

■
A BRICK-WALLED terrace
acts as a cheerful outdoor
adjunct to the living room
and dining room wings



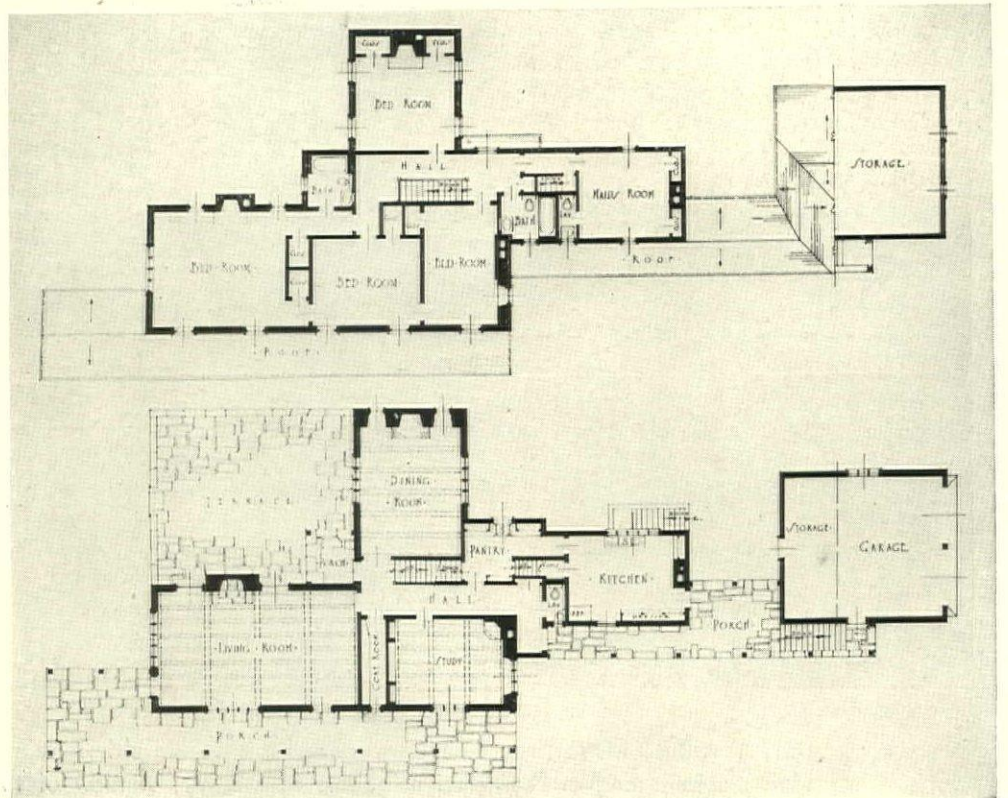
ONLY A BIRD LOVER could have thought of this delightful hospitality, which brings the pleasant song of feathered neighbors to the very window of the living room

The full charm of all outdoors



THE BACK of the house, with long, low lines and a hint of sagging ridge that creates an atmosphere of aged charm and quaintness

FLOOR PLANS with plenty of windows, adequate closets, and rooms which are arranged for convenient and comfortable country living



captured in this country house



CORNER FIREPLACE in the study, harmonizing quaintly with diamond shaped window panes and beamed ceiling

THE DINING ROOM, too, has its fireplace in this house of many fireplaces, as befits a country home in wooded hills

How architects
should be selected

WHEN THE

By ALBERT O. LARSON

Larson & McLaren, Architects, Minneapolis

Intense interest has been shown by architects from all parts of the country in the question asked in the January issue of *The American Architect*, "how should the government select private architects?" Eighteen answers to this question have been received, including two from A. I. A. Chapters. Mr. Larson's article was finally selected for publication because of his discussion of the subject itself and the completeness of the plan he advances, a plan with a basic thought which seems to be along the lines of the majority of solutions submitted.

THE subject of selecting architects for government work has become of more than passing interest to the public and of vital concern to the architectural profession. Just how far the government should continue to engage in the architectural and engineering business should not be difficult to answer.

The government engaged in many lines of business during the war, but never ventured into building construction nor the supply of building materials. The design and construction of governmental buildings should be handled outside of government departments, and undoubtedly to the best advantage by those architects and contractors engaged in their professions in that section of the country where the building is to be erected.

The office of the Supervising Architect has functioned well. The supervision of construction has resulted in high standards, for governmental buildings and planning done by the department has provided uniform working facilities in the thousands of cities for such buildings as post-offices. Unfortunately that elusive thing called "design" has suffered through this system. Preliminary work, data records and supervision must always be handled by the Supervising Architect, if public interests are to be protected. Maintenance of buildings, repairs and additions, in addition to new work, will always necessitate a large government organization.

The letting of construction contracts has been handled in a clean-cut businesslike manner. The whole procedure has been carefully worked out. Financial responsibility, a guaranteed price and competent supervision insure a definite result. Unfortunately no such definite procedure prevails in the selection of outside architects for government projects. Because of no definite scheme for making such awards, architects and the public have been led to believe that politics have had a hand in the selection. The Treasury Department has established no standards by which the architects themselves can know the basis of appointment.

Individuals who are not competent to handle or understand a question so technical have attempted to assist: home-town politicians, seeing no further than the Washington cab-driver who explained that "the fine buildings cost us nothing—the government paid for them" have interjected local politics and prejudices into the picture.

The architect himself, hoping that a new local post-office building will relieve the present building situation, vainly seeks to discover whether or not he will be one of the favored few to design a government building.

All outstanding architecture of this country has been developed in the offices of private architects. The planning of working spaces and the conveniences and the equipment which make manufacturing and business plants economical and efficient to operate have been worked out in the offices of architects and engineers. Should not the unending resourcefulness of the leading architects also accrue to the public good in the planning of government buildings? Should not an architect who has planned garages, department stores, and office buildings be able to apply his knowledge of construction and planning to a post-office in a way which will add to the comfort and efficiency of postal department employees to a greater measure than will the design from a governmental department whose whole experience has been that of government buildings of a stereotyped pattern? Will not government standards keep pace with building progress if the private architect assists? Will not the specifications of a local architect better adapt local materials and building methods to government buildings?

How should an architect be appointed? The following method would eliminate politics and insure a selection on the basis of capability. The American Institute of Architects would select two architects, paying for their services out of American Institute of Architects' funds, to act with the Supervising Architect in the selection. After announcement to the American Institute of Architects in the locality to have the new building, architects would

GOVERNMENT BUILDS

THIS IS MR. LARSON'S PLAN

1. A. I. A. to select two architects to act with Supervising Architect as a Board of Selection.
2. Architects in locality of proposed building to apply through local A. I. A. Chapter for appointment by Board.
3. The two architects with highest rating to appear personally before Board.

BOARD TO RATE APPLICANTS ACCORDING TO:

• exhibit of work done during past five years	35%
a. Character of design and planning, scope of practice	
b. Recognition of work by public	
c. Typical working drawings and specifications and engineering	
• experience and technical training of principals of firm	20%
• personnel of office	15%
• local A. I. A. Chapter rating	20%
(by ballot on other qualifications listed)	
• financial rating	5%
• service to Government during war	5%
	<hr/>
	100%

submit to such board an application for appointment. The American Institute of Architects in Washington would receive such applications for consideration.

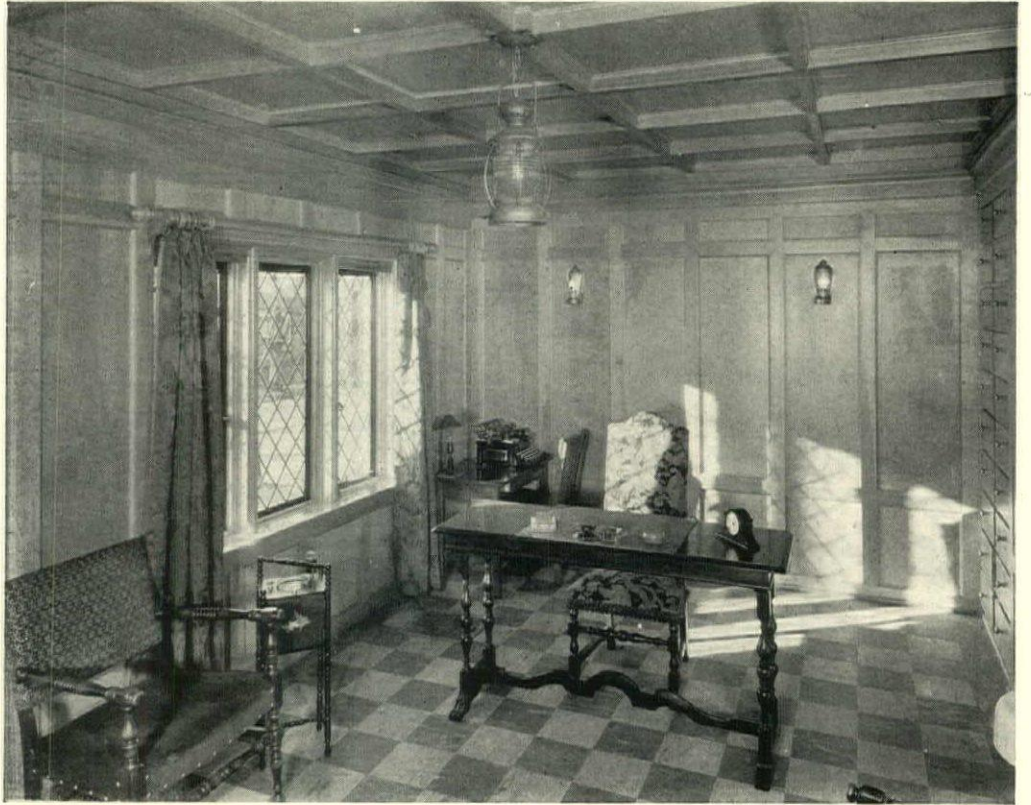
The standards by which architectural firms could be judged and compared would be determined as shown in the plan at the top of this page.

A ballot in the local chapter of the American Institute of Architects (for use in the above schedule and percentages) would establish proportionate American Institute of Architects rating. An invitation to make a personal appearance before the board would be extended to the two architects who rated the highest qualifications. Expediency would best be served by making the award of the commission at such time.

If the design of public buildings by outside architects is to raise or even maintain the present standards of such work, there must be a definite premium placed upon competency and ability. The selection of a local architect does not necessarily imply those qualifications, and local pride or prejudice must not dictate the selection of a Podunk architect for the Podunk post-office, if there is no architect in Podunk who measures up to the standards of an architect in another city who has not yet received a commission. Far better for the public and for the profession to have fifty public buildings throughout the country designed by architects from a single city, if a fair examination of the competency of those local architects reveals no fitness to handle the expenditure.

CONFIDENCE CREATED

An architect's first task is to create complete confidence. The general office, with its natural birch finish and floor of rubber tile, shows good taste and yet there is no suggestion of undue extravagance. It inspires a client's confidence



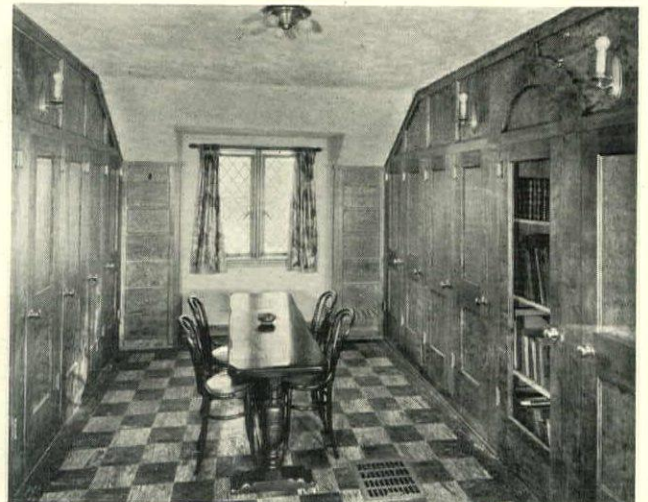
An Architect's Studio

Office of Werking & Son, Richmond, Indiana



THE PRIVATE OFFICE

with its walls of knotty pine, offers a cheerful, restful place in which one can work quietly



THE LIBRARY

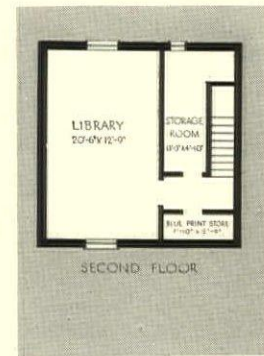
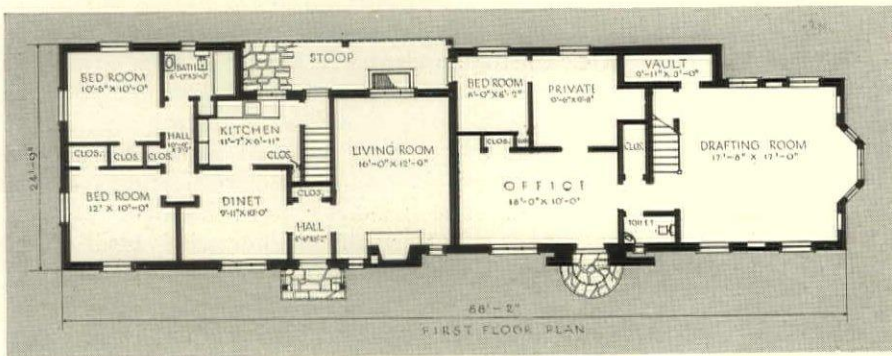
and reference room is on the second floor where there is likely to be freedom from interruptions



EFFICIENCY SUGGESTED

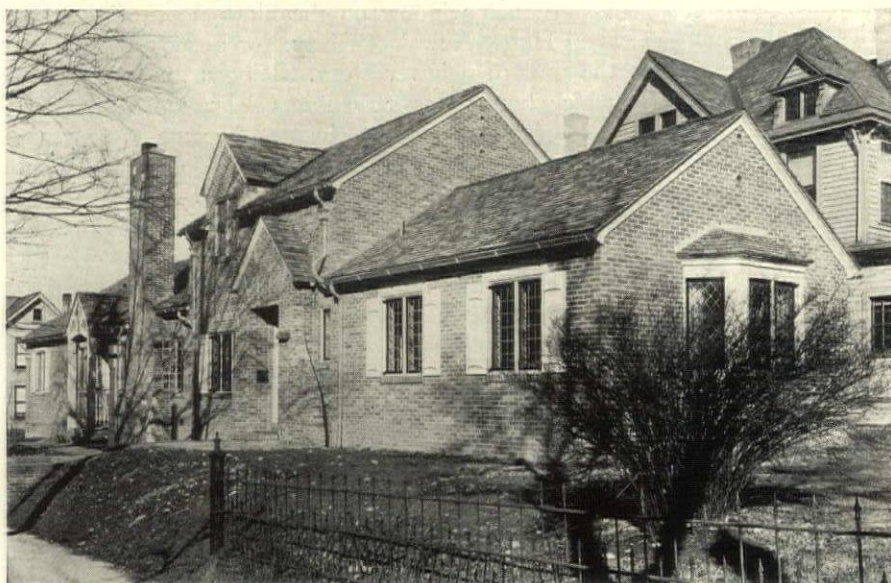
A client must feel that his architect is not only a capable designer, but also an efficient business man. So this drafting room, spacious and well ventilated, suggests that here is a room well suited to creative effort. It bespeaks efficient, capable management

in a Town of 20,000



FLOOR PLANS

show a duplex character ideal for later conversion into a two family house without any sacrifice of its present convenience



THE EXTERIOR

is well designed for its location in a residential district and, through its domestic quality, should help to attract new clients

DO WE MAKE IT TOO

Easy to Fall Out of Windows?

By

FRANCIS S. ONDERDONK

Instructor in the College of Architecture,
University of Michigan

THE tradition of building too low window-sills is costing each year the lives of hundreds of people. According to the Chief Statistician of the Bureau of Census, in 1928 five hundred and five people met their death by falling from windows. Although a large percentage of these may have been suicides, there is an alarmingly high number of cases where people accidentally lost their balance, resulting in a fatal plunge.

During sixteen years in which I lived in Europe I cannot recall having heard of this type of accident. Upon my return to the United States, I noticed frequent newspaper reports of people falling out of windows and I began collecting such reports as came to my notice and observing the height of window-sills. To my surprise I found that in this country of high buildings window-sills are lower than in some European countries where the maximum height of buildings is frequently six stories. Although even a one-story fall can be fatal, a plunge from the ninth story means certain death and endangers to a much higher degree pedestrians who happen to be passing.

In the majority of cases reported of falls from windows no witnesses are present at the time of the fatal plunge, and hence it is rarely stated with certainty whether it was a case of leaping or of falling. Of the twenty-five cases concerning which I have detailed reports, six can be definitely set aside as suicide. Among the remaining nineteen cases the majority in all probability were accidents of which the following, which occurred in February, 1928, is typical:

"APPARENTLY overcome by one of the dizzy spells with which she had been suffering during the last six months, Mrs. M. Simmerman, 65 years old, fell from the dining room window of her home at 1030 Hoe Ave., the Bronx, and plunged three stories to her death in the courtyard. Her son believes that she had suffered an attack, gone to the window for air, and, becoming dizzy, had fallen out."

This tragic combination of circumstances, persons already feeling faint going to the window for fresh air, and then falling out of it, can be considered the most frequent cause of this type of accident.

This brings up the additional danger presented by the double-hung window which is so commonly used in

the United States. Frequently the lower sash, which must be pushed upwards, offers an initial resistance due to friction, suddenly gives way and may cause the person who has been raising the sash to lurch forward. We may therefore consider the combination of double-hung window with low window-sills as an American tradition which is largely to blame for the appalling number of falls from windows.

It seems strange that in the case of Patrick Grant 2nd, banker and former Harvard football player who fell from the fifth floor of a Walnut Street building in Philadelphia, officials had protested against the installation of casement windows in his office, fearing just such an accident. The windows were installed there at Grant's request but actually the low window-sill caused the accident, in my opinion.

A FRENCH window caused the death of P. F. Fuller, twenty-nine year old scenario writer. He mistook a French window on the ninth floor of the Park Central Hotel, New York City, for a door and plunged to the roof of a lower story. Being a guest at a party at which liquor was served in celebration of the completion of his latest film, he had become drowsy, and gone to sleep. After the party had broken up he suddenly awakened and, it is believed, tried to find the bathroom. Instead he fell out of the open window. We wonder whether the architect who installed a French window on a ninth floor without building a three feet high iron railing in front of it failed in his responsibility.

Readers who have visited Paris will recall the window protections placed on the top story of many apartment-houses. Unprotected French windows have a special charm in villas when they open out upon an inviting lawn but it is hard to believe that any responsible person would build them on a ninth floor.

The average height of five window-sills chosen at random in Central Europe was found to be 2'-11½";

TOBACCO MAN FALLS TO DEATH AT HOTEL
 Anthony Schneider, 60, Head of Webster Eisenlohr, Killed at the Beverly in 6-Story Drop.
ACCIDENT, POLICE REPORT
 \$12,500,000 Company's Stock, Which Had Sold as High as 113%, Went to 4 in Market Crash.

SCENARIST IS KILLED IN 9-STORY PLUNGE
 Paul Fairfax Fuller Mistakes French Window in Hotel for a Door and Falls.
PARTY ENDS IN TRAGEDY
 Movie Writer Had Been Celebrating Completion of His Latest Play at the Park Central.

Anthony Schneider, 60 years old, president of Webster Eisenlohr, Inc., of 511 Fifth Avenue, one of the largest cigar manufacturing concerns in the United States, was instantaneously killed yesterday morning when he fell six stories from the floor of the hotel at 125 E. Washington. The body fell through the window which he fell was a well, a waiter, Mr. Schneider had the tobacco ped from the bottom of the ac

Probably mistaking an open French window for a doorway, Paul Fairfax Fuller, 29 years old, a moving picture scenario writer, of 116 West Forty-seventh Street, plunged from an eighth floor of the Seventh Avenue hotel, to the roof of the building yesterday morning. He was connected with the effort, "The Apartment at the Park Central," which included Miss Margaret Moran and a Mr. Van

R. W. MURRAY DIES IN 24-STORY FALL IN FIFTH AVENUE
 Well Known Real Estate Man Believed to Have Lost His Balance.
 Reginald W. Murray, a real estate operator interested in numerous important building projects in New York, fell to his death from the twenty-fourth floor of the nearly completed fifty-eight-story office building at 500 Fifth avenue, at the corner of Forty-second street, early this afternoon.

There was no suspicion of suicide. Mr. Murray had left his partners in the two real estate and construction companies of which he is president only a few minutes before and was examining a suite of blueprints in his hand when he fell, and it is believed he lost his balance when he leaned over the low window sill, only two and one-half feet high, to observe the light that would enter the offices. His body landed on the roof of the three-story building

R. DEANE KILLED BY 7-STORY FALL
 Retired Dentist, Stricken by Heart Attack, Plunges From Window.
 Dr. Henry F. Deane, retired dentist, who for many years had a fashionable practice among Park Avenue and Fifth Avenue residents, fell to his death yesterday afternoon from the window of his seventh-floor apartment in the Hotel Versailles, 141 East Sixtieth Street. He was 64 years old.

While hundreds of pedestrians passed the Bowling Green Building at 11 Broadway yesterday afternoon, Frederick Dessin, wealthy carbon broker, fell or jumped from a tenth floor window and was killed instantly on the sidewalk. Although he had been in ill health for several years, Mr. Dessin was in good spirits yesterday morning, according to his associates, who believe he fell while opening a window for fresh air. Shortly after lunch, George Grant, an employe of the office, saw him come in and go to his desk. Grant left the room for a moment and when he returned it was empty, but he heard screaming from the street far below. Grant hurried down and identified

10-STORY FALL KILLS BROKER ON BROADWAY
 Frederick Dessin Plunges From Window of Office in the Bowling Green Building.
 Son Carried On His Practice Among Park Avenue and Fifth Avenue Residents.
 Seized with a sudden heart attack, Dr. Henry F. Deane, retired dentist, who for many years had a fashionable practice among Park Avenue and Fifth Avenue residents, fell to his death yesterday afternoon from the window of his seventh-floor apartment in the Hotel Versailles, 141 East Sixtieth Street. He was 64 years old.

There was no suspicion of suicide. Mr. Murray had left his partners in the two real estate and construction companies of which he is president only a few minutes before and was examining a suite of blueprints in his hand when he fell, and it is believed he lost his balance when he leaned over the low window sill, only two and one-half feet high, to observe the light that would enter the offices. His body landed on the roof of the three-story building

WHO is to blame . . .

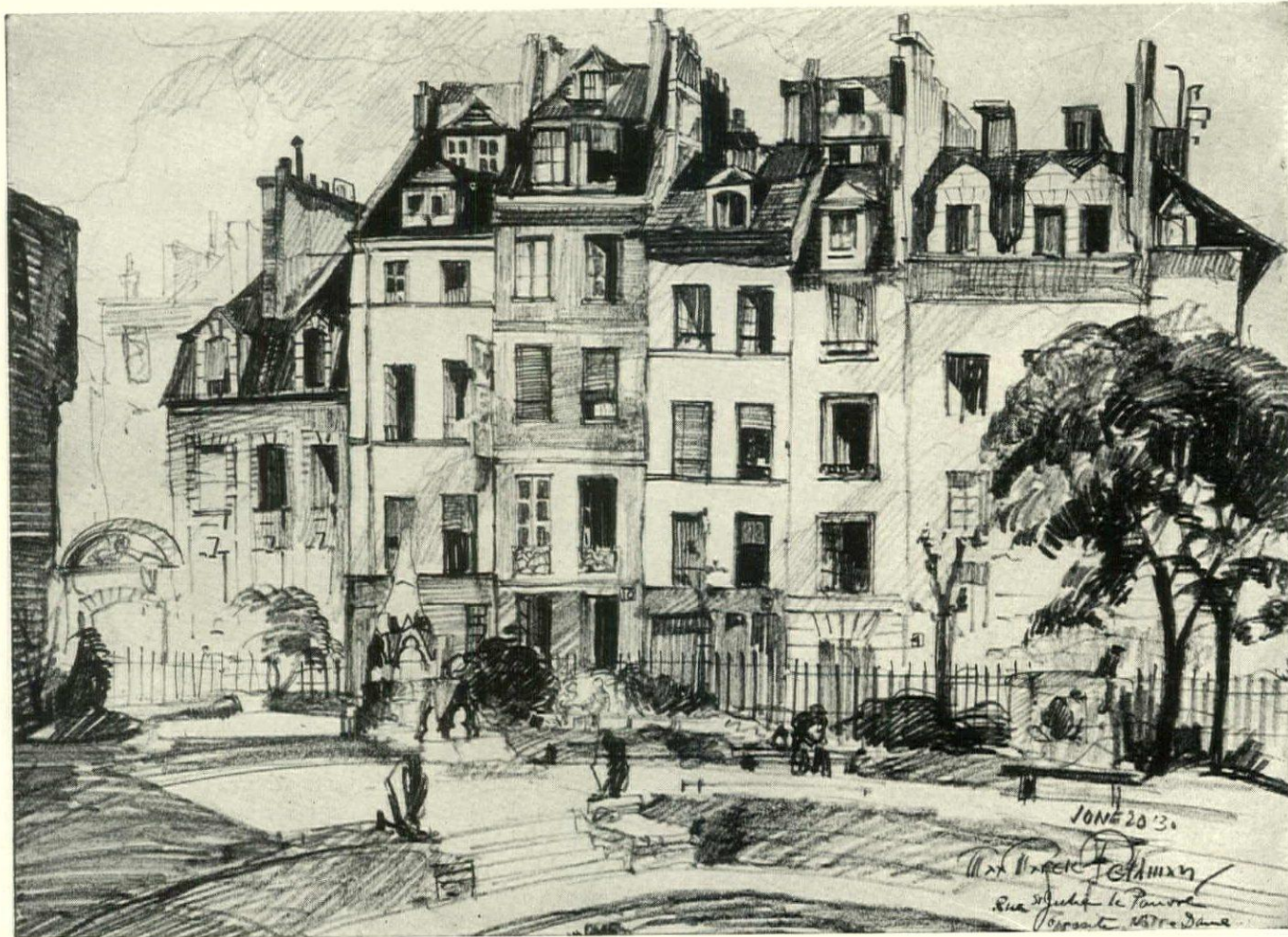
for the kind of news to which window sills two feet high are a contributing factor? . . .

in the authoritative book by F. Titscher and O. Schwab, "Die Baukunde," 85 cm, i.e. 2'-9 1/2", is recommended for the height of a window-sill. The average of six French and Belgian examples was 93 cm, i.e. 3'-3/10", and the average of four English window-sills was 2'-7". Nine American window-sills which I measured averaged only 2'-2 1/8". It may seem petty to argue about a difference of a few inches but we must realize that in the question of balance the slightest increase of the lever-arm or of the weight may convert stability into instability. The gigantic iceberg whose lower part gradually melts and then suddenly topples over is a good example of this.

It is hard to believe that, whereas in building construction determined by engineering methods a twofold or threefold or still higher safety factor is demanded, it should be permitted to build window-sills so low that they are a fraction of an inch below or above the center of gravity of the person standing at the window. The average American is, if anything, taller than the average European and hence our window-sills should be higher instead of lower. In a country such as ours, in which so many high buildings are erected, window-sills should be made at least three feet high and we should urge that a corresponding paragraph be included in our building codes.

THE psychological effect of being many stories above the ground must also be considered. Many have experienced the peculiar lure of the ocean-depth to the passenger who commenced his journey without any intention of suicide; actually it has occurred that passengers jumped into the sea. It would seem that the nearness of danger fascinates the mind in a demonic manner as is brought out in the report of one of the three temptations of Jesus. One of the mystery plays presented in New York in 1928 based its climax on this psychological fact, featuring the lure of the depth yawning below the window of a skyscraper apartment. Indeed, one is tempted to say that jumping from windows or high buildings has become a specifically American mode of suicide. But herein also the architect faces a certain degree of responsibility, as the despondent person who is weighing in his mind the "to be or not to be" should not be able to find a low window-sill which lures him to unbalance his body to death.

It may take a long time till all building codes in the United States are altered as suggested above, but in the meantime architects could consider it a sacred duty to break quickly the American tradition of building too low window-sills.



RUE ST. JULIAN LE PAUVRE

OPPOSITE NOTRE DAME, PARIS

By MAX FELDMAN

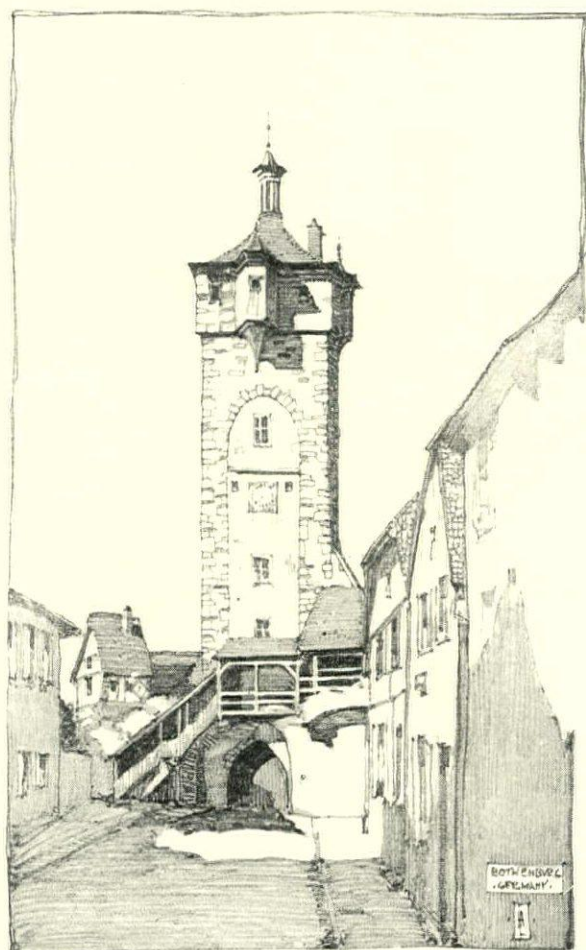
New York

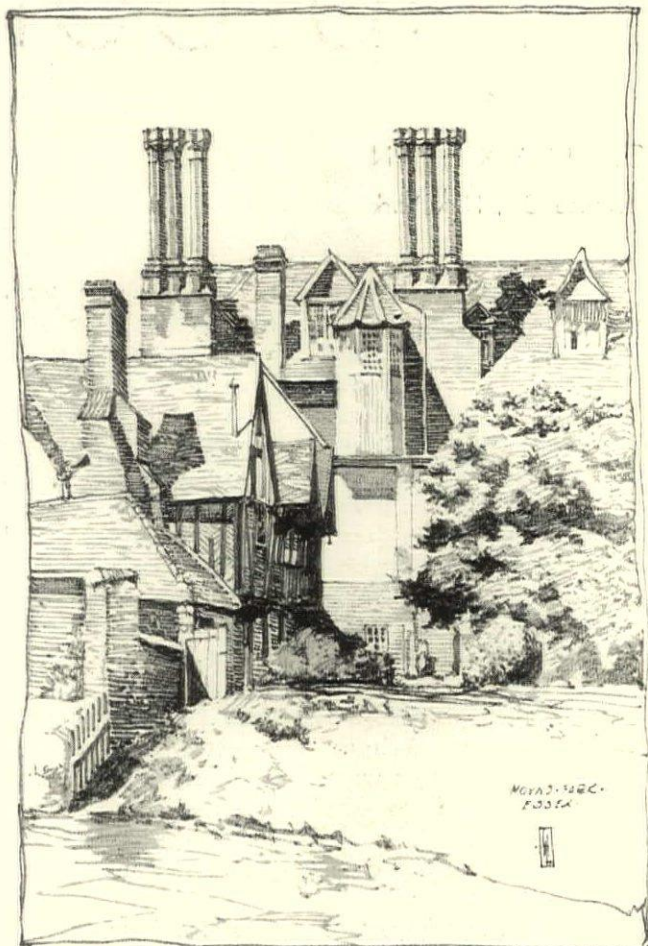
ROTHENBURG, GERMANY

By L. A. LAMOREUX

Mansfield, Ohio

FRANCE and
GERMANY





OLD SHACKS
LOS ANGELES

By STANLEY JOHNSON
Los Angeles, Calif.

MOYNS PARK, ESSEX

By L. A. LAMOREUX
Mansfield, Ohio

CALIFORNIA
and ENGLAND

The use of non-combustible materials does not make a building fireproof, for its combustible contents will always remain a serious hazard if a few simple precautions in planning are not taken

FIREPROOF STRUCTURES

are Not Fireproof

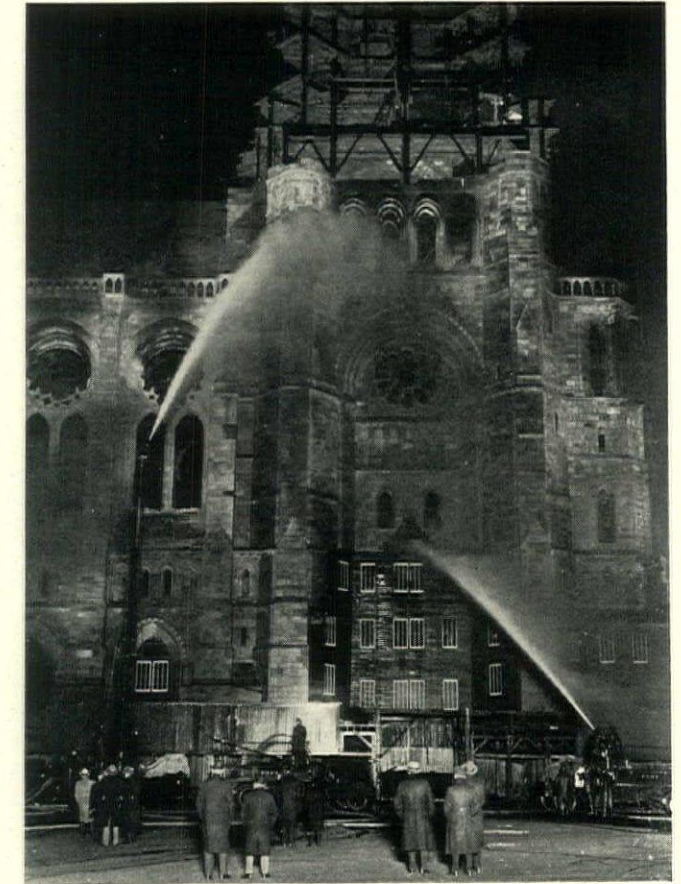
By HERBERT E. MAXSON

Vice President, Continental Insurance Co., New York

WITH the introduction of fire resisting construction, there developed a more or less false sense of security, a belief in the minds of many that in a so-called fireproof structure the hazard of fire was nil, that no serious fire damage could result to or in a structure built of incombustible material. This sense of false security was quickly dissipated by sad and costly experiences which carried with them lessons that taught not only the need of radical improvement in the structural details of fire resisting buildings as originally designed, but also the absolute necessity for ample fire protection and fire-fighting equipment.

The varying details of construction, nature and occupancies, combustible tendency of their contents, and the grade of fire protection as commonly found in modern fire resisting structures of today exert an important influence upon their respective susceptibility to damage from fire.

Structurally, from a fire hazard viewpoint, an ideal fire resisting building is one in which the structural frame work is protected by solid masonry $1\frac{1}{2}$ " or more in thickness, and the floor and roof arch construction is

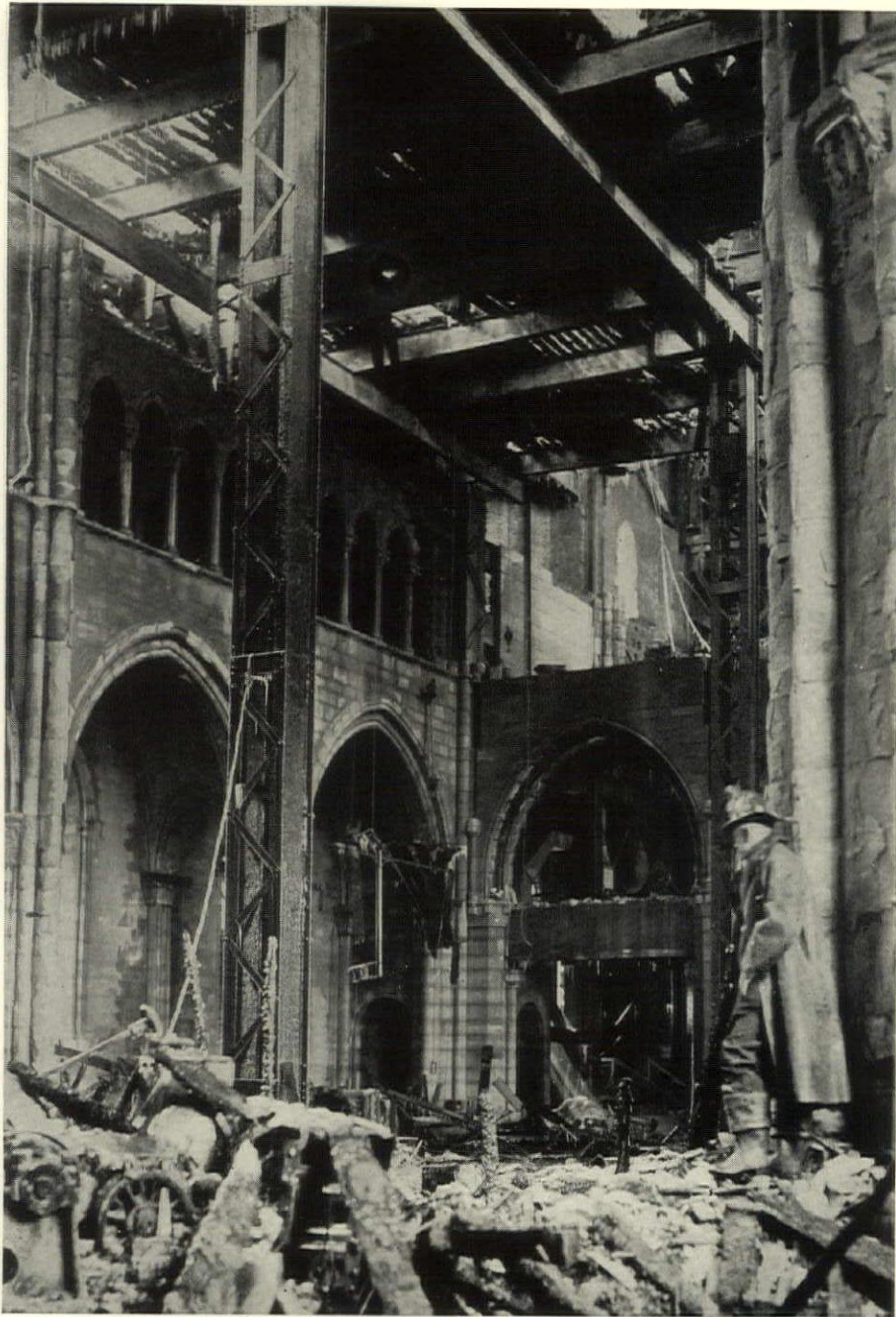


P & A

composed of masonry; either reinforced concrete, terra cotta or brick of thickness and span proper to support any weight to which it may be subjected. It has easily replaceable exterior and interior wall finish and surfacing materials. All of its floor openings such as elevator, stairway, dummy, pipe, ventilating and other shafts, are enclosed by fire resisting walls, i. e. plastered brick, terra cotta or gypsum blocks, with reliable fire doors at all openings. It is moderately exposed and has polished wired glass windows in hollow metal frames on all exposed sides and on all sides above the 8th floor. All interior woodwork is treated for fireproofing and its floors are scuppered or otherwise provided with adequate drainage to remove water in the event of fire.

Fire resisting buildings in which there are serious structural defects, such as unprotected iron or steel structural members or unprotected floor openings, may justly be graded 20 to 80% below the ideal structure in fire insurance underwriting merit, depending upon the height, nature of occupancy and the combustibility of their contents.

Those with less important structural defects, such as



P & A

RIVERSIDE CHURCH

in New York City, is built of incombustible materials, but this did not prevent serious damage to the building when the combustible scaffolding burned

is sufficient temporary woodwork used in the construction of the average fire resisting structure to result in serious fire damage. During recent years fire losses of this character have cost fire insurance companies 10% to 70% of the gross amount of insurance carried at the time.

AS in all classes of buildings, the amount of fire insurance carried on fire resisting structures is usually based upon the original cost when new, whereas the cost of replacement of sections of these structures, particularly ornamental building facings and loft parts requiring the use of costly scaffolding and the employment of high salaried mechanics, is likely to run 50% to 200% higher than the original cost. During certain stages of their construction there are times when the amount of insurance carried on fire resisting buildings in course of erection is grossly inadequate to properly protect the interests of the builders and the owners.

combustible interior partitions, finish, etc., and those badly exposed having poorly protected or practically unprotected openings toward the exposure, may be graded accordingly.

THE fire hazard of buildings is usually more severe while they are being erected because of the introduction of the many temporary hazards incidental to construction. Probably the most important of these hazards is the presence of quantities of temporary woodwork in the sidewalk decks, platforms, enclosures, interior and exterior scaffolding, hoist shafts and frames, guard rails, landing platforms and runways leading to exterior hoists and scaffolding, wood floor arch frames temporarily installed as supports for masonry floor arches, wood concrete forms built around steel members, temporary wood flooring, partitions, enclosures, offices, materials and workmen's shanties. Collectively there

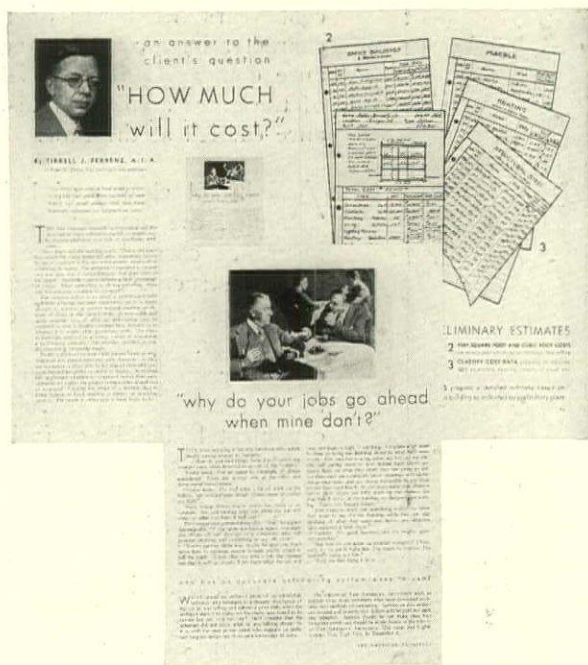
In one recent example, the cost of repairs and replacements necessary as a result of fire in a modern church during its erection amounted to between 200 and 300% of the original cost of the damaged parts. Had the structural damage been a little more severe, sufficient to require replacement of many supporting structural steel members which was narrowly averted, practically total demolition and reconstruction might have been necessary. In this event the total amount of insurance carried would have been entirely inadequate, possibly not half enough to pay for the costs of reconstruction to the stage that had been reached when the fire occurred. The wise course is to keep insurance figures at the maximum as construction work proceeds, giving some consideration to replacement costs as well as actual costs to date.

It is essential that costly fire resisting structures be built in so far as possible (Continued on page 104)

» » » WE DEVELOP DATA SHOWING COST OF MATERIALS IN PLACE AND FIND IT EASY TO MAKE

accurate estimates

Another article on estimating, submitted in answer to the request printed on page 66 of the November, 1930, issue of *The American Architect*



When we take into consideration that bids submitted by reliable contractors often vary ten per cent or more, too much should not be expected from the architect in the way of accuracy. Contractors have the advantage of architects in that they have complete drawings and specifications to figure from, and are able to secure sub-bids on most of the materials entering into the building.

Notwithstanding the above mentioned facts, the public expects fairly accurate estimates of the cost of a proposed building; therefore we as architects should devise some reliable method for making such estimates.

The method developed and used in our office for some years I find satisfactory, as we have not failed in letting a job on account of the cost exceeding the estimate since we have been using it. The method of taking off quantities and securing sub-bids as practiced by the general contractor is out of the question at the time architects are expected to make their estimates; but the preliminary sketches should be made and the general type of construction determined. Having this much data the architect can in a short time compute the amount of excavating and approximate amount of footings required; the floor and roof areas can be determined, also the square feet of exterior walls, partitions and many other items. In fact the approximate number of feet of all materials entering into the construction of the building can be computed. The number of door and window openings can be counted; the number of plumbing fixtures can be determined; the approximate number of feet of radiation can be estimated by use of one of the many short rules that are accurate enough for this purpose.

The problem now is to compute the cost of materials in place. During a slack time in the office we made careful calculations of costs of the different type construction of walls, partitions, floors, roofs, etc. in place in the building including material and labor. Every item is figured upon a basis of a square of one hundred feet, or on the basis of square, cubic or linear feet. All quantities usually figured in yards are reduced to feet in order to facilitate calculations. This data is arranged in schedules such as that illustrated. We have about twenty schedules which are bound in loose leaf covers, and properly indexed.

Schedule marked "A" gives the cost per hundred surface feet of brick and tile walls of the different thicknesses ranging from 4" to 21", using face brick ranging in price from \$20.00 to \$50.00 per thousand. This price includes the cost of all the materials and labor required to lay up one hundred square feet.

Schedule marked "B" (Continued on page 120)

THE case described in the November issue of *THE AMERICAN ARCHITECT* comparing the architect making his preliminary estimate of the probable cost of a contemplated building, to that of an automobile salesman, can hardly be considered as parallel. If the automobile salesman was making an estimate of the cost of an automobile to be built according to specifications not yet written with many of the details undecided, it is probable his estimate of cost would not be any nearer the actual cost than is the preliminary estimate made by most architects to the actual cost of a contemplated building. It must be remembered and should be considered by the general public, and especially by the architect's client that architects are usually requested to make an estimate of the probable cost of a building when the work is in the preliminary stage and many details are not yet determined.

I agree that the customary method used by architects in making preliminary estimates, by cubing up the proposed building and computing the cost by using the cost per cubic foot that a similar building has cost, is very inaccurate and leads to many disappointments to the architect as well as to his clients.

By J. R. SMITH
ARCHITECT
LINCOLN, NEBRASKA

(A)
DATA FOR ESTIMATING THE COST OF WALLS COMPLETE IN BUILDING.
Price quoted are for one square of 100 feet of surface.

Thickness of wall 4" 6" 13" 17" 21"

Common brick, cement mortar	
Hollow tile " "	
Common brick, tile backing	
\$20.00 Face brick tile backing	
\$22.00 " " "	
\$24.00 " " "	
\$26.00 " " "	
\$28.00 " " "	
\$30.00 " " "	
\$32.00 " " "	
\$34.00 " " "	
\$36.00 " " "	
\$38.00 " " "	
\$40.00 " " "	
\$42.00 " " "	
\$44.00 " " "	
\$46.00 " " "	
\$48.00 " " "	
\$50.00 " " "	

(B)
DATA FOR ESTIMATING COST OF FLOORS FOR DIFFERENT TYPES OF CONSTRUCTION
Price quoted is for square of one hundred surface feet.
Wood joist construction 2x4-16 2x6-16 2x8-16 2x10-16 2x12-16 2x14-16
Sheeting floor \$6.70 \$10.00 \$11.40 \$12.20 \$14.00 \$17.00

Flooring over sheeting
1" x 3" At \$20.00 per M. \$22.55

At 100.00 per M.	22.80
At 110.00 " M.	25.05
At 75.00 " M.	21.70
At 80.00 " M.	22.40
At 85.00 " M.	23.05
At 90.00 " M.	23.70
At 95.00 " M.	24.40
At 100.00 " M.	25.05
At 110.00 " M.	26.40

(C)
DATA FOR ESTIMATING MILL WORK
COMPLETE IN PLACE INCLUDING FRAMES & CASINGS
& PLACING OF HARDWARE

	Y.P.	P.R.O.	C.R.O.
Windows complete up to 36x30" for frame bldg.	20.00	21.00	22.00
" " 36x30" to 40x32" " "	25.00	26.00	27.00
Small windows up to 36x30 brick bldg.	21.00	22.00	23.00
Windows 24x30" to 40x32" brick bldg.	22.00	23.50	25.00
Large special windows per sq. ft.	2.00	2.25	2.50
8"x8"x2" or less 1-3/8"	20.00	25.00	27.00
10"x7'0" 1-3/4"	24.00	29.00	32.00
up to 3'0"x7'0" 1-3/4"	28.00	34.00	38.00
4"x7'0" 1-3/4"	32.00	38.00	42.00
4"x7'0" 2 1/4"	35.00	40.00	42.00
wide per step	5.00	6.00	7.00
h rail " "	5.00	6.50	10.00
" " "	10.00	12.00	13.00
" " "	10.00	11.00	12.00
" " "	30.00	35.00	40.00
ft.	10.00	16.00	17.00
ft.	15.00	18.00	17.00
ft.	1.00	1.25	1.50
ft.	2.00		
ft.	1.50	2.00	2.50
ft.	1.00	1.25	1.50

ESTIMATE ON APARTMENT #559
Three story 34 apartments.
Fire proof corridor and outside walls.
Fire proof corridor, floors and stairways.

Excavating for basement under half of Bldg.	\$ 300.00
Concrete footings	400.00
Basement and foundation walls	1135.00
Basement floor (half of building)	240.00
Chimney and incinerator	250.00
Outside steps and sidewalks	100.00
13" brick and tile or Terra Cotta block outside walls	7000.00
Corridor masonry walls	3120.00
Reinforced concrete floors in corridors	638.00
Reinforced concrete stairs and landings	300.00
Stone or Terra Cotta trim on exterior of Bldg.	800.00
Structural steel	200.00
Three wood floors complete; oak with 2" x 10" joist	2680.00
Frame partitions	1322.00
Ceiling construction	40.00
Roof, construction included	1020.00
Sheet metal work and hardware	700.00
Roof insulation and floor and wall deadener	500.00
Metal lath in place	580.00
Plastering (Colored)	2800.00
130 Windows at \$25.00 each complete in place	3250.00
Three main entrances at \$50.00 each	150.00
200 Inside doors at \$20.00 each in place	
24 course windows at ten dollars each	
10 Basement windows at \$10.00 each	
24 Kitchen cabinets at \$75.00 each	
12 Ironing boards at \$8.00 each	
24 Mirrors at	
24 Medicine cabinets at \$7.00 each	
12 telephone booths at \$10.00 each	
Other mill work such as base and closet shelves etc	
Window and door screens	
Painting and varnishing	
Electric wiring	
Electric fixtures	
Plumbing at \$80.00 Per fixture	
Heating	
Gas heater, etc.	
Compensation Insurance and bond	
Contractors profit 10% about	
Architects fee including supervision of work 5%	
FURNISHINGS.	
24 Gas ranges at \$25.00 each	\$600.00
24 Electric refrigerators	2120.00
24 Folding beds at \$35.00 each	840.00
9 Folding tables at \$15.00 each	134.00
130 Window shades at \$1.00 each	130.00
	3864.00
Total cost of building and furnishings	
Allowance for location	
Incidentals	
Total investment	

AFTER PRELIMINARY
SKETCHES ARE MADE

and general type of construction
determined, it is easy to

- compute approximate quantity of all materials
- count number of door and window openings
- determine number of plumbing fixtures
- calculate approximate feet of radiation

THEN use schedules of cost in place, based on
cost per "square," or square, cubic or lineal feet.

THE RESULT is a good approximation of cost of
the completed structure.

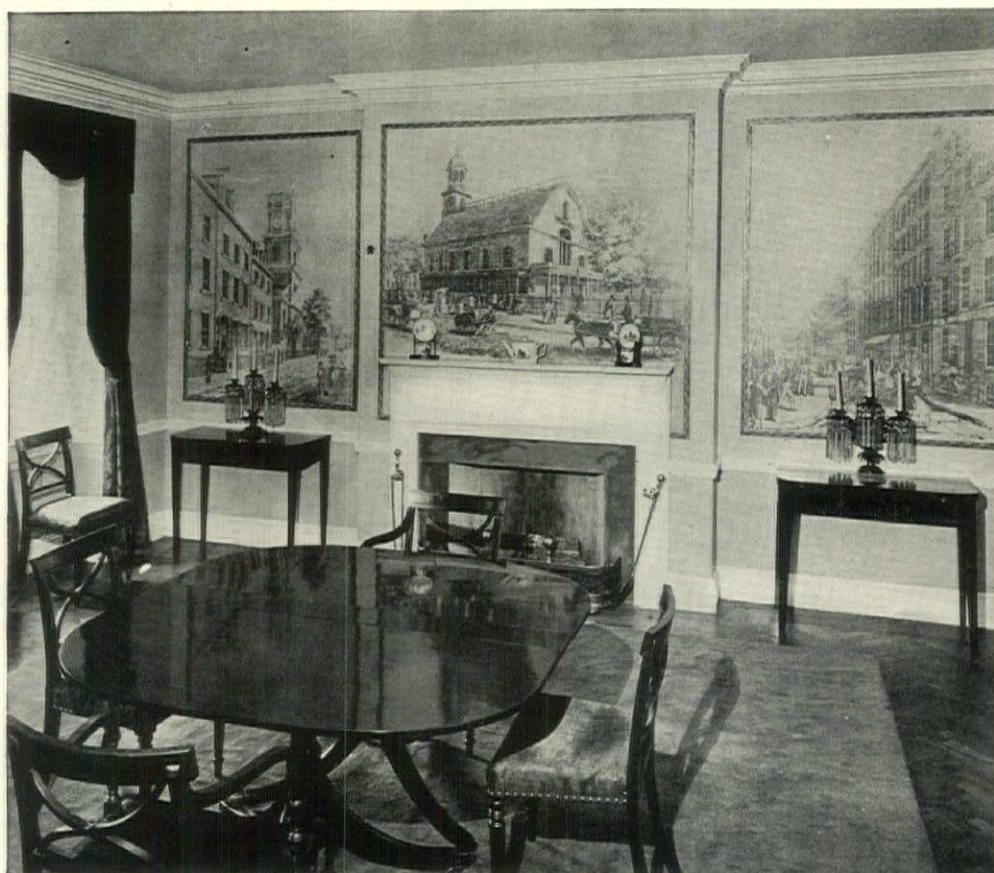
New Decorative
Effects possible in

MURALS

by

Photography

By H. S. THOMAS
of The Eastman Kodak Company

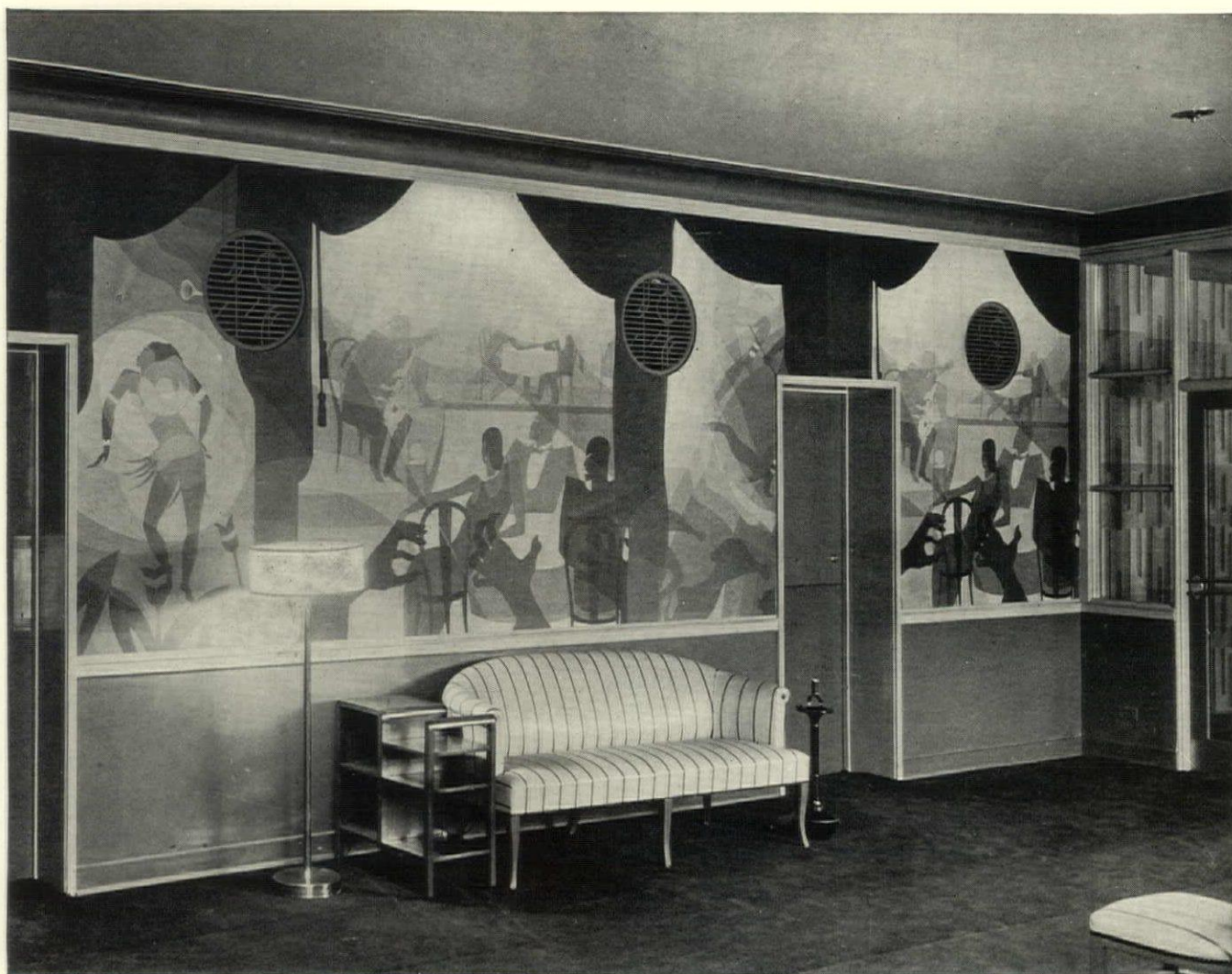


ORIGINAL DRAWING by Aaron Douglas, 12 x 20 inches, enlarged by photography and used to decorate the walls of a restaurant in the Hotel Sherman, Chicago. Photography and hanging by Kaufman & Fabry. Holabird and Root, architects

OLD PRINTS enlarged and used as photo-murals in the Owen Winston house. Jones & Erwin, decorators

HOW MADE

The print to be copied is photographed, enlarged on special paper, hung on the wall like wall-paper, and after that colored with oils or watercolors if desired.



ADVANCES in the art of photography and particularly in the making of enlargements by this medium afford architects and decorators new opportunities for the unusual in wall decoration. Under proper direction this use of photography has many possibilities offered by no other means. Just select a painting, drawing, etching, fabric, bookplate, sporting print, tapestry, design, or photograph and—leave the rest to the lens. The original of your choice, or of your client's, is photographed. Then the film image is projected on photographic paper and the paper hung on the wall. The result is a photo-mural.

Of course it is not quite so simple as that. One of the world's largest photographic organizations spent two years experimenting to determine the best way to make and hang photo-murals.

Briefly, the process is this: select an original illustration which will compose properly when scaled to fit the wall area to be covered. The original is copied by a photographer and the resultant negative is masked or trimmed to the correct proportion to fit the wall.

The next step is to mark the negative into strips vertically so that each negative strip will enlarge to forty inches wide, the usual maximum width of photographic paper, and to whatever length is needed to fill vertically the space selected. The photographic paper strips, obviously, must match exactly at the edges in order to

preserve the subject of the illustration. Since the paper stretches about an inch in width when wet, trial and experience in this work is essential to obtain a satisfactory job. The lengthwise stretch of the paper is negligible.

A photographic enlarging paper called P. M. C. Bromide, familiar to all photographers, has been found to be satisfactory for photo-mural work. It is a high-grade stock and has exceptional uniformity and lasting qualities. Single weight No. 5 grade should be used if murals are to be left photographic black and white or colored with oil paints. Black and white prints should be finished in a light tone. Dark prints, not reflecting much light, tend to darken the entire room. No. 3 grade has a rougher surface than No. 5 and lends itself to coloring with pastels. Either grade of paper tolerates watercolors—but more on coloring later.

Any good wall-paper man can hang photo-murals successfully. Photo-murals in two dining rooms in the Cloud Club, high up in the Chrysler Building, were recently hung in about a day's time by a man who had not previously handled work of this kind.

The instructions for the architect to pass along to the decorator are simple, but important: Photo-mural prints are, of course, delivered dry but they should be hung soaking wet. Otherwise the buckle of the print caused by the unequal moisture absorption qualities of the



MAN'S CONQUEST OF THE AIR, down through the centuries, is pictured in photo-mural form in this private dining room of the Cloud Club, Chrysler Building, New York. Myers, Minnott & Co., Inc., decorators. William Van Alen, architect

gelatin base of the photographic emulsion and the uncoated back of the paper, cannot be eliminated. Before soaking in water in any convenient tub or can, the edges of the print to be lapped should be skived for about half an inch, on the back—the side opposite the photographic image. A sanding block tends to cut the paper through to the image so this work should be done by hand. If the edges are skived too thin, right down to the emulsion, curling is apt to result when the print is hung.

After wetting the print, and wiping surplus water from the back just prior to coating with a good dry paste mixed with warm water, hang the print, but not until the edge has been plumbed with line and bob. The marks made on the negative will now prove valuable aids to matching the subject because the paper is again stretched so the thirty-nine-inch strip your photographer delivered to your decorator fills forty inches or a fraction more. In drying out on the wall the paper will not shrink perceptibly, but if you try to butt the edges even the slight shrinkage that does occur will result in white seams showing between strips.

The pull of drying paper is powerful; photo-murals have been known to "explode" poor plaster. Placed over seasoned plaster or wallboard or plaster covered with muslin or canvas, they will give no trouble. As in

the case of hanging wall-paper, the lime in the plaster should first be "killed" to prevent discoloration.

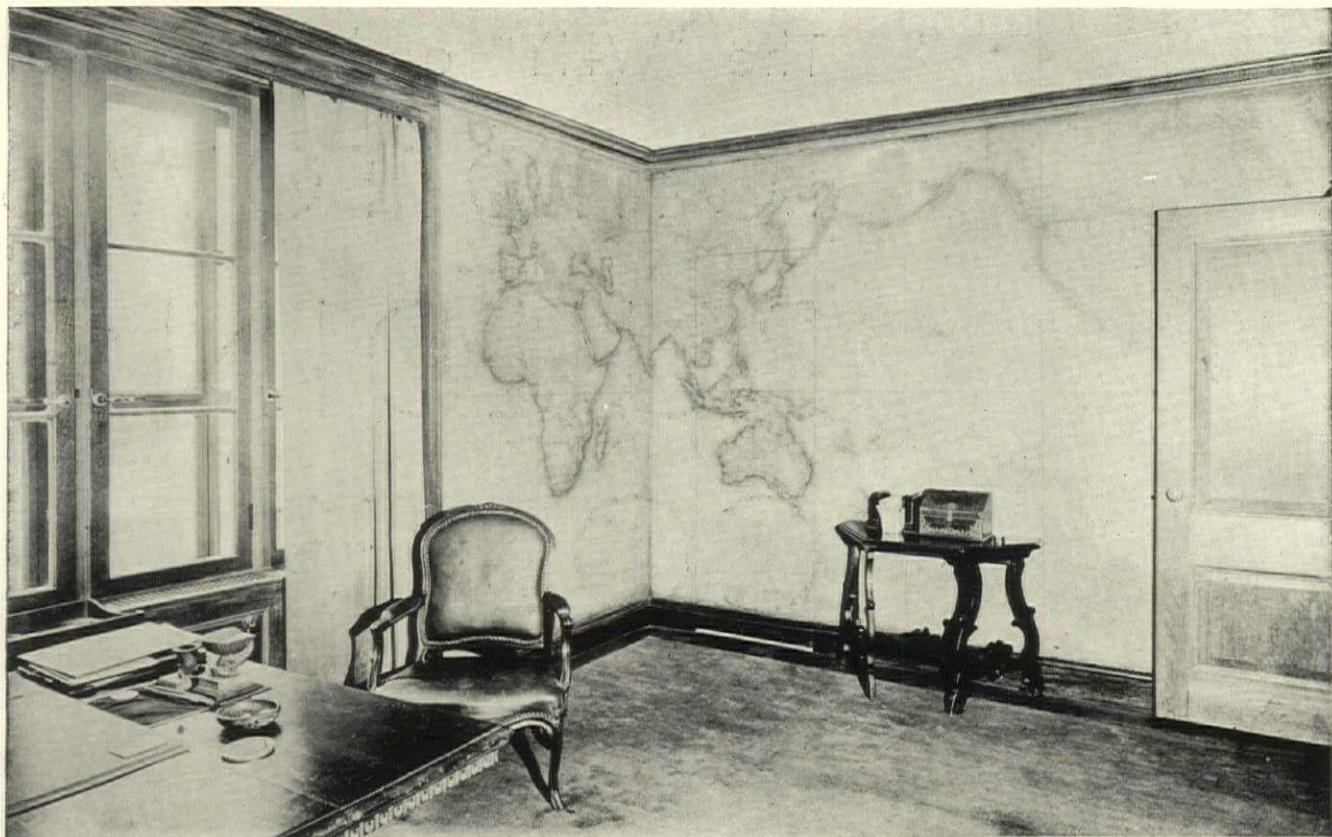
Pastels provide the least expensive and an effective method of coloring photo-murals. Pastels can be applied quickly and mistakes are easily rectified. Coloring should be in low key so as to decorate and not detract.

For protection, pastels are best sprayed with a transparent lacquer applied with an airgun which should not be held close enough to the mural so that any of the coloring matter will be blown away. The application of lacquer reduces color brightness about thirty per cent.

Coloring with oils is usually somewhat more expressive. Stark realism and sharp photographic outline should be avoided for the sake of decorative effect. Soft, diffused prints are preferred by many to hair-sharp enlargements. Large brushes or rags should be used in working over large areas. A good technic is to thin oil colors with boiled linseed oil until they can be brushed on. Absorbent cotton serves for removing excess color and for rubbing down. Oil colors which have been found most satisfactory for photo-murals include burnt sienna, lemon chrome yellow, deep chrome yellow, ultramarine blue, Madder Lake, Toluidine red, and Milori blue.

Watercolors are perhaps the least satisfactory me-

If it can be photographed,



MAPS as photo-murals, antiqued by spraying with lacquer after being hung. A door directly at the left of the table on the right wall is cleverly concealed under the photo maps



STEEL—with all its romance and molten motion is visualized in the photo-murals of this room in the Cloud Club. Myers, Minnott & Co., decorators

dium of all. They can be successfully applied, however, by spraying them on with an airgun.

Two other means of securing color are available: Your photographer can make, instead of black and white prints, photo-murals in rich, warm sepia at an extra cost of fifty to one hundred per cent. Or you can have the finished job sprayed with a tinted lacquer.

Figures for jobs recently completed have varied from cents to dollars per square foot of finished photo-murals.

The variation is explained partly when it is understood that cents refers to a photographer's minimum charge for the simplest black and white copy-and-enlarging job where only one or two negatives must be made. Dollars may include in addition to the photographer's charge the architect's fee, the paper-hanger's wage, and the services of a color artist or a decorator's spray gun expert; dollars may include canvas on the plaster, and beading or molding around the finished murals.

it can become a photo-mural



The "WHY" and "HOW" of tomorrow's BUILDING CODES . . .

By George N. Thompson
Secretary, Department of Commerce, Building Code Committee

THESE THREE QUESTIONS SHOULD BE ANSWERED IN A BUILDING CODE

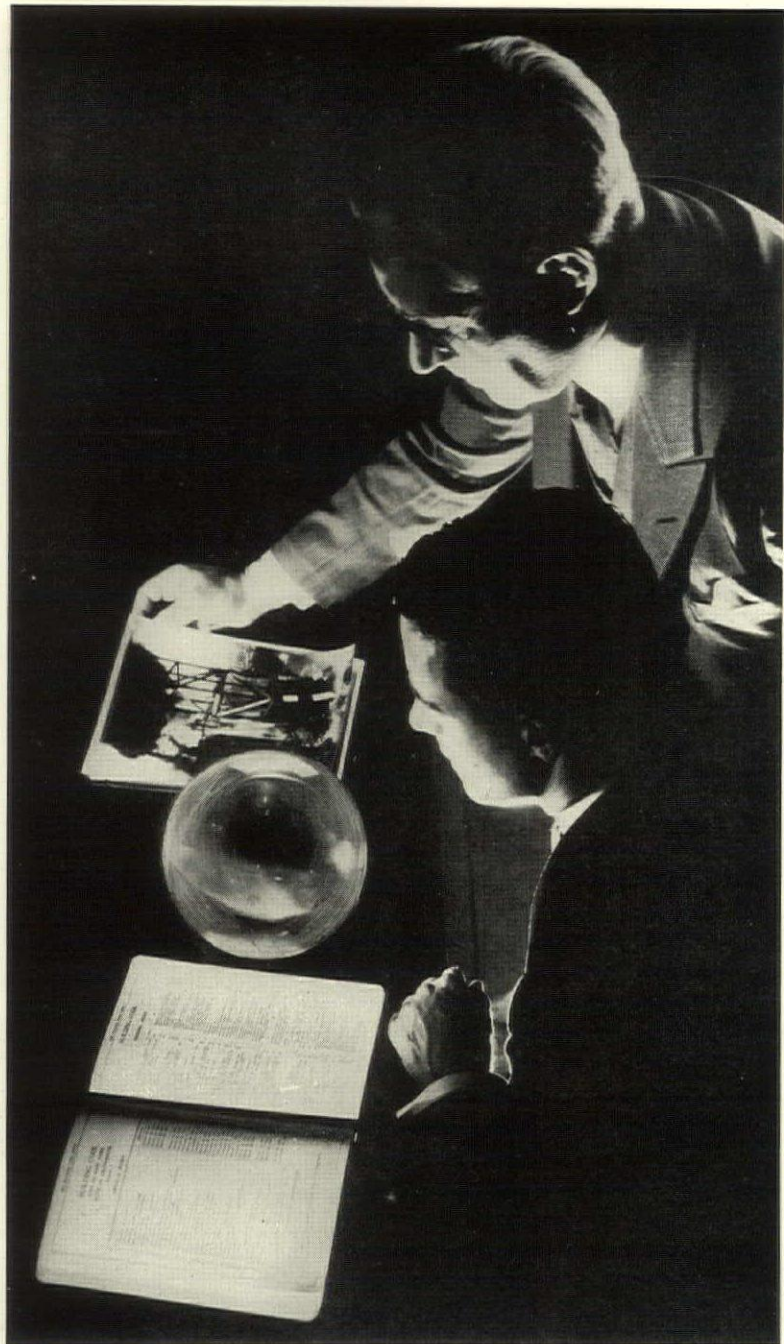
1. is the construction reasonably fire safe?
2. has it a reasonable margin of structural safety?
3. will occupants suffer in health?

A SURVEY of the more than eight hundred building codes in effect in this country makes their resemblance to the celestial system a never-ending source of fascination. From the modest fourth or fifth power stars, represented by codes that are little more than fire limit ordinances, to the blazing luminaries that control building in our large cities, they form a varied constellation. There are solar systems in which city codes revolve as planets about a central state code. Satellites in the form of elevator, plumbing and electrical regulations attend main building ordinances. Wandering comets of proposed "model codes" flare into prominence and gradually recede, perhaps to complete their orbit at some future time when their merits will be better appreciated. The star dust of which these varied regulations are composed is of one substance but the forms that it takes are as diverse as the orbs of a summer's night.

Inspecting the display more closely we find that some of the municipal codes now in effect are dimming with age, while others stand out sharply because of their comparative youth. A recent survey of such codes in cities of 5,000 population or over, according to the 1920 census, discloses sixty-seven codes more than twenty years old, eight-eight from fifteen to twenty years, and one-hundred and fifty-one from ten to fifteen years. Without placing too much emphasis on these facts, for subsequent amendments and the gravitational pull of state codes frequently has a steadying effect, there can be no doubt that building in our cities and towns is regulated by requirements of varying quality and in some cases reflecting only feebly the scientific knowledge of the present age.

This situation is well known to other than trained observers for, to borrow a well worn phrase from the lore of the advertising agent, this country has become code-conscious. The reason is based partly on more enlightened ideas of how far it is necessary to go in protecting the public and partly in the feverish search for greater efficiency and economy in the use of building materials. Not so long ago we were more or less complaisant in these matters. Buildings were of comparatively simple construction. Heights were limited because of the inevitable limitations of bearing wall construction and of primitive types of elevators. Land costs had not soared to undreamed of values. The code demands of the horse and buggy age were simple in character, easily observed, and understandable to the layman.

To-day we face a different situation. New applications of materials, marvelous ingenuity in building design, and economic pressure have combined to bring about a situation in which code requirements are no longer accepted with patience. We know a great deal more about what will happen when various combinations of materials are assembled. We are no longer tied down



WHICH SHALL IT BE?

STATIC?

one trend makes the code a detailed manual, by the very definiteness of which progress is retarded

OR PROGRESS?

another trend is towards simple basic requirements expressed in terms of results, where proof of the value of a new idea is sufficient—a trend encouraging progress but open to political abuses

by which the fundamentals are put into effect.

If we admit the three essential features and brush aside for the moment the collateral topics that cluster about them we can deal more fairly with the question of trends. Necessarily this will demand the historical method of treatment since these trends have their roots in the developments of the past fifty years and are merging into future developments only dimly discernible.

Fifty years ago building codes dealt mostly with fire resistance requirements and wall thicknesses. Of fire tests as we know them to-day, on a systematic basis affording comparisons between materials, there were virtually none. Strength tests were available to some extent but, by comparison with the rich accumulation of to-day, knowledge was meagre and largely empirical. Of tests or studies regarding the minimum of light and air necessary for health there was nothing of importance. To-day, because of changes in construction, we have a vastly more complicated subject to deal with and a multitude of facts to analyze and reduce to basic regulations.

The renaissance of interest in the building code dates from the World War. That event shook us out of our complacency in accepting things as they were and substituted an inquiring attitude about many things hitherto held good enough.

The pressure for saving materials and effort so that attention could be concentrated on victory extended into what little was done in the way of private construction. After the war the shortage of housing accommodations that had piled up and the increased cost of construction called for

(Continued on page 94)

by doubts and ignorance. Many architects are sure that they could design and erect a building with more liberal allowances than are called for by the building code and still have a structure safe in every way. Hence a restlessness, a feeling of resentment, a questioning whether the code is not preventing constructive work at a time when it is needed.

Experience has taught that there must be certain rules for the protection of the public. To make these legally enforceable they must be produced in the form of ordinances. The three chief questions to be covered are: Is the construction reasonably safe as regards fire? Is it strong enough to stand up, with a reasonable margin of safety? And is it so designed that people venturing into it will suffer no deterioration in health? From these three considerations the code is built up. The complicated method of presentation, the forbidding legal phraseology, the array of penalties, are merely devices



THE OLD HARBOR, ST. TROPEZ

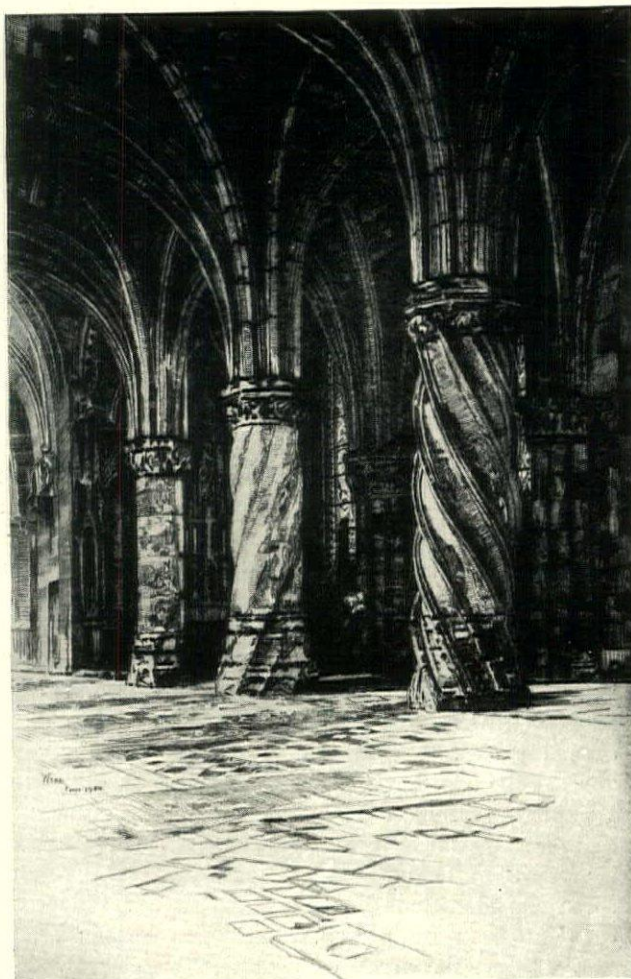
DRYPOINTS

BY

A. C. WEBB

MIRRORED in the blue Mediterranean where it washes the shores of Southern France and Italy, are hundreds of picturesque and fantastic fishing villages, rich in color, activity and dramatic history. Among them, with cool narrow streets and sun-drenched roof tops, is St. Tropez. The old harbor has seen many a Roman trireme and Saracen sea-raider before its heavy walls and rounded towers. And now a happy fisher-folk toil and sing and play, without the old-time fear of sudden raids

TWISTED COLUMNS
Eglise St. Croix Provins

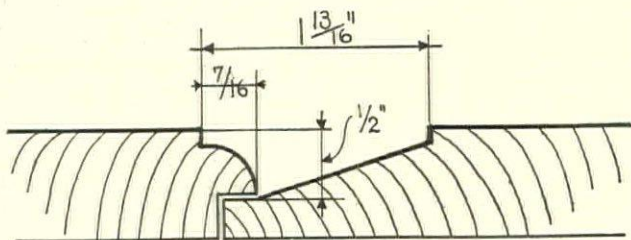




AC White
Amalfi
1930

AMALFI

Once a mighty sea-faring and commercial port that challenged even the powerful Pisa and Venice. Today but a terraced village with a fishing fleet of no more than local fame



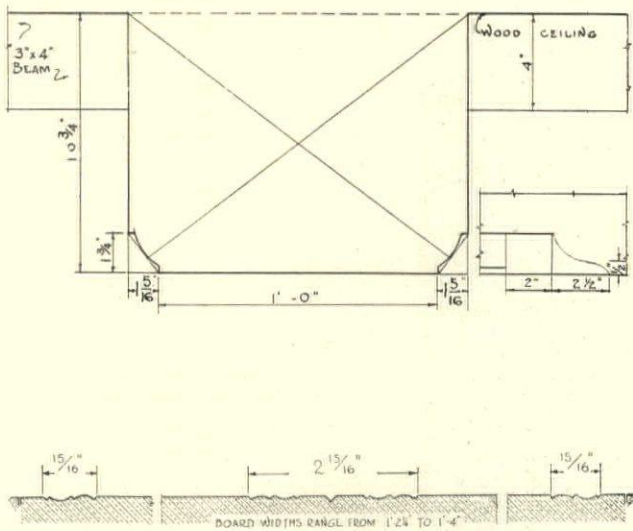
■ **ABOUT 1700.** White pine boards, 10" to 20" wide, with molded and beveled edges as detailed at the left, have been retrieved from several houses built in Essex County, Mass., and made into a room, which is typical of the period, at the Museum of Fine Arts, Boston

Measured Details of Early American PINE PANELING

By HARRY WAGNER, Architect
Kansas City, Missouri

THE renaissance of the Early American house and furnishings indicates that the American people have not forgotten the heritage which has come to them from the days of our forefathers. Nor does interest lag today in the use of wood for paneled walls, so characteristic of our early architecture. Essentially of days long passed, this type of wall paneling seems to breathe the spirit of the pioneers who laid the foundation for this great country. No other type of material is so expressive, so rich in tradition, so perfect a setting for the truly beautiful treatment of the Early American period. Pine as an interior finish has maintained its place and prestige for many years.

It has been a favorite interior trim not only because of the availability but because it can be worked and carved so admirably and has such a mellow softness and beautiful grain. For years it has been selected for its clearness and freedom from knots but of late architects and decorators, realizing the informal effects obtainable in knotty pine, have created livable interiors through the use of this once rejected grade. As long as the knots are sound and of good color, most any grade of pine boards may be used, depending on the number and size of knots desired. Many lumber companies milling this material for interior finish have a grade known as Special Knotty Pine interior trim. This grade is selected from



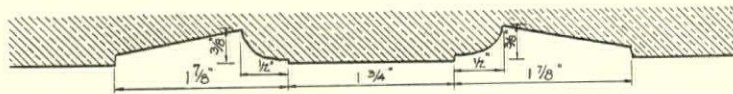
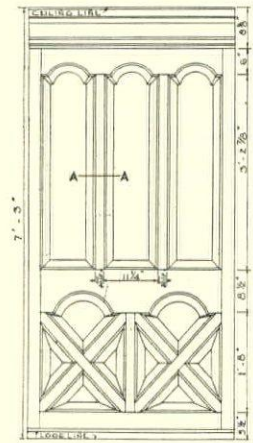
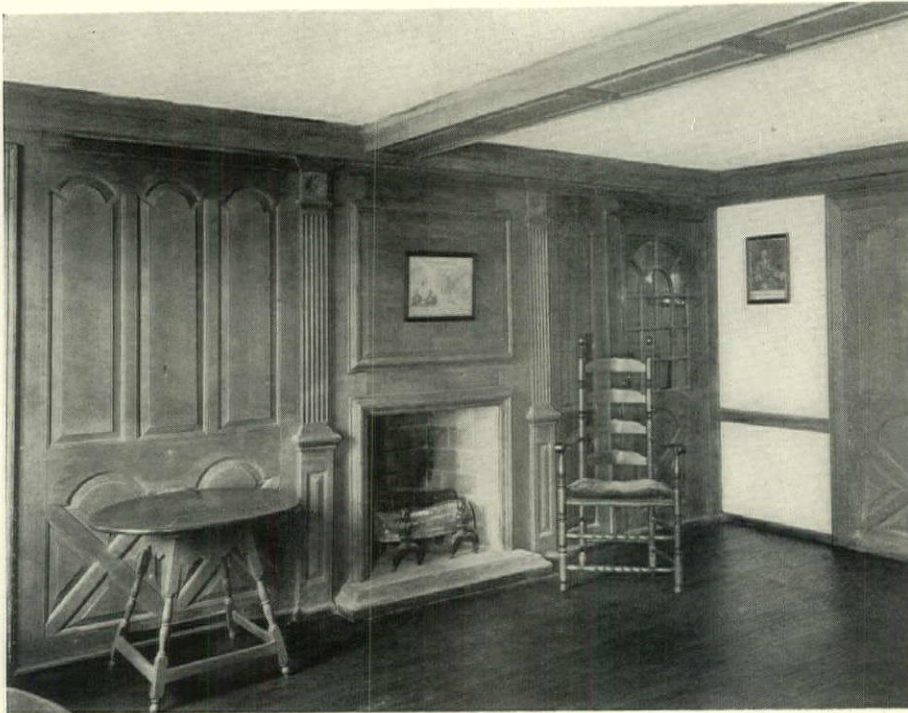
■ **PARLOR** in the Hart House, Ipswich, Mass., a seventeenth century room reproduced in the Metropolitan Museum of Art, New York. Height of room, $7' 5\frac{3}{4}''$; width of boards from $14''$ to $16''$. Small hand hewn beams are $3'' \times 4''$ and are set from $18''$ to $19''$ on centers

various common grades ranging from No. 1 common to No. 4 common. It is dried to a point where the moisture content is reduced to 7 or 8 per cent. Care is taken in this grade of pine so that only sound knots are permitted and these knots must be kept away from the edges of the boards. Satisfactory knotty pine boards can also be selected from ordinary No. 2 and No. 3 common material. These boards must then be dried thoroughly and later reselected for straightness and soundness of knots.

Pine used in this manner as a wall treatment is reasonable in price, especially when used as vertical batted wall boards. Compared to canvassed walls on white coat plaster or to plaster walls papered in an imported or high-grade paper its cost is comparable to these treatments, and in some cases lower in price. Considering a pine interior properly finished as a finished product with practically no upkeep or maintenance it is in reality more economical. Unlike most other wall treatments it is one of the few that materially improves and mellows with age.

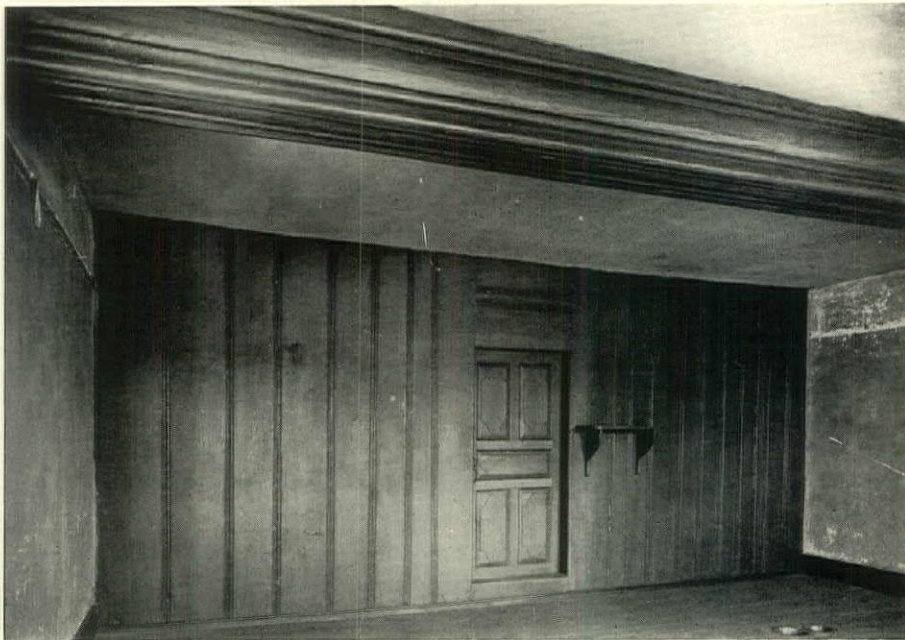
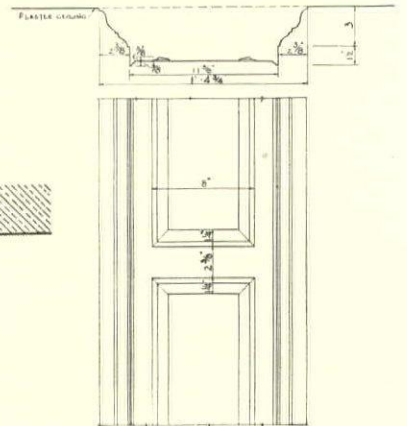
Pine, properly finished, furnishes a neutral and friendly background for all types and styles of decorative treatments and can be used effectively with inexpensive and colorful chintzes, quaint old-fashioned furniture and many kinds of metal work and hardware. On the other

ORIGINAL FINISH still

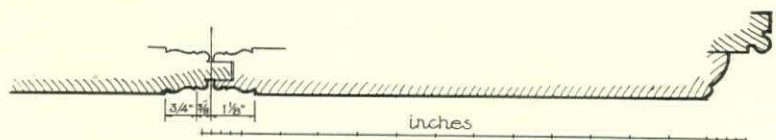


A -- A

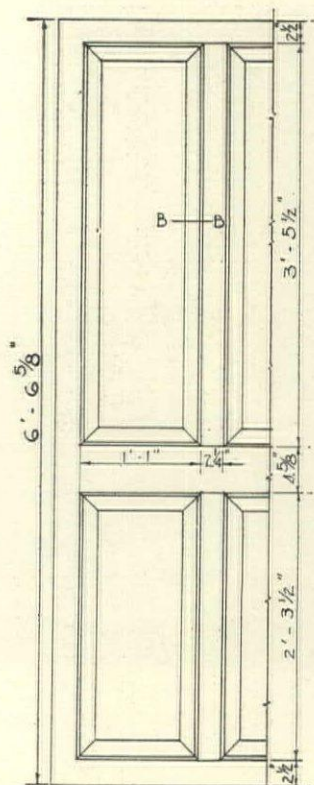
■ FROM NEWINGTON, MASS., a room 7' 3" high, showing how pine paneling was often given an elaborate touch. Built during the second quarter of the eighteenth century. Now in the Metropolitan Museum of Art, New York



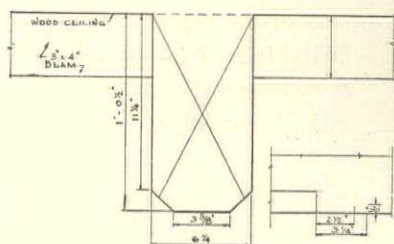
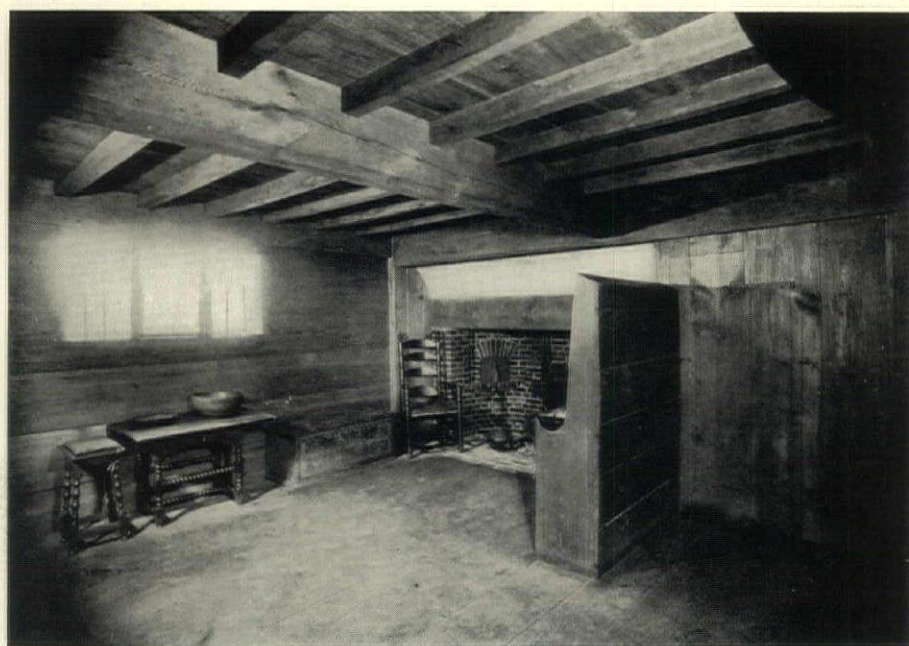
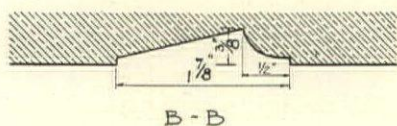
■ HOUSE OF THE MILLER at Millbach in Lebanon County, Pa., showing strong German influence. Only one side of the room was paneled. Built 1752. Now on exhibition in the Pennsylvania Museum of Art, Philadelphia, Pennsylvania



beautiful after 200 years

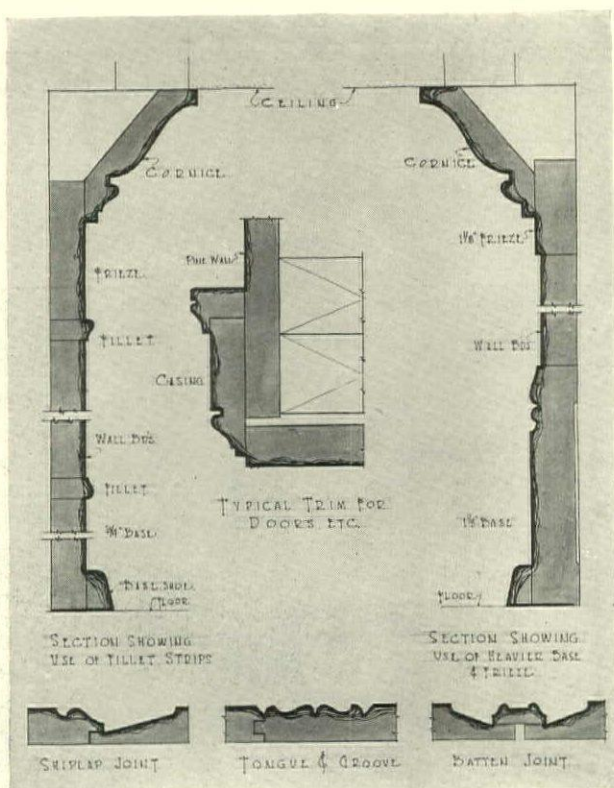


■ **BEDROOM FROM HAMPTON, N. H.** The height of room is 6' 6 $\frac{3}{4}$ "', the width of the panels varies from 8 $\frac{3}{4}$ " to 15". Built during the second quarter of the eighteenth century. Now exhibited in the Metropolitan Museum of Art



■ **A MASSACHUSETTS KITCHEN** built 1683: the Capen House at Topsfield, Mass. Height of room, 7' 6 $\frac{3}{4}$ "; width of boards, 10" to 18", most of the boards being near the larger dimensions. Small beams 3" x 4" set 19" on centers. Reproduced for permanent display in the Metropolitan Museum of Art, New York

■
MODERN dining room in knotty pine handled in the fashion of earlier days. Such wood interiors, which unify rooms by a close relationship to wood furniture, need attention to detail and harmonious furnishings



■ **TYPES OF MOLDINGS** and trim suitable for use with walls paneled with vertical boards. Many mills have a grade known as "special knotty pine interior trim," selected from various common grades ranging from No. 1 common to No. 4 common

hand, pine properly designed and executed in richly paneled walls of raised panels, carved plaster and ornament, can maintain its place with any of the more expensive and rare woods in elaborately formal and dignified Georgian rooms.

These interiors can be finished in a number of ways but because of the subtle beauty of its natural grain the most popular treatment is through the use of stains. In order to preserve the grain and maintain a neutral background for furnishings I prefer it finished in one of the antique deal wood stains ranging in color from a very light amber or honey color to a chestnut or cinnamon brown. The depth of color depends largely on the amount of natural light in the room. The choicest and perhaps the best-liked of the many treatments I have given pine was obtained by first staining the wood with one coat of deal wood acid stain which left the pine about the color of pipe-stem amber. When the boards are tongued and grooved or batten boards are used, the stain should be applied to the boards before they are erected. This safeguards against any side shrinkage in the boards leaving streaks of unstained pine exposed. After the first coat has been sandpapered to smooth any raised grain, the knots were "killed" individually with white shellac. White lead pigment thinned with turpentine was then brushed on over the knots and before this pigment had a chance to dry it was thoroughly wiped out with a cloth. Shellacing the knots first permitted the white lead pigment to be rubbed off easily and only a trace of it remained in the grain of the knots. The small portion of this grayish-white in the knots not only softened them but gave an appearance of age and mellowness.

Modern Pine Paneling Shows



■
KNOTTY PINE used in the living room of the house of J. A. Browning. Harry Wagner, architect

PINE RISERS and knotty pine walls in a modern Kansas City residence

The entire pine wall was then given two coats of thin shellac and each successive coat of shellac was rubbed down with steel wool. A final polishing with a good grade of wax completed the finishing of the wood. This wax coat left the wall boards with a delightful sheen and softened the whole surface.

Desirable effects can be obtained, where one wishes a minimum of gloss, by using only one coat of shellac. Pine is a rather soft and porous wood and if only one coat of shellac is used it should be of somewhat heavier body.

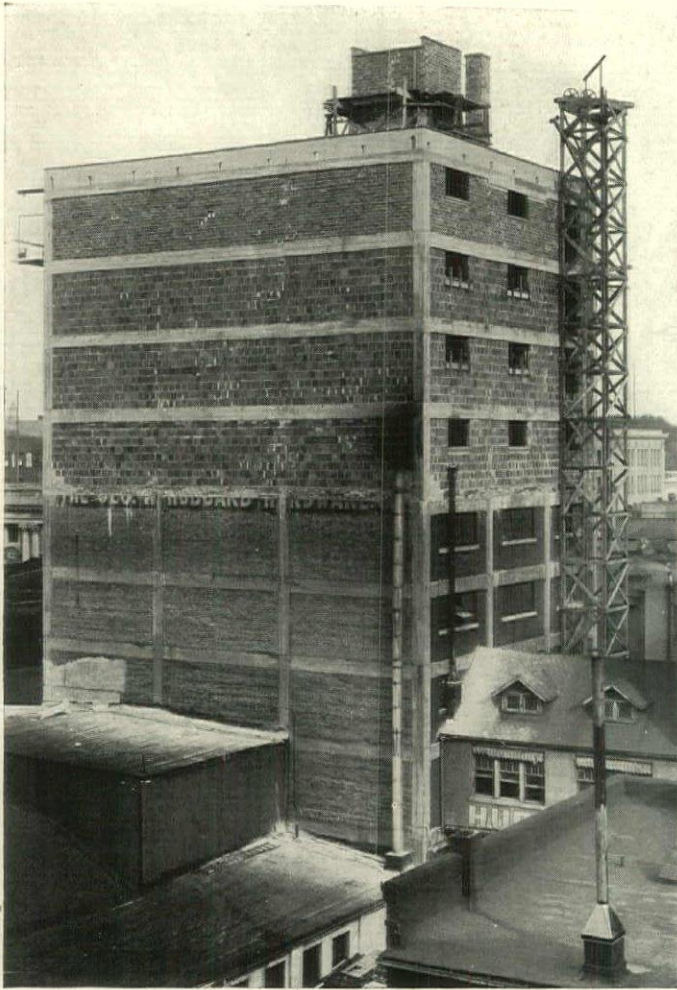
For the interior of hunting lodges and rustic rooms good results have been obtained by staining the wood, color to suit, and then applying a heavy coat of boiled linseed oil thinned slightly with turpentine oil finishes. The results obtained in both cases are practically the same.

For formal rooms where a varnished finish is desired, the wood should be stained and sanded, then given one coat of shellac slightly sanded, and two or more coats of varnish. The last coat can either be gloss rubbing varnish rubbed down with pumice and oil or water; or can be a rubbed effect or dull coat varnish. If a rubbed effect or dull coat varnish is used for the last coat it should always be applied over a gloss coat as the gloss varnishes are superior in body and more durable.

Where a painted surface is desired pine again lends itself admirably to this type of finishing. Having a very smooth and even grain all forms of Northern, Norway, Oregon and California Pine are suited for painting, and a great many fine and elaborate interiors of note are of these woods enameled in (Continued on page 128)



Beauty of Cheaper Grades



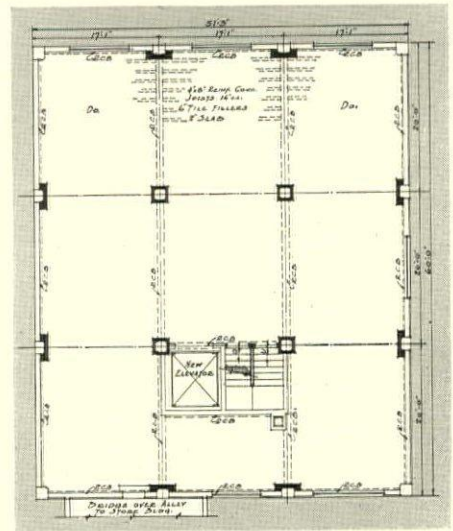
THIS PICTURE SHOWS four new stories added to five-story reinforced concrete warehouse at a cost of \$52,000

Plan of warehouse at right. Angles around existing interior columns carried additional weight to enlarged footings. H-columns were added to exterior columns. The existing corner columns were strong enough to carry additional load

THEY SAID:

"You can't add 4 stories to a 5-story building"

BUT



By EDWIN W. BYERS, Architect, Flint, Michigan

AT the mention of building additional stories atop of an existing reinforced concrete building not planned for increased height, many architects and contractors throw up their hands in surrender. This is due possibly to the fact that the concrete original strongly suggests the same material for the additional stories. As a result a serious attempt is seldom made to determine whether or not another type of construction affords a solution to the problem. Ordinarily the question is dismissed as a possible but expensive engineering operation. Through the use of steel construction for the upper stories and to transfer the added loads to the foundations, the writer found that a problem of this nature can be economically solved.

The Hubbard Hardware Co., Flint, Mich., had a five-story and basement reinforced concrete warehouse, built about fifteen years ago, adjacent to its store building, in the most congested block in Flint. The building was fifty-one feet three inches by sixty feet in plan, with no

available space for storage of materials, due to heavy traffic conditions. It was built of beams, girders, solid slabs and eight-inch enclosing walls, and had a worn-out elevator and peculiar concrete stairway. There was a bridge connection with the store building in which the offices of the store were located. The roof slab was designed for thirty pounds live load and pitched about fifteen inches both ways from the center line. Upon examination, it was found that the corner columns and footings would carry the additional loads of four more stories; the side wall and interior columns and footings were about proper size to carry existing loads only.

The owners wanted two or more additional stories for one hundred pound live loads and a new elevator. They also desired to carry on their business during construction with the least possible interruption, maintaining elevator service and the use of the offices.

The first step was to design a superstructure with the lightest possible dead load. The answer was fireproofed

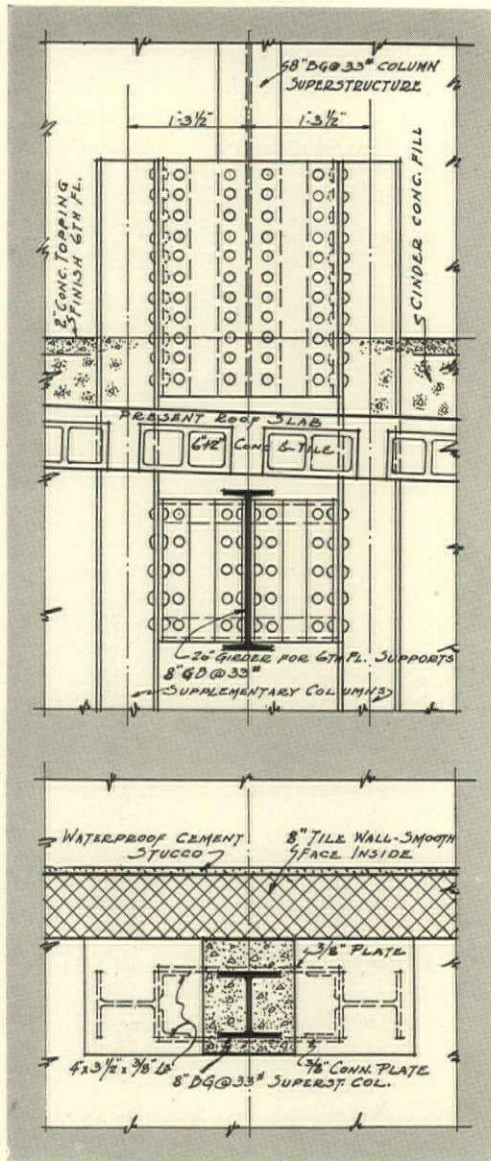


FIG. 1

AT ROOF of old building, section and plan showing how superstructure columns were connected at the roof line to the supplementary columns. Figure 2 shows the new column construction below the old roof

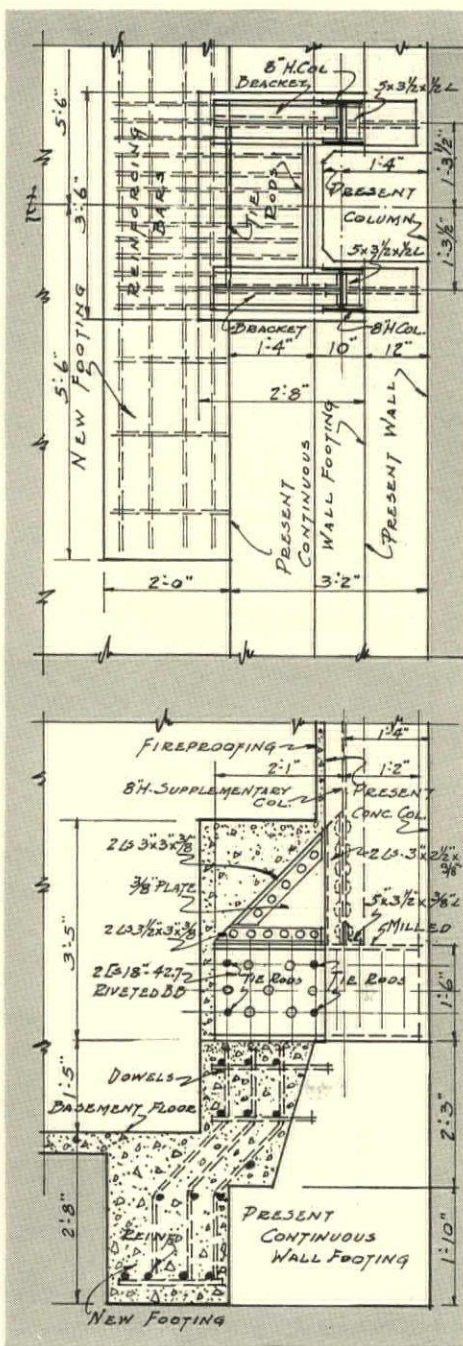


FIG. 3

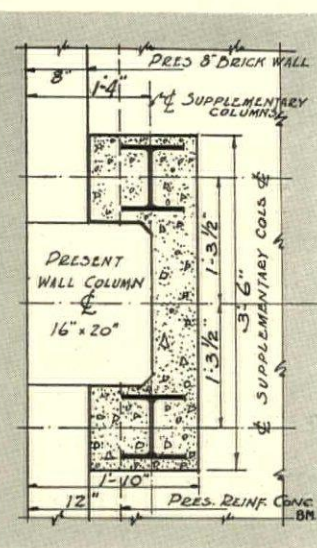


FIG. 2

BELOW ROOF: new exterior columns were built around the old exterior columns, as shown in the above plan. The new columns carried the extra load of additional four stories down to enlarged footings

AT LEFT: section with plan above showing method of reinforcing footings and distributing load to new column footings without disturbing existing footings

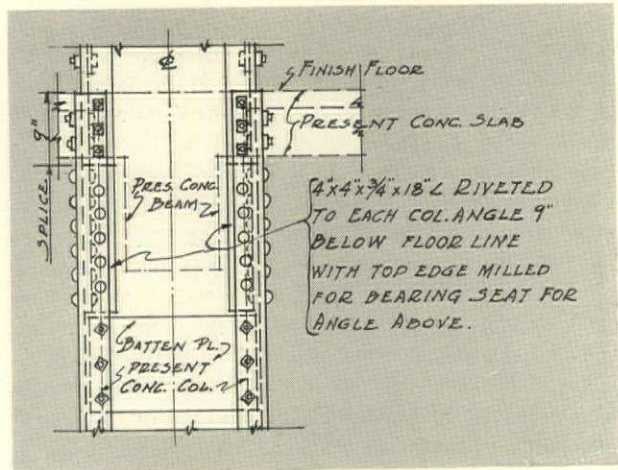


FIG. 4

AT LEFT: elevation showing how angles around interior columns in lower stories were spliced below floor slabs

AT RIGHT: plan of Figure 4 showing detail of reinforcement of interior columns by use of angles and battens

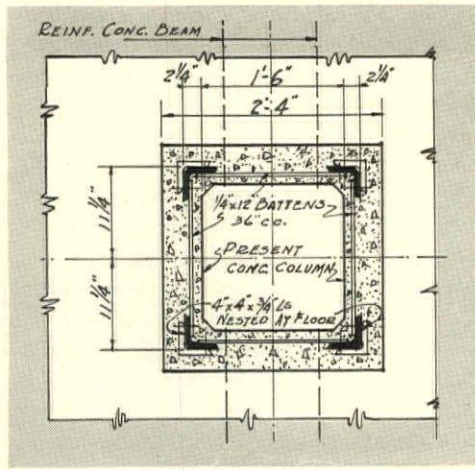


FIG. 5

STEEL MADE THE FOUR NEW STORIES POSSIBLE

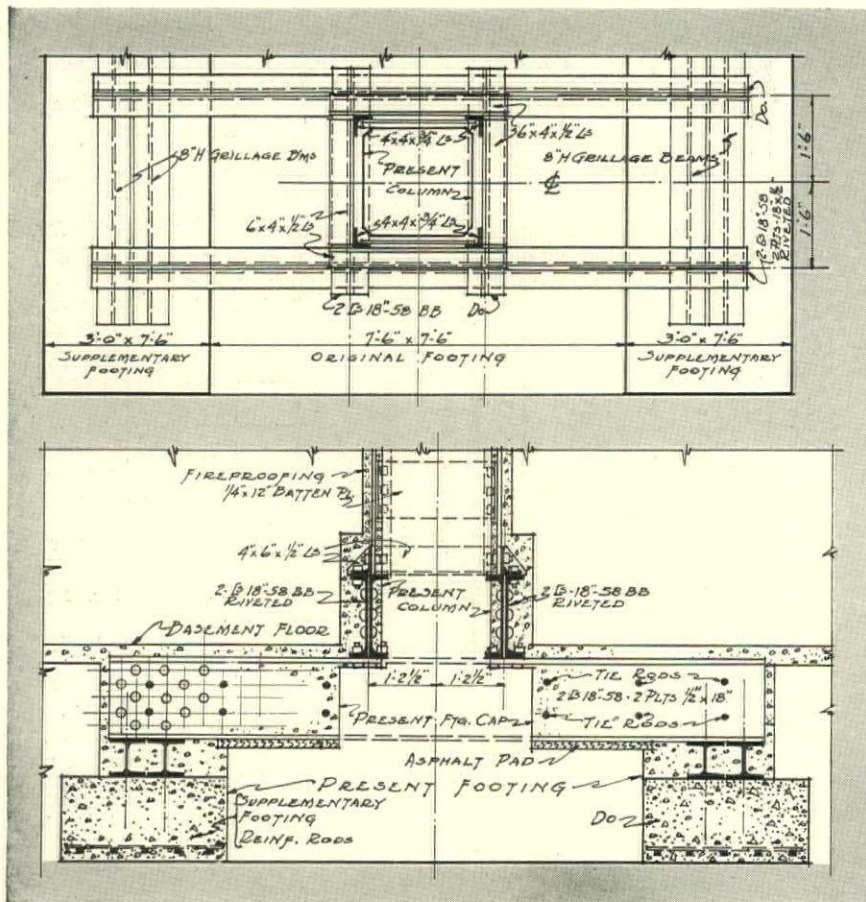


FIG. 6

NEW INTERIOR FOOTINGS were built around existing footings, and the interior columns reinforced with angles carried down to the footings, as shown in the above plan and vertical cross section

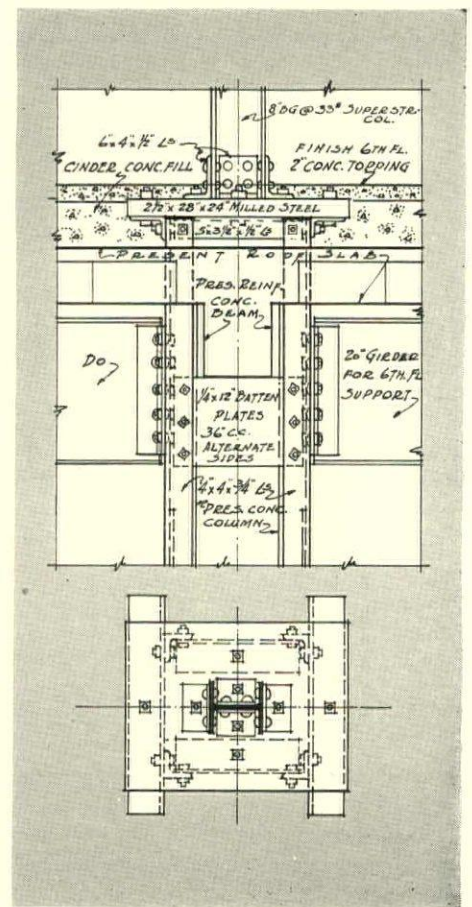


FIG. 7

ANGLES on the corners of old interior columns supported a steel plate carrying new upper interior columns

steel beams and columns and concrete slabs. The sidewall columns had to be set in and the spandrel beams carried on brackets, otherwise the framing is not out of the ordinary, and light and speedy to erect.

The next problem was to carry the new loads to the footings without structurally disturbing the existing building and with a minimum amount of shifting of stock racks, bins and open stock. This was done by fabricating steel columns, in story lengths, around the existing columns, as shown in Figures 1, 2 and 3.

For the interior columns of the lower stories four angles tied together with batten plates and spliced and nested at each floor line were used, as shown in Figures 4 and 5. These were decreased in size as they went up floor by floor. Each angle had a short section of angle riveted inside, near the top, and milled to take the bottom of the angle above, which was also milled, thereby affording perfect bearing and only depending on bolting for holding in place during construction. It was necessary to cut the heel of the upper angle so as to clear the fillet on the lower ones. In this way a continuous lattice steel column was formed which transferred the new loads from the superstructure, through a two and one-half inch steel slab at the top, down the outside of and independent of the existing concrete columns, to the footings. Strange to say, the most difficult part of this job was cutting the small holes at each column, necessary to run the angles through the floor and to pour the concrete fireproofing.

The sidewall columns were even less troublesome than the interior ones. An eight-inch "H" column was carried up each side of the existing columns to a point above the roof sufficient to give the proper rivet area for a connection, as shown in Figures 1 and 2. The sidewall columns had to be set in, up in the superstructure to avoid eccentric loading, which is not good for anybody's building, to say nothing for the poor fellow who has to figure it out.

The corner columns were leveled off at the existing roof line and drilled to take anchor bolts which were grouted in and held a steel slab which spread the new load over the entire area of the old column.

The existing roof, designed for a thirty pound live load, required reinforcing to carry a one hundred pound live load. Since the roof as well as the floors in the existing building are tile and concrete joist construction, it follows then, that if the span of the joists was shortened the problem in this respect would be solved. It was easy to get beam connections on the new supplementary columns, so beams and girders were framed almost the same as the superstructure, dropping them just far enough below the existing roof slab to permit installation. Then by breaking holes in the slab at intervals above the beams and forming around them, we were able to pour concrete grouting which by careful puddling made everything tight and gave the additional strength needed. The existing roof was leveled off with cinder concrete and a two- (Continued on page 112)

FIRST: 2" x 6" + & g Douglas fir, cut to partition length, is used for shoring, bracing, stringers and soffits of concrete slabs. Each 2" x 6" supports an area of about 15 sq. ft. A row of 2" x 6" doubled is carried down the center of the span to stiffen the form construction



Costs Cut
for

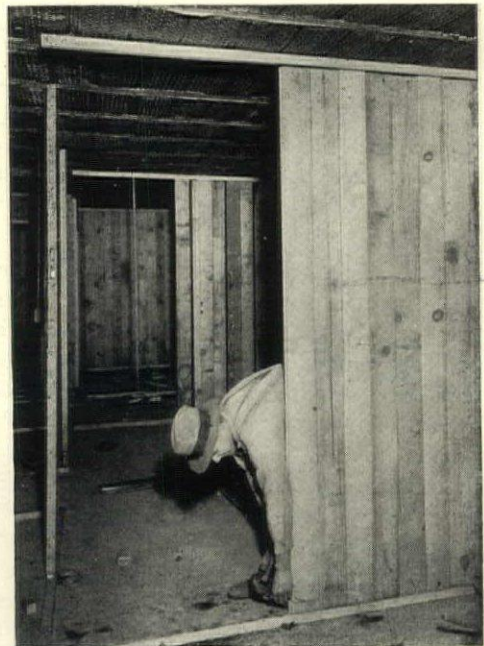
PARTITION WALLS

in apartment house of reinforced concrete

Developed by SCHACK & YOUNG, Architects and Engineers, Seattle, Wash.



SECOND: after being used as form lumber, the 2" x 6" are piled conveniently nearby for later use in partition walls



THIRD: the 2" x 6" are set vertically making a 2" solid partition wall. The only waste consists of cleats and odd lengths



FOURTH: the partition is lathed and plastered on both sides, furring strips being set on 16" centers. For sound resistant partitions, the partition is covered with sound resistant material on each side and plastered. Note thinness of partitions

WHAT ARCHITECTS

New National Association
Wanted by California

Sears-Roebuck Builds \$100,000 Houses

Engineers Ask Government
to Employ Private Architects



BUTCHERS' CHURCH, where only butchers worship. The Saint Aurelien Chapel in Limoges, at the end of a little street which for a thousand years past has been lined only by butcher stalls

"TO hasten unemployment relief, the Office of the Supervising Architect should cease its efforts to prepare plans and specifications for Federal building projects, and should confide this task to outside architects and engineers," declares a report transmitted by the American Engineering Council to Col. Arthur Woods, chairman of the President's Emergency Committee for Employment. "The office of the Supervising Architect should become, as its name implies, more supervisory." This report was from a committee of American Society of Mechanical Engineers, headed by Ralph E. Flanders of Springfield, Vt.

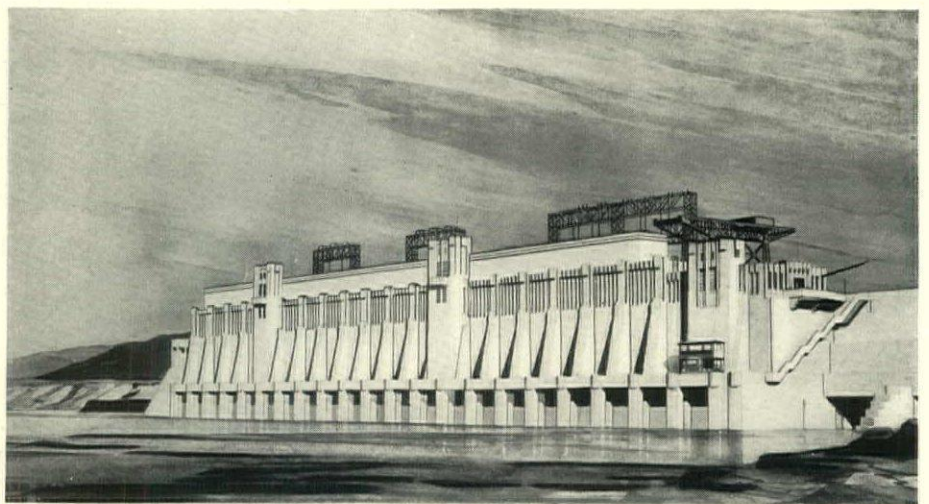
ATAX of three cents a square foot has been imposed on billboards in the State of New Jersey. As a result, a number of advertisers have discontinued this type of advertising and several thousand signs have been taken down.

EACH \$5,000 spent in construction work will afford year-round employment for at least one workman, according to the preliminary report on the construction census for the District of Columbia.

ORGANIZATION of Building Congresses will be a major aim of the Committee on Industrial Relations of the American Institute of Architects during 1931, the idea being to link architects, builders, bankers, and workers together. William Orr Ludlow, New York, is chairman of the Institute's committee.

THE first bathtub in the United States made its appearance in 1842. The Virginia legislature put a \$30 annual tax upon the contraption. In Philadelphia, the city council failed in 1843 by two votes to pass an ordinance forbidding the use of bathtubs between November and March. Adam Thompson, Cincinnati, Ohio, exhibited his personal tub at an 1842 Christmas party; four of the guests took baths, and the event merited two columns in the daily newspapers.

"OUR home construction division has this past year constructed houses costing as low as \$2,500 and up to approximately \$100,000 with financing," states E. R. Gibbs, eastern manager of the Home Construction



HYDRO-ELECTRIC power station on the Columbia River near Wenatchee, Washington, for the Puget Sound Power & Light Co. Stone & Webster, engineers

ARE TALKING ABOUT

Every \$5,000 of Construction Gives
Year's Work To One Workman

First United States Bath Tub 1842

First Installation of Two
Elevators in One Shaft

Division of Sears-Roebuck and Company. "In the past year our operations in the New York area have constantly numbered between 300 and 500 houses under construction for individual home owners at all times. The average financing through Sears-Roebuck and company involved about \$5,000 for each house." This company has secured so much business in the New York area that it is now establishing its own building loan facilities in New York City, and will continue to loan up to 75% on a fifteen year installment plan.

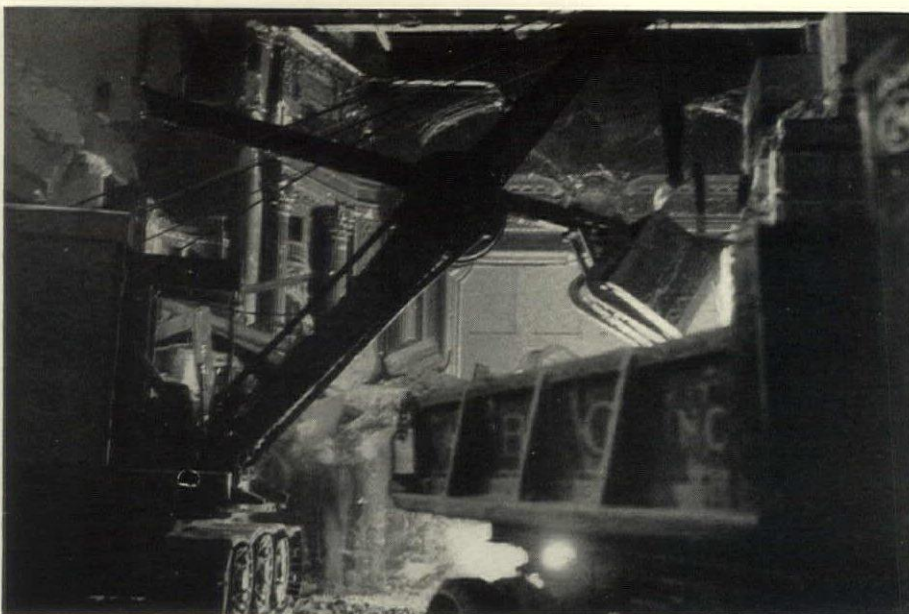
THE American Institution of Architects will hold its sixty-fourth annual convention in San Antonio, Texas, on April 14, 15 and 16. Headquarters for the delegates will be at the Hotel Plaza.

THE first installation of two elevators operated separately in the same shaft has been made by the Westinghouse Electric & Manufacturing Co., in its main office building at East Pittsburgh, Pa. One elevator is an express, the other a local. Concerning this type of equipment, H. D. James, consulting engineer, states: "A study of the elevator layouts of certain typical projected buildings shows that the use of dual elevators in these cases would save floor space that could be rented for from \$35,000 to \$85,000 a year."

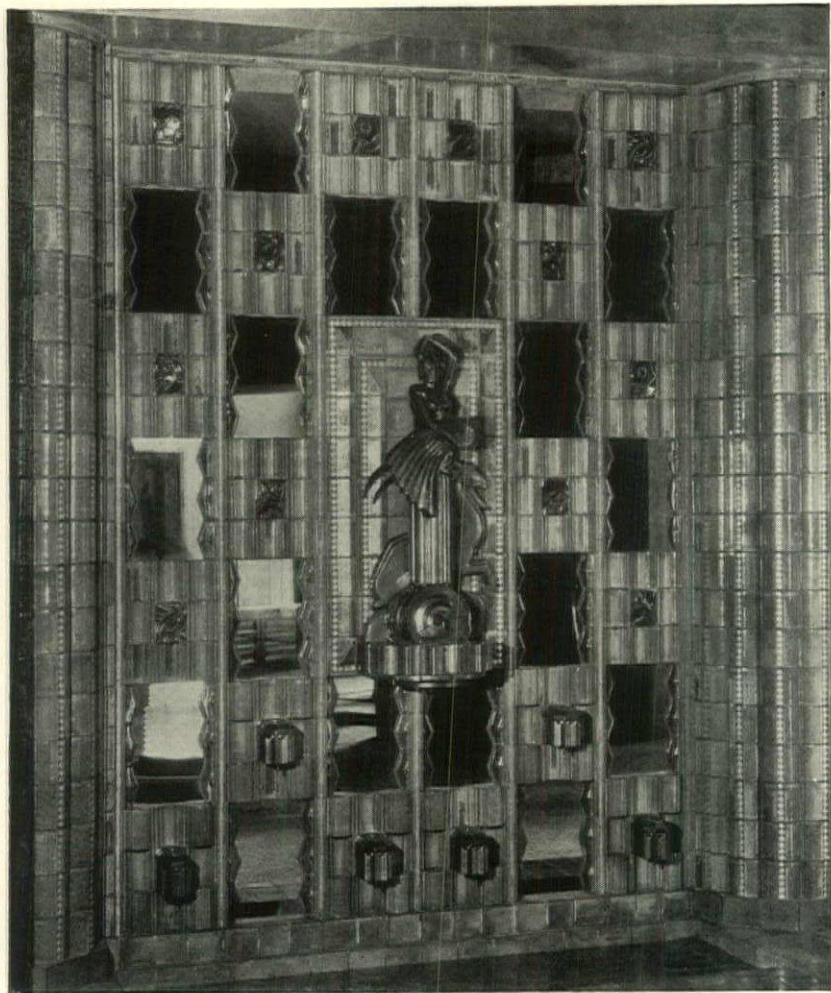


ARCHITECT'S SIGN. Smith, Hinchman & Grylls, architects, Detroit, Mich., specify a sign for all their buildings and include on it all the sub-trades engaged

WHAT building supply dealers think of 1931 construction as compared with that for 1930 is shown by a questionnaire sent out by the Universal Atlas Cement Co. and answered by 2,300 dealers all over the country. On all types of construction, 48% believe that there will be no change, 18% that there will be more
(Continued on page 90)



THE END of the Century Theatre, New York, a famous architectural masterpiece that never paid. Under the cornerstone had been placed a poem by Gilder, a choral ode by McKaye, a message from the then Governor Hughes, and a pint of Old Crow. Everything was there . . . but the Old Crow had flown



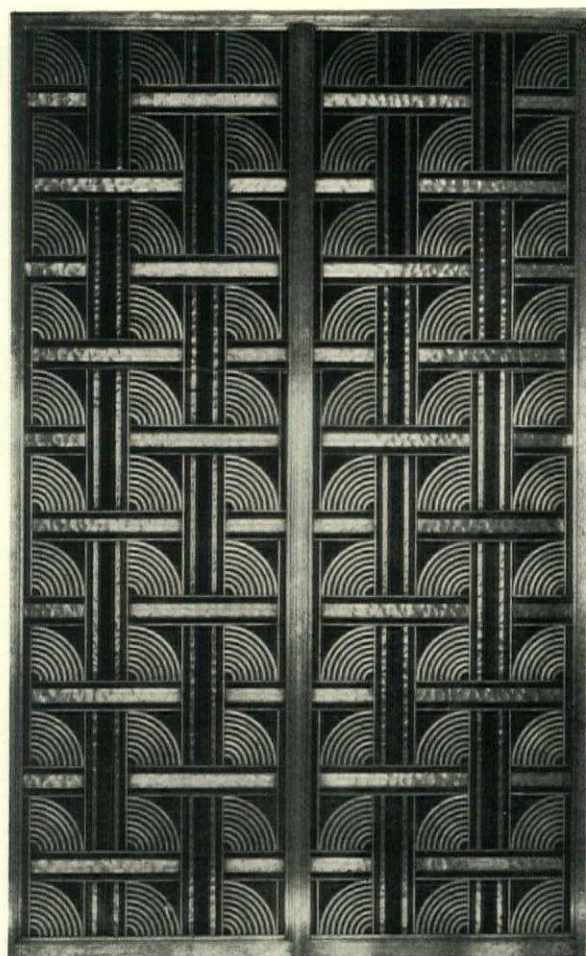
M F
O R
D E
E N
R C
N H

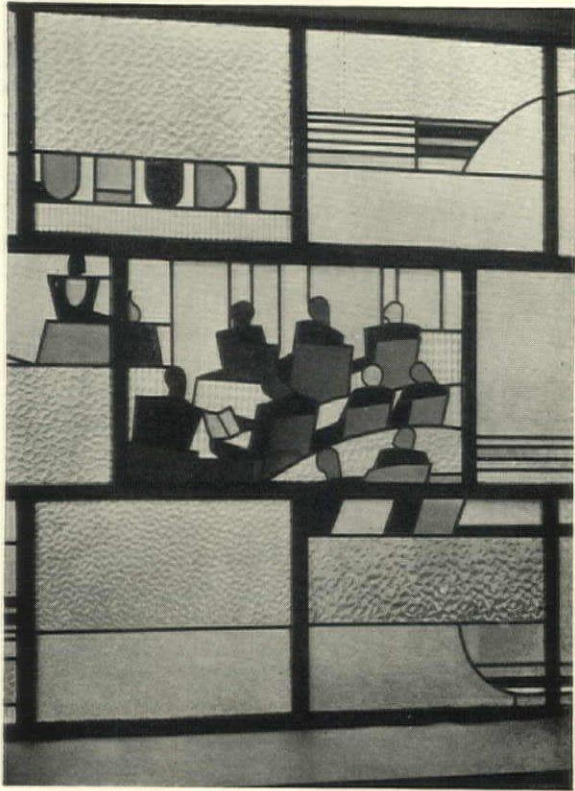
METAL AND GLASS

GILDED FAIENCE tiles and mirrors set in a geometric pattern produce an unusual modern wall fountain. Designed by the French decorator Bourdet

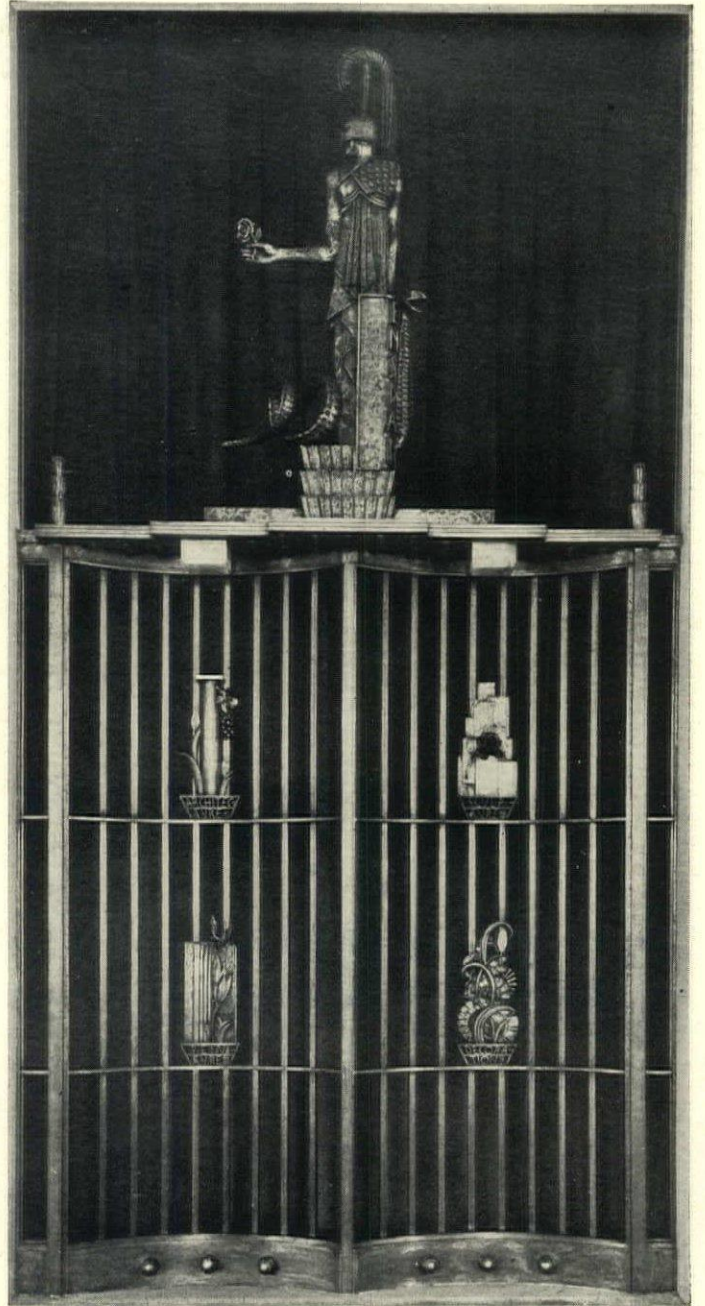
SILVERED METAL and forged iron arranged in geometric motifs are largely used by Subes, the noted French decorator, for doors and grilles

Photographs by Bonney

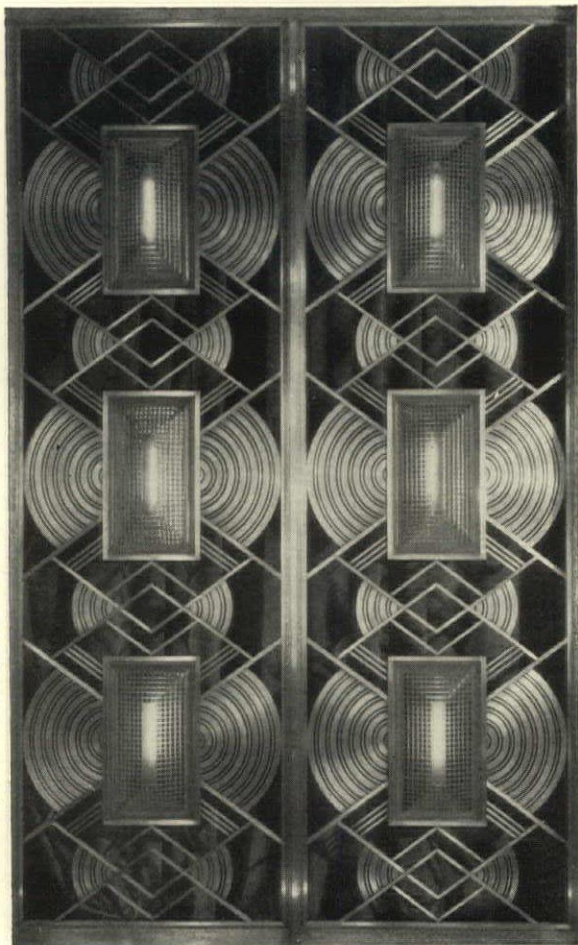




LECTURES, executed in white, gray and black glass. Part of a long window designed by Barillet for a publishers' building in Paris



FOUR SYMBOLS of the Beaux Arts break the strong vertical lines of this forged iron grille designed by Subes for Ecole Nationale Supérieure Des Beaux Arts, Paris



A GRILLE of forged iron and silvered metal, typical of the modern tendencies in French decoration. Designed by Subes

. . . As It Looks

Protection for Window Cleaners

RECENT newspaper articles have agitated the building of wider window-sills for the safety of window-cleaners.

While this may increase the safe footing of those who follow the precarious work of cleaning windows in our high buildings, the proper selection and installation of window-cleaners' bolts is a subject that should also be given better attention. Many of these bolts depend for security upon their proper anchorage in masonry. Where anchorage is weak, a condition is created that is worse than where no bolts are installed. Bolts have been known to pull out of loosened masonry. The proper installation of these bolts is a moral obligation that no architect can avoid. Owners of buildings are under a similar obligation to give these bolts periodic inspection and to see that they are maintained in safe condition.

A Prophecy of 100 Years Ago

DURING the trying times of 1830, Macaulay wrote, "A single breaker may recede; but the tide is coming in.

. . . If we were to prophecy that in the year 1930, a population of fifty millions, better fed, clad, and lodged than the English of our time, will cover these islands . . . that machines constructed on principles yet undiscovered will be in every house—that there will be no highways but railroads, no traveling but by steam—that our debt, vast as it seems to us, will appear to our great-grandchildren a trifling encumbrance, which might be paid off in a year or two—many people would think us insane." This eminent English essayist in underestimating the progress that has been made in one hundred years, strengthened his statement, "A single breaker may recede; but the tide is coming in. . . . On what principle is it that when we see nothing but improvement behind us, we are to expect nothing but deterioration before us." An encouraging thought in today's troublesome times!

Ethics Kill Opportunity

TEN years ago a young architect was asked to permit a zealous carpenter, also young, to bid on a residence for a physi-

cian. He protested. The physician insisted, saying that the carpenter had many friends—and "I'm new in this town and need the friendship of people with friends." The carpenter was engaged as contractor, for his bid was in line. His work was so satisfactory, that the architect gave him other jobs. Soon the carpenter, now a builder, approached him: "I have a contract to build a house, but need the plans drawn. Will you do them for me?" That was the first of several commissions. Then the carpenter made this proposition: "I find that I can get business. Suppose you and I go into partnership. You design the houses and I will build and sell them." The architect, obsessed with the idea that it was unethical for him to step out of his professional

standing and become associated in the contracting business, refused. Today the young carpenter is a millionaire several times over; he employs from thirty to forty draftsmen. The architect, who left his home town for the larger opportunities of New York, is without a job. The question is, does our domestic architecture suffer because so many of its practitioners cannot make a living designing small houses and yet refuse to sell their talents to a public which needs their talents and ethical responsibility?

How Architects Can Help Deaf

DEAF people make up some ten million of the population of the United States, according to the Chicago Wom-

an's Aid. This organization is sponsoring a nationwide movement to have "hearing aids" installed in churches, schools, lecture halls, theatres and other public places. This movement, in the interest of a large number of adults and children whose hearing is such that they are denied learning or enjoying much that is available for those of normal hearing, is commendable. Architects can do much toward helping this work, and in so doing aid humanity, by including suitable equipment in buildings where persons hard of hearing are likely to appreciate this forethought of their misfortune.

Credit to Whom Credit Is Due

FAIR play, according to a recent bulletin of the Structural Engineers Society of New York, is an economic necessity.

While the bulletin states that fair play among the professions of the building industry is not always a "natural consequence" it cites two cases that are exceptional. In one case an architect of national prominence in an address referred to an important development in building planning as "the latest of changes which should be credited to the (structural) engineers and not to the architects." The second case involves the architect of what is said to be the world's largest building who "is always careful to ascribe to everyone involved—engineers, contractors and material producers—their part in the consummation of his great structures." Big men are seldom egotistical, ignorant, or selfish of credit. On the other hand they are generally modest and always ready to "render unto Caesar those things which are Caesar's."

Does Radio Destroy Houses?

WHEN the radio loud speaker owned by a certain man is turned

on, the partitions in his house are said to vibrate. Since this particular loud speaker has been installed it has been noticed that the plaster has begun to crack. Is this instance less common than it would at first appear? How many have had a similar experience? Is the cracking of the plaster in this case a coincidence or does radio tend to destroy houses?

to the Editors . . .

A Building That Moved Back

A SEVENTEEN-story office building in a southern city was built some years ago with spread footings on what proved to be a poor foundation. The building settled and leaned about five inches toward the street. A large addition has recently been erected with the floor levels of the new area lining up with the old building. Difficulties and dangers were anticipated. The new foundations were carried down to rock by means of caissons. Precautions were taken to avoid draining too great a volume of water from under the foundations of the old building. Conditions of this kind are possibly not too unusual, but the interesting fact is that after the foundations of the new building were in place it was found that just enough water had been drained from under the old building to return it to its proper position and it was no longer five inches out of plumb.

To Kill Cheap Construction

COMPLAINTS made to the Construction Industries Division of the Better Business Bureau of St. Louis by house owners or purchasers relative to shoddy construction work are followed up and given sufficient publicity to assure owners of the work being rectified. A recent bulletin of the Bureau cites the case of a man who bought a house from a realty company. After living in the house for six months it was found that the house was so poorly built and the up-keep so great that it would be cheaper to forfeit what money he had paid, rather than to put the house in condition. The matter was investigated. The realty company admitted that they had been in the habit of using cheap construction in some instances but that they had found it unprofitable as these houses generally fell back on their hands. Inasmuch as the Bureau is informing the public concerning good construction the realty company confessed that they thought it advisable to erect better houses. Under the action of publicity cheap construction has a way of shriveling up. There is plenty of it throughout the United States that needs daylight and fresh air.

Everybody Is Our Competitor

MOST competition is not to be found within an industry itself, but outside of the industry. Point is lent to this statement by an article in *Class* by James A. Worsham, sectional sales manager, Williams Oil-O-Matic Heating Corporation. He writes, concerning work of his company's salesmen, "B had been thinking about painting the plant but finally decided to buy an oil burner instead." And the sale was made because Mr. Paint Man was waiting for a business revival, and our dealer's salesman was on the job.

"Another report, 'Mr. B had about decided to buy a new car but I was able to convince him that his car was good enough to use another year, and he bought an

electric refrigerator.' Mr. Automobile Salesman was evidently back in the showroom, waiting for the buyer to come in."

Sales—and profits—go to the men who work for them, in architecture as in the generally considered more commercial business world. And architects are in straight competition with much more than other architects—engineering services, free plans and so on. All industry is seeking the dollars spent for architects' fees. Architects must fight hard to hold their own.

Never Be Satisfied Has Limits

TWO hundred miles of film a year are said to flow from the Eastman factories. The progress that has been made in the camera field from the production of what is now considered an inconsequential number of dry plates to a stupendous industry has largely been due to Eastman's slogan, "Never be satisfied." Architects know what this means. To it may be attributed the energy that goes into the numerous preliminary sketches that accompany the design of any building. Carried too far it has the effect of consuming too great an amount of time, especially when it involves items that are not too important. Draftsmen often spend far too much time to become satisfied with the contours of mouldings, losing sight of the factors in moulding design that really count.

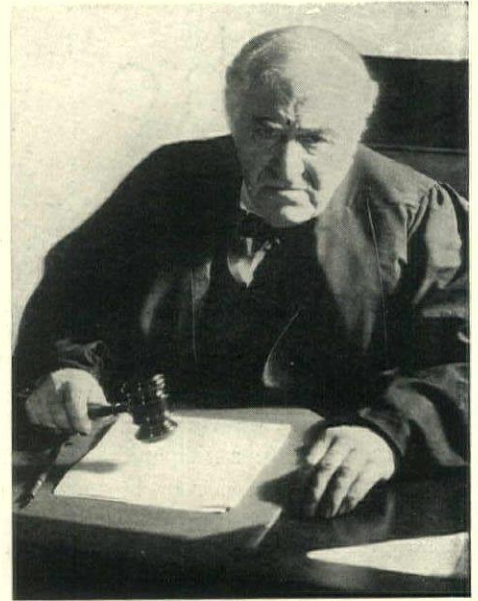
Architects for Government Work

WHILE many opinions are expressed in articles received by THE AMERICAN ARCHITECT as to how the Government should select private architects to design Government buildings, fundamentally these differ only in minor conceptions. All agree that political appointments are to be deplored and that appointment should not be predicated on membership in the American Institute of Architects. The Institute as a national organization is, however, recognized as the logical clearing house for making recommendations to the Supervising Architect of the Treasury. Some architects feel that local committees should be formed to make recommendations to the Government, these committees including the local Representative in Congress, local custodian of Federal Buildings, the mayor and representatives of local civic organizations, as well as local architects. Other architects argue the merits of the competition system. Several propose the questionnaire system and balloting by local architects to nominate two or more candidates from among whom one can be selected by the Supervising Architect. One architect suggests that editors of architectural magazines and a group of professors of design from leading universities meet and develop a concrete plan; another suggests an advisory group of architects to cooperate with the Government. All agree that employment of capable local architects will establish a higher standard of government architecture in every community, an aim worthy of support of all citizens.

"The partnership was dissolved

BUT YOU HAVE TO PAY"

By George F. Kaiser, LL.B.



WHAT HE DID. Wilson and Nielsen had been partners engaged for some time in practice of architecture. The agreement between them contained a provision that it should expire December 31st, 1928. In July, 1928, Nielsen notified Wilson that when their agreement expired, he would not renew it.

Nielsen, having arranged to become a member of a competitive architectural firm, solicited and obtained several commissions for his new firm shortly prior to the expiration of his old partnership relation. During the following year in his new connection Nielsen did considerable work for White Ware & Company a former client of Wilson & Nielsen. Then one day, to the surprise of Nielsen and the consternation of his new associates, suit was instituted by Wilson, praying that it be decreed that Nielsen hold all his profits from the White Ware & Company business in trust for his former partner to the extent of his interest therein.

Who pays for plans when agent exceeds authority?

WHAT HE DID. Stuman was the high potentate of the Independent Knights of the Day. When the order wanted a new lodge building, Stuman was made chairman of the building committee with authority to have plans drawn for a new building to cost not more than \$50,000. It was contemplated that the new building would have bowling alleys, a gymnasium, an assembly hall, and all the fixing and trimmings that the four hundred members of the lodge could think of. Stuman went to an architect and told him what the body wanted. "Why a building like that will cost you \$75,000 or \$85,000," replied the architect. "Well, we must have a lodge building and we want a good one," replied Stuman, "so go ahead and draw the plans and specifications and it will be all right." The architect drew plans but the lodge refused to pay. When he sued both the lodge and Stuman, Stuman never thought that he would have to pay and that the lodge would be held harmless.

WHY HE DID IT. Stuman knew nothing of building or construction work or the cost of materials or labor. He wanted his lodge to have a fine lodge build-

WHY HE DID IT. Nielsen tried to justify his actions by claiming that as no profit was to be made out of the business he secured from White Ware & Company for his new firm until after the actual expiration of his old partnership agreement, his soliciting the customer of the old firm was not improper.

WHY HE SHOULDN'T HAVE DONE IT. The courts in similar cases, where the respective rights of partners have been involved, however, have refused to adopt such a view, and in one recent case the obligations partners assume to one another were stated:

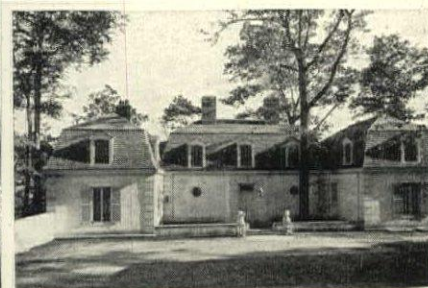
"They owe to one another the duty of the finest loyalty. Many forms of conduct, permissible in a work-a-day world, for those acting at arms length, are forbidden to those bound by fiduciary ties. A trustee is held to something stricter than the morals of the market place, not honesty alone, but the punctilio of an honor the most sensitive, is then the standard of behavior."

ing, and when the architect told him what the proposed building would actually cost, he expected that his "brothers" would back him up if he went ahead.

WHY HE SHOULDN'T HAVE DONE IT. An agent who has so far exceeded the limits of his authority that there may be no liability attached to his principal will be personally liable to the third party with whom he dealt, either for breach of an implied warranty of authority or in an action for deceit. This is provided always that the party with whom the agent deals is ignorant of the lack of authority, acts in good faith, and is misled or induced into entering into contract by the agent's authority. But if he knows or has knowledge sufficient to put him on inquiry of the facts and circumstances surrounding the agency and he fails to make use of such knowledge or to make such inquiry, it cannot be said that he has been induced or misled into the contract by the agent's express or implied representations. And he cannot hold the agent responsible for any injury suffered thereby unless the agent has concealed or misrepresented material facts to his injury.



BY THE CHOICE OF TILE for this Mansard roof, all hard sheen and reflection have been avoided. Ludowici Hand Made Shingle Tile has been used with perfect appropriateness. There is a pattern of Ludowici Tile equally suitable for each type of architecture. Their beauty and protection against weather and fire are everlasting. We shall be glad to mail our catalogue or have a representative call upon you. And permit us to call your attention to our pages in Sweet's.



Home of Thomas R. Coward, Bedford, New York.
Breed, Fuller & Dick, architects.

LUDOWICI TILE

Made by
LUDOWICI-CELADON COMPANY

NEW YORK: 565 FIFTH AVE. • CHICAGO: 104 SOUTH MICHIGAN AVE. • WASHINGTON: 738 FIFTEENTH ST., N. W.

THE READERS

Have a Word to Say

GOVERNMENT ARCHITECTS CANNOT CREATE BEAUTY

Editor, THE AMERICAN ARCHITECT:

HAVE read various articles in your magazine in the past few months in regard to your campaign to have the Federal Government engage private architects for all governmental building projects instead of having most of the work done by the Office of the Supervising Architect. Every self-respecting architect throughout the country, it seems to me, should whole-heartedly back up your magazine in this splendid editorial policy. I hope that you will have the courage to continue this plan until its object is accomplished. There must not be any compromise.

If one takes the time to consult a first-rate dictionary one will find that the word supervise means this and only this—to have a general oversight of, *superintend—in-spect*. There is no other meaning to the word. Therefore it is quite apparent that the Federal Government is actually violating the true meaning of the law which brought the Supervising Architect's office into being. In short the Federal Government is competing in a professional way with the private practitioner in architecture. Why should architects accept this unfair practice of the government entering in competition with the private practitioner? Would it dare to compete against lawyers, physicians, dentists and other professional men? Emphatically no! It is definitely an oppressive situation. The supervising Architect should be limited to the field of work which the title of his profession indicates and it is up to the Federal Government to put a stop to this unjust competitive practice at once.

The point which you have made in your several editorials that the bulk of this work should be distributed to private architects in the various communities in order to reduce unemployment in the architectural profession is well taken. This, we all realize, is very important and is a very serious matter. But there is still another phase of this problem that seems to have been lost entirely in this recent discussion and that is, the beauty and distinctive architectural character of these proposed structures. In most of the arguments that I have read practically no reference has been made to this important phase of this building program. This angle to me is just as important as the one of unemployment, for these structures are to last many, many years and should be outstanding landmarks in the various communities where they are to be erected. To erect commonplace factory-like government buildings at this time, or at any other time for that matter, would be a discredit to the government.

Suppose, however, that the law should give the Supervising Architect the right to compete with the private architect. Could beautiful buildings be created by the Supervising Architect's office in any case? This to me is a very important question. With all due respect for the

integrity and the technical ability of the Supervising Architect and his staff, the answer to this question seems clear to me—no. With an unwieldy organization of hundreds of civil service employees where individuality and personality automatically disappear, it is almost impossible to conceive or to hope that any beauty can emerge from such an atmosphere. Beautiful architecture has always resulted from a personal expression of individuality which to my mind could never be accomplished by a governmental architectural bureau. It just can't happen.

What we need for our communities at the present time is not only larger and more modern buildings, but more beautiful buildings. Here is an opportunity for the National Government to establish an architectural precedent of great distinction throughout this large country in the various towns and cities, around which future architectural developments could be properly harmonized. One beautiful building in any community unconsciously and automatically sets a high standard for subsequent building programs and it seems to me that it is the duty of the National Government to lend its leadership in the cause of more beautiful American cities.

The Supervising Architect claims that he can complete working drawings and specifications for a government building faster than any private architect. This is a misleading statement. If this work which he refers to, is done sincerely and beautifully and with individuality (which all of it certainly warrants) it can be done no more rapidly by the Supervising Architect than by a capable private firm in the architectural profession. In fact, a number of private architects, each working on a separate building, could do the bulk of this work even faster and certainly with more individual expression in design than if the same quantity of work were to be turned out by a government bureau.

All these irrelevant arguments about fast production in turning out architecture give the false impression that beautiful buildings can be designed, cut and sewed together like so many suits of ready-made clothes. Do you suppose for a moment that the great monumental structures of the past and of the present, such as the beautiful palaces in Florence, the governmental buildings in London, the impressive edifices in Rome and that outstanding modern City Hall in Stockholm were turned out under civil service direction? These buildings were carefully thought out and designed by competent and talented individuals, who took the necessary time to create these worthwhile structures. There is no shortcut to things beautiful. What we need is not more speed, but more appreciation of the meaning of the word architecture.

If our future cities are to have distinctive architectural character, then we must begin now by putting this important proposed work in the hands of the most com-

STRUCTURAL STEEL CREATED THE SKYSCRAPER

STEEL GIVES FREEDOM TO DESIGN

Out of steel's great strength and versatility have come the most amazing structures the world has ever seen. Tradition has had but little influence on them. They are inspiring in their architectural freshness, appropriate to their purposes, efficient to a remarkable degree.

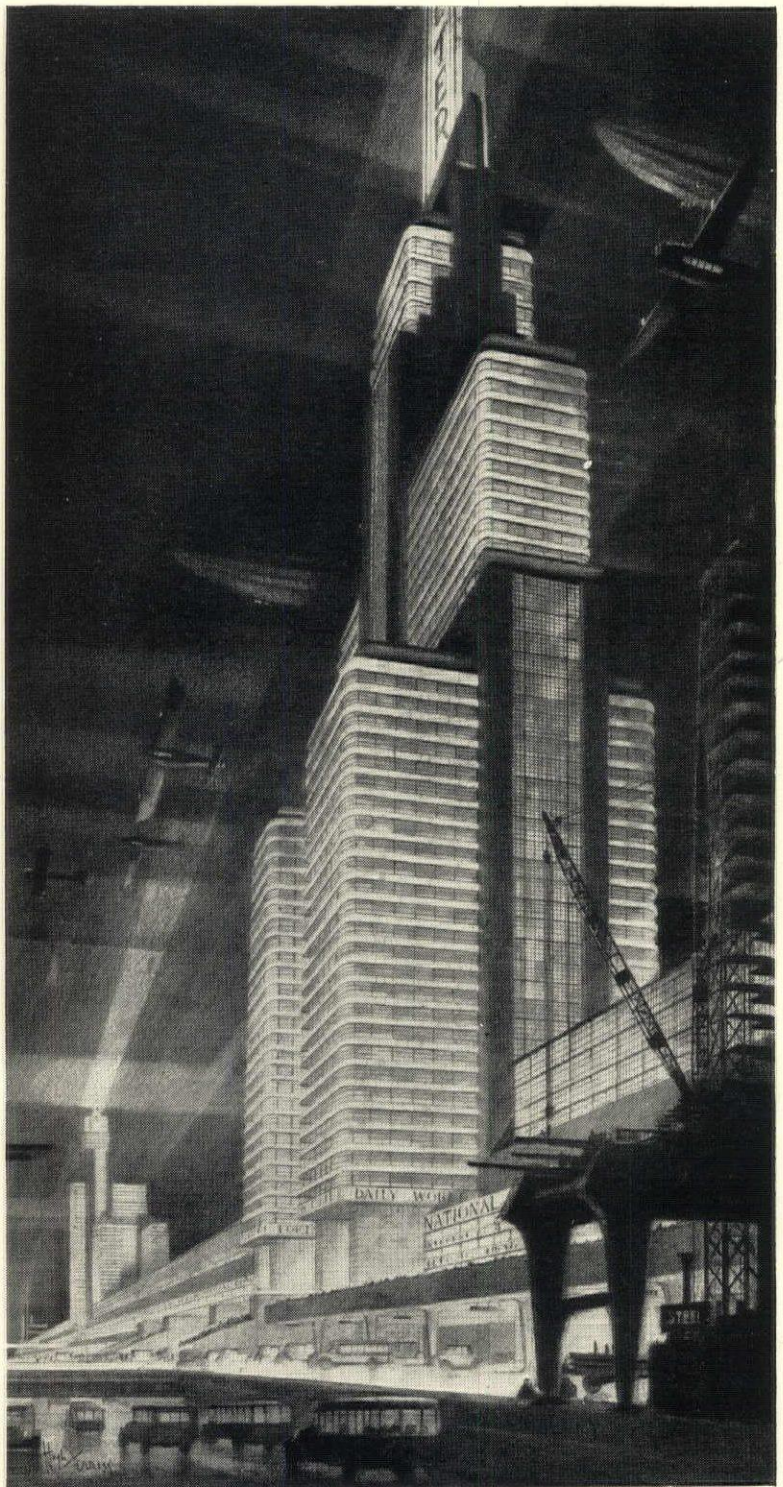
Now, the Age of Steel enters its most interesting phase. . . . The proved principles of skyscraper construction are being applied to dwellings, small apartment and mercantile houses, small factories and schools. They are being built with steel!

Many plants are in large-scale production of the smaller steel shapes. With them you can secure great variety in design, new economy in construction, absolute security and permanence. Use steel for buildings and bridges of every kind—large or small.

Before building anything, find out what steel can do for you. The Institute serves as a clearing house for technical and economic information on steel construction, and offers full and free co-operation in the use of such data to architects, engineers and all others interested.



The co-operative non-profit service organization of the structural steel industry of North America. Through its extensive test and research program, the Institute aims to establish the full facts regarding steel in relation to every type of construction. The Institute's many publications, covering every phase of steel construction, are available on request. Please address all inquiries to 200 Madison Avenue, New York City.—In Canada, to 710 Bank of Hamilton Bldg., Toronto, Ontario. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas, San Francisco and Toronto.



"STEEL CONSTRUCTION FOR WALLS OF GLASS." AN ENLARGEMENT OF THIS DESIGN BY HUGH FERRISS, ON SPECIAL STOCK FOR FRAMING, WILL BE MAILED WITHOUT CHARGE TO ANY ARCHITECT, ENGINEER OR BUSINESS EXECUTIVE.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

STEEL INSURES STRENGTH AND SECURITY

petent men in the country. When I think of the word speed which has been mentioned so frequently by the Supervising Architect's office in Washington, I can't help but think of the grotesque factory-like structures which were built during the great war and which marred and are still marring the landscape of many of our American cities, including Washington. Those buildings were erected during a national emergency when men's lives were at stake, but let us not repeat this sort of thing during times of peace.

What we need and need badly right now is a courageous man in our National Government who possesses both vision and character, to take the bull by the horns and check this standardized production of government buildings, and put this all-important work in the hands of competent architects throughout the country whose stamp of personality and sense of the beautiful will become an integral part of their designs. To these men, and to these men alone should this all-important architectural work be intrusted, if these future government monuments are to possess that intangible thing called beauty.—*Francis Keally, A.I.A., 101 Park Avenue, New York City.*

Because of the importance of the subject to the architectural profession, Mr. Keally sent a copy of this letter to President Hoover, Ogden C. Mills, Secretary Mellon, Senator Wagner, Senator Copeland, and Representative John J. O'Connor.

• WANTS TO KNOW WHY WASHINGTON STATE CHAPTER "HIRES CONTRACTOR TO DESIGN"

Editor, THE AMERICAN ARCHITECT:

NO wonder the Washington State Chapter of the American Institute of Architects wasted their money in advertising.

Does the A. I. A. advocate the elimination of the professional services of the architect and the substitution of the contractor when buildings are to be built? No.

Then why eliminate the professional services of the advertising agency: building the advertising campaign "in cooperation with the newspaper"?

This is just what appears to have been done by the above Chapter as published in the February issue of *THE AMERICAN ARCHITECT*. They hired the contractors to do their planning and designing. The published advertisements certainly reinforce the above conclusions.

The architect does have a product to advertise in cooperation with the entire building industry and that is buildings—the product of that industry.

The public wants to know how to obtain these buildings economically sound, conveniently planned and beautifully conceived.

The advertising campaign must be planned from their standpoint. They are not particularly interested in "Consult an Architect," A. I. A., etc. An engineer, a realtor, a contractor will do if they will get the results.

But what they must be educated to understand is that a "good building is the product of a good architect, good contractors, good craftsmen, using good materials," if they are to avoid the pitfalls of those who have tried other means to their sorrow to produce a building.—*Merritt Harrison, A.I.A., Harrison and Turnock, architects and engineers, Architects building, Indianapolis, Ind.*

• AN ADVERTISING MAN TELLS WHY WASHINGTON STATE CHAPTER WASTED ITS MONEY

Editor, THE AMERICAN ARCHITECT:

IN your February issue, page 24, there appears an article, "This Advertising Wasted Our Money," by Joshua H. Vogel.

After reading it several times, I am still undecided as to whether Mr. Vogel intended it as a satire on methods too often employed in a cooperative campaign by a profession or an industry, or whether he was seriously presenting facts concerning an "advertising campaign" which has actually appeared in the *Seattle-Post Intelligencer*.

If it was intended as a satire, it is a masterpiece. If it is an actual statement of facts, it should be answered, and that quickly, lest it should cause a wrong impression to prevail.

The writer of this letter is not an architect. For this reason, he has no idea or intention of competing for the seventy-five dollar prize offered for the best story, based on Mr. Vogel's article.

The writer has, however, spent seventeen years in advertising work. He has had a hand in the planning and preparation of several campaigns, which had for their object the education of the public to a better appreciation of the services of a specific profession or industry. Among these campaigns, incidentally, has been two for architects. For these reasons, he feels himself qualified to express an opinion as to why this campaign was a failure. The reason can be expressed in one brief paragraph.

It failed because the man or men responsible for it had not the slightest conception of even the rudiments of advertising. It failed for the same reason that a building would fail if designed and constructed by one who had absolutely no knowledge of architecture or building methods.

"This Advertising Wasted Our Money" says the title of the article. That the money was wasted, there can be no doubt. It was not "advertising" that wasted it, however, but rather the lack of it.

There are fourteen "advertisements" displayed in connection with the article. If we except the small quotation from "Laws and Customs," appearing in one of them, there is not a single reason given why it is to the advantage of any reader to employ an architect.

"For Horologium and Hippodrome"; "For Kiosk and Kurhaus"; "For Excubitorium and Auditorium"; "For Bargello and Banking House"; etc.!!!! How many readers of the *Seattle-Post Intelligencer* do you suppose are interested in erecting a "Horologium" or a "Kurhaus" or an "Excubitorium"? How many, do you suppose, even know the meaning of these words?

The writer asked four men of better than average education and intelligence if they knew what a Kiosk was. Three of them frankly admitted they did not. The fourth said it was a boat used by Eskimos in which to hunt the walrus!

"But," the author will no doubt reply, "you miss the point entirely. Those headings are a clever way to attract attention."

On the same basis, wouldn't it be still more clever to

PROTECTION by A. D. T.

In the old City Hall at Atlanta, Ga.,—and now in the new \$2,000,000 building, positive protection was carefully planned. In both cases, A. D. T. Central Station Watchman Supervisory Service was chosen to guard the premises.

Properties of all types, valued at more than 22 billion dollars, are constantly protected by A. D. T., the highest standard of property protection available.

A. D. T. Central Station Services, operating through A. D. T. Central offices in principal cities, include Watchman Supervisory, Manual and Automatic Fire Alarm and Sprinkler Supervisory Systems.

For details, see our catalog in Sweets or write us.

City Hall,
Atlanta, Ga.



G. Lloyd Preacher & Co., Inc., *Architects*
National Construction Co., *Builders*
Electro Construction Co., *Electrical Contractors*



Controlled Companies of
American District Telegraph Company
155 Sixth Avenue, New York, N. Y.

print the messages in Chinese characters? Then everybody would look at them, and no one understand them.

This type of advertising is even more tragic when it is remembered that the practitioners of no other profession or industry can offer better or sounder reasons for their employment than can the architect.

Moreover, advertising—and we place newspapers high up on the list of mediums—offers a quick, dignified method of acquainting prospective builders with the indisputable fact that *it pays to employ an architect*.

The subscribers of the newspaper supply a vast audience, among which are many who are interested in building or remodeling homes, apartment houses, factories, public institutions, commercial buildings, etc. Why speak to them of Kiosks and Excubitoriums? Why not tell them, in simple, understandable terms how the architect can serve them; how his specialized knowledge actually enables them to build a better building for less money; how his services protect them from wild design, poor construction, inferior building materials, and early obsolescence; that in any one of his many functions . . . the securing of reliable bids . . . in making favorable contracts . . . in the supervision of the actual construction, he more often than not saves the owner far more than his fee. To say nothing of the saving of the owner's personal time and his peace of mind. And that far from adding to the cost, the reputable architect actually enables the owner to build a better building for less money.

If the Washington State Chapter will make another appropriation, use the Seattle-Post Intelligencer, or other good newspapers, and build their advertising along sound, sensible, logical lines, they will have no cause to complain of the results obtained from advertising.

In conclusion, Mr. Editor, isn't it passing strange that a group of architects, who should appreciate the value of specialized knowledge, perhaps better than any other group, should themselves practice against their own preachings and attempt to conduct an advertising campaign without the benefit of the specialized knowledge of a man or organization trained in the ways and methods of advertising?—*Frank Schmitger, of the L. W. Ramsey Company, advertising, Davenport and Chicago.*

• SOMETHING ABOUT "ART VS. YALE UNIVERSITY"

Editor, THE AMERICAN ARCHITECT:

I HAVE just concluded reading the article, "Art vs. Yale University," in the January issue of THE AMERICAN ARCHITECT. It is, as Mr. Butler remarked, "an intelligent criticism by a young layman," but it also is a rather unfair criticism of American architects and architecture.

Had the young critic fully analyzed the society in which we live, the intellectual atmosphere which we are supposed to breathe, he would realize that the architecture which he so strongly condemns does represent the age in which we live. I wonder whether a "modernistic" architecture would be a true representation of the modern mind and modern society. I wonder whether LeCorbusier, Gopius, etc., really work in the spirit of modern Europe? Is Frank Lloyd Wright representative of the America of today? Or do they work in "wish" atmosphere rather than in the atmosphere of

existing conditions. Why bemoan the falsity of illegitimate Gothic or Classic, when the age which produced it is nothing but sham, four-flushing with stiff shirt fronts that hide an internal cancerous condition.

Why expect light, honesty and truth in architecture of an age that sells you cigarettes by appealing to your sex instinct, and in which you are always wondering at the relation of the sterile and anemic females of the billboards to dandruff, chewing gum, tires, and mattresses. Would an honest and logical architecture of steel, concrete, and glass be truly representative of our present society in which millions are permitted to starve, go barefooted and homeless because we have too much wheat, too many pairs of shoes, and too many vacant homes; a most illogical and unreasonable condition. Churches that cater to class, congregations of Sunday-Christians submerged in the oozing mire of race prejudice, intolerance, jingoism, etc., are truly represented in architecture by toilets hidden in orieles, by imitation Gothic tracery, by feudal fenestration, and flying buttresses which do not support the roof but are supported by it.

No, Mr. Hale, our architecture is not false, it is honest because it truly represents the age we live in, the air we breathe, and the way we think.

How long could any architect exist if he were to insist on doing only what he thinks is architecturally honest and logical? There are too many clients who feel that they can afford to outdo the Parthenon, Louis XVI, Chartres Cathedral, etc. And unfortunately, this element is the one upon which the architect depends for his livelihood, the University for endowments, and the government for its income tax.

An honest architecture, as Mr. Hale and all of us with him would like to see and create, cannot exist in a society founded on sham, poor logic, or none at all. We should be gravely unjust to the archeologist of the future if we should not hide our steel frame work by a "style exterior," for only the imitation "style exterior" will truly represent us as we really are.—*Max Alper, Architect, 302-105 West Monroe Street, Chicago, Ill.*

• AN IDEA ABOUT LICENSING ARCHITECTS

Editor, THE AMERICAN ARCHITECT:

FOR some time I have been reading the articles on the uplifting of the architectural profession as published in your magazine and also some of the comments on this subject by other practicing architects; it has caused me to stop at times and do a little analysis of my own situation.

I think as you do that we must advertise ourselves to the man who controls the money-bag strings and educate him to the fact that the architect who is succeeding is as much of a business man as he is himself and in order to be a success must keep abreast of the rapid growth of business needs and the rapid introducing of new building equipment and materials, of which he must have a thorough understanding. In other words he should be a living Jack-of-All-Trades and also be a walking encyclopedia.

Again it does not do my grocery bill much good to discover that the prospect and his wife have not decided whether new furniture or the hiring of an architect will



MODERN SUBSTANTIAL ADMIRABLE

OHIO SAVINGS BANK AND TRUST COMPANY
TOLEDO

Architect: Mills, Rhines, Bellman and Nordhoff, Toledo;
General Contractor: A. Bentley & Sons, Toledo; *Plumbing
and Heating Contractor:* Howard C. Baker Company, Toledo

UNUSUAL interest attaches to the new 30-story building of the Ohio Savings Bank and Trust Company in Toledo, for unusual measures were taken to assure wise investment of the five and a half million dollars involved.

Bank and office buildings in every part of the United States were visited and compared and the experience of their owners drawn upon. Every specification of material or equipment passed under searching scrutiny. The aim was to embody all that is most modern and known to be worthy, for such a building. The result has been much commended.

The choice of NATIONAL Copper-Steel Pipe for the major tonnage of pipe in this fine structure is one more testimony to the reputation, among informed users, of NATIONAL—

America's Standard Wrought Pipe

NATIONAL TUBE COMPANY, Pittsburgh, Pa.

Subsidiary of United States Steel Corporation



NATIONAL PIPE

do the most advertising socially. We are thought of as a luxury instead of a necessity.

Then there is that beautiful thing on paper, the Architects License Law. It means that every Tom, Dick and Harry cannot call himself "Architect" but it does not say that every contractor, carpenter, draftsman and handy-man cannot call himself a designer and draw plans for any building, buildings that when used by the public may be unsafe and unsightly, and if structurally safe may not be economically safe.

Here is the way I would like to see this law: Every residence of over a certain price, or every residence or building in certain restricted districts, and every building used in any way to accommodate the public, must have a licensed architect to draw plans and supervise the work. We need a set of teeth in our license law. The plumbers have a law that says that no person shall put in plumbing unless he is a duly licensed plumber. I'd sooner smell sewer gas than have the building fall on me or live next door to some monstrosity.

Now, what about advertising? Put some teeth in this license law, and why then worry about advertising, because on every job of any consequence there would then be a licensed architect and in this way the public would soon become acquainted with the duties of an architect.

Everyone knows what a plumber does because if they require this kind of work to be done then they must hire a licensed plumber or have their work condemned by the Inspector. "Who is going to be your architect" would soon be a logical and answerable question of every prospective builder.—*Norman B. DeKay, architect and engineer, Helena, Montana.*

• A QUESTION ABOUT FINANCING IS ASKED

Editor, THE AMERICAN ARCHITECT:

IN the October issue on page 41, the Certified Building Registry chart makes a comparison between the curate, as explained in the following letter:

In the cost of the cheap house is a financing charge of \$1305.00; the Quality House financing was but \$240.00.

We have financed a great many dwelling houses of all grades and the interest rate of six per cent per annum prevails on all classes of construction. Therefore, if the same amount of money was borrowed for both operations the charges should be the same.

I would be pleased to have more information on the financing of the operations scheduled by them.—*Walter H. Haker, vice president Construction Finance Corp., 293 Washington Street, Boston.*

• AND CLYDE MANN ANSWERS

Editor, THE AMERICAN ARCHITECT:

A REPLY to your inquiry required reference to Chicago to get information regarding the cost data used in THE AMERICAN ARCHITECT. We find the figures were those of actual costs authoritatively compiled.

However, we are surprised that there should be any query on this for the second mortgage discount money in most places has cost 15 to 25 per cent. We believe President Hoover used 20% as average. That usually is for three-year paper and renewals run high, too. The

figures for the country—perhaps not for Boston area—are too low.

You are evidently, however, more interested in the broad facts than specific cases. The proposal of an authoritative rating, which is now having some acceptance in New York City as we are doing some inspection work for one of the biggest lenders, is for the purpose of furnishing lenders, and we make the proposal specific to you, with more precise information than the biggest lenders have had about the hidden costs of excessive depreciation, excessive fuel and excessive maintenance which come of poor materials or workmanship or both. Rating is to show the "fortified value" by use of a Code of each type of building which weighs the various elements and factors according to their effect on quality.

If you will study the Rate-O-Graph that was printed (in part) in the American Architect and in Building Investment for December, you will see how it works in case of dwellings. Other Codes would consider other factors.

We have found that engineers for loan departments of life insurance companies say they have never adequately considered the importance of "fortified values" in this way.—*Clyde A. Mann, Director, Certified Building Registry, New York, N. Y.*

• CORRECTIONS ON GOLDEN GATE BRIDGE

A SAN FRANCISCO news bureau sent THE AMERICAN ARCHITECT photographs and data about the Golden Gate Bridge, which were duly purchased and published in good faith. Important credits were inaccurate, as explained in the following letter.

Editor of THE AMERICAN ARCHITECT:

Page 62 of THE AMERICAN ARCHITECT for February, showing the Golden Gate Bridge, has just come to our attention. We regret very much that this publication was made without reference to the office of either the Chief Engineer or the Architects for verification and authority, as it contains errors and omissions of an embarrassing nature.

While it is true that we are architects for portions of the bridge, among others the terminal plazas shown in your illustrations, the caption "The Golden Gate Bridge—Morrow & Morrow, Architects" gives an entirely false impression of our relation to the whole. Mr. Joseph B. Strauss as Chief Engineer is in complete charge of the project, and should be so credited in any publication. Mr. John Ebersson, Architect, also has acted in the capacity of consultant on important portions of the bridge.

You will realize that the page in question puts us in the position of appropriating unmerited credit, as such publication is commonly assumed to be with the knowledge of the architect in question. It would seem that anyone in a position to obtain this material for you might very readily have informed himself as to proper conditions surrounding its use.

We shall look for these corrections in sufficiently prominent form in your March issue.—*Irving F. Morrow, Morrow & Morrow, architects, San Francisco.*

An Architect-Owner says - "to avoid losing my tenants I'm installing **CHICAGO FAUCETS**"

"Some years ago I purchased an apartment building and the experience of being an architect-owner has been interesting in many ways.

"For instance, take the question of faucets. I always specify Chicago Faucets, but the building I bought did not have them. Consequently, tenants are always complaining about leaky faucets, and the expense of fixing or replacing them has been no small item.

"The other day my wife said to me, 'You can't afford to be buying new faucets all the time. Why don't you have the old ones repaired?' I replied, 'It's cheaper to buy new faucets than lose good tenants. If they move out, and apartments are vacant, I'm out hundreds of dollars. I can't afford to lose tenants, so why take a chance when I can install Chicago Faucets and thereby reduce complaints and expense to the minimum?'"

Maybe you don't own apartment buildings, Mr. Architect, but your clients own all kinds of buildings, and they all use faucets. You'll do them an everlasting favor by insisting on everlasting Chicago Faucets.

Mail the coupon for 76-page catalog and free cut-open sample.

THE CHICAGO FAUCET CO.,
2700-22 N. Crawford Ave., Chicago.

Tell me what an architect should know about Chicago Faucets.

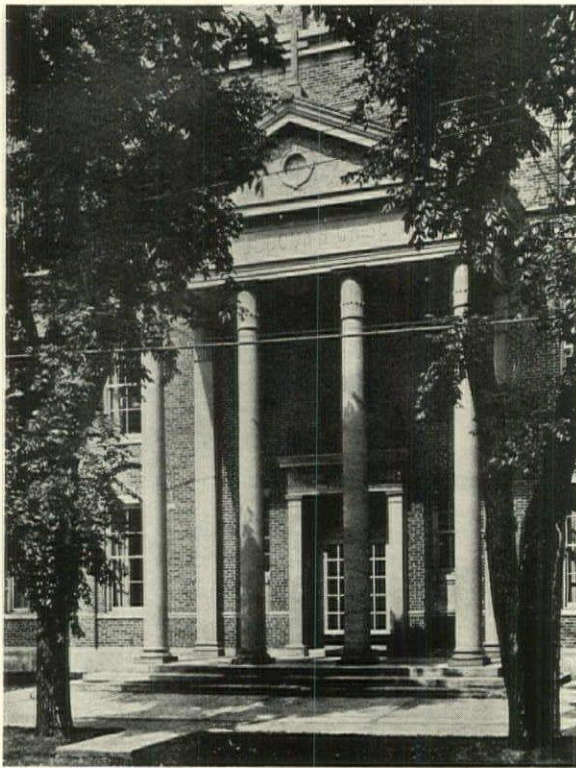
Name

Address



Made with standardized, removable unit. Seat or washer renewed for a few cents. As easy as changing a light bulb.

CHICAGO FAUCETS



Entrance, Muldoon High School for Girls, Rockford, Ill.
From "Catholic Churches and Institutions"

CATHOLIC CHURCHES AND INSTITUTIONS

By Wybe J. van der Meer, B.N.A., architect, 208 Mead Building, Rockford, Ill., who also is a publisher. Illustrated; size $9\frac{1}{4} \times 12\frac{1}{4}$; price \$15.00.

A MONOGRAPH of the work of Mr. van der Meer's office, containing illustrations of exteriors, interiors, details and plans of ecclesiastical buildings recently erected. Included are rectories, schools, gymnasiums, churches and other such buildings. In a few cases, renderings instead of photographs are reproduced.

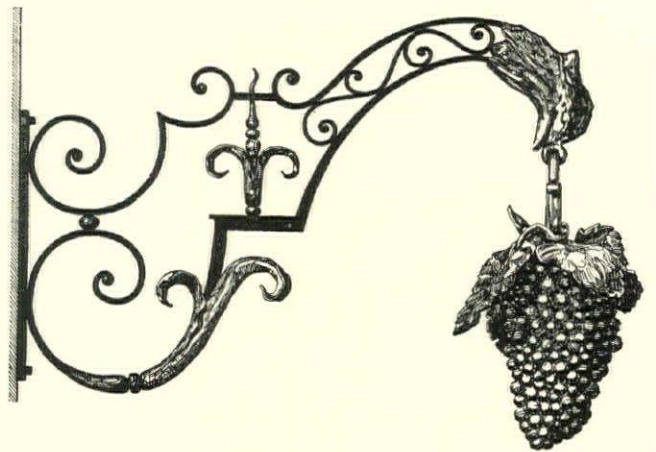
COLORING, FINISHING, AND PAINTING WOOD

By A. C. Newell. Published by the Manual Arts Press, Peoria, Ill. Illustrated; indexed; 417 pages; size $6\frac{1}{4} \times 9\frac{1}{4}$; price \$3.50.

ONE function of this book is to give information about the new and widely used wood finishes and painting materials which have been recently placed on the market. It therefore contains considerable material of interest to architects, although primarily intended as a text book for school use. The author is professor of

industrial arts at the Illinois State Normal University.

Some of the subjects covered by the book are preparation of the surface of wood with plane and scraper, surface abrasives and their use, wood-stains and water-staining, oil stains, spirit stains and applying stains, chemical stains, dyes useful as stains, coal tar dyes and their use as wood stains, wood fillers, enamels and enameling, lacquers, etc.



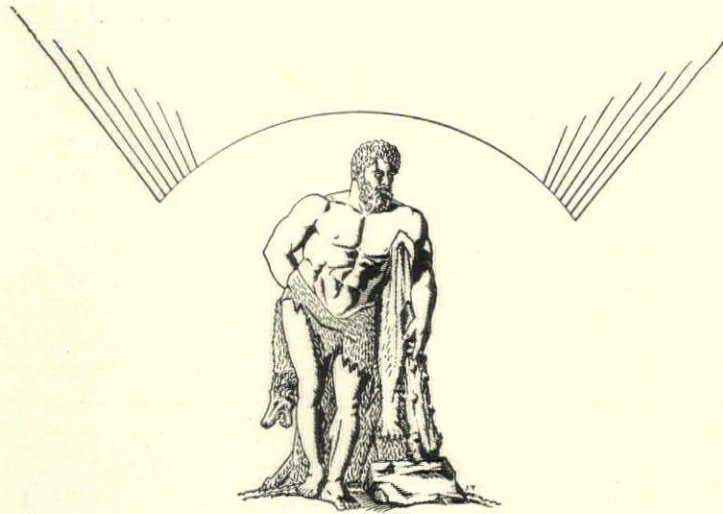
Cabaret Sign, Musee Lesecq des Tournelles, Rouen.
From "Year Book Boston Architectural Club"

YEAR BOOK OF THE BOSTON ARCHITECTURAL CLUB CONTAINING EXAMPLES OF METAL WORK—1930

Published by the Boston Architectural Club, 16 Somerset Street, Boston. Illustrated; 160 pages; size $10\frac{3}{4} \times 13\frac{1}{2}$; index; price \$5.00.

EXAMPLES of metal work from all over the world, and of all ages, are contained in this interesting volume published by the Boston Architectural Club. It contains not only a general survey of different periods in design, but also presents some heretofore unpublished photographs and numerous reprints from volumes not found in the average library. For instance, the frontispiece shows a collection of coins from the early Greek republics, a prolific source of decorative design, while the last page in the book shows illustrations of the copper, nickel and silver currency of the Irish Free State, youngest of the world's republics.

There are many measured drawings throughout the book, besides many fine sketches. The photographs are well chosen and cover a wide range of subjects: a pompeian lamp standard, a 12th century Verona grille, a 16th century Bologna Balcony, cabaret and tradesmen's signs in Paris, detail of entrance Chase National Bank, New York, and a host of other ancient and modern metal work worthy of note. There is an interesting preface by Charles D. Maginnis.



THE STRENGTH OF THE RUBEROID Co. IS BEHIND THE SERVICE OF EVERY RU-BER-OID BUILT-UP ROOF

Every time you specify a RU-BER-OID Built-up Roof a manufacturer of 40 years' experience and an investment of many millions stand behind you.

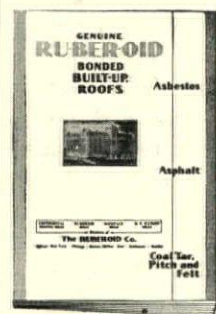
Every time you must choose a built-up roof best fitted to a specific building, remember RU-BER-OID offers you three types, Asbestos, Coal Tar Pitch and Felt, or Asphalt, in specifications that meet any condition of climate, atmosphere, unusual wear or roof design.

Every time there is a question of workmanship responsibility, remember RU-BER-OID Bonded Roofs. Such roofs are applied only by approved roofing contractors, and guaranteed both as to workmanship and material for 10, 15 or 20 years, according to the specifications used. This guar-

antee is backed by a National Surety Bond.

The price range of RU-BER-OID Built-up Roofs makes them attractive for any work. The service record proved over a long period of years places RU-BER-OID Built-up Roofs on the basis of true economy.

For ready reference, you will find a complete catalog of RU-BER-OID Built-up Roof specifications in Sweet's. Should you desire extra sets of these specifications, or face a roofing problem resulting from unusual conditions, there is an engineering department at each Ruberoid office listed below. Simply write or phone. Your inquiry will receive our prompt attention.



The RUBEROID Co.

ROOFING MANUFACTURERS FOR OVER FORTY YEARS

Sales Divisions: RUBEROID MILLS—CONTINENTAL ROOFING MILLS
SAFEPAK MILLS—H. F. WATSON MILLS—ETERNIT

ASPHALT SHINGLES AND ROLL ROOFINGS—ASBESTOS-CEMENT SHINGLES AND CORRUGATED SHEETS—ASBESTOS, ASPHALT, COAL TAR PITCH AND FELT BUILT-UP ROOFS—ASBESTOS, SHEATHINGS, FELTS, MILL BOARD, PIPE COVERINGS—KRAFT WATERPROOF PAPERS—COAL TAR AND ASPHALT FELTS AND SHEATHINGS—ASPHALT WATERPROOFING PAINTS AND CEMENTS—DRY FELTS AND SHEATHINGS

Offices & Factories: New York, N. Y.—Chicago, Ill.

Millis, Mass.—Eric, Pa.—Baltimore, Md.—Mobile, Ala.

IMPRESSIONS OF JAPANESE ARCHITECTURE

By Ralph Adams Cram. Published by Marshall Jones Company, 212 Summer Street, Boston. Illustrated; indexed; 242 pages; size 6 1/4 x 9 1/4; price \$4.00.

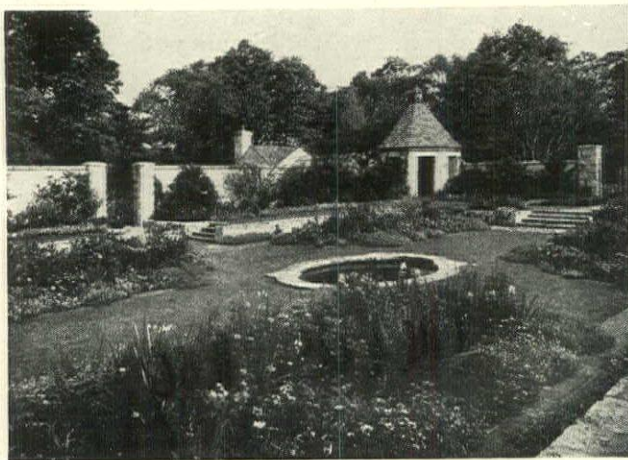
THIS is the revised edition of a book long out of print. It covers the whole field of the history and tradition of Japanese architecture and its allied arts from the Sino-Korean Kondo at Horiuji, said to be the oldest wooden building in existence, down to modern times. The new edition contains many new illustrations.

Some of the subjects covered in this very interestingly written book are the early architecture of Japan, the later architecture of Japan, temples and shrines, temple gardens, domestic interiors, the minor arts, Japanese sculpture, and the future of Japanese art.

Of this book, Professor K. Okakura said it was the best on Japanese architecture ever produced by a Westerner. Certainly Mr. Cram's fine insight into architecture and his time spent in Japan should produce something well worth while.



Figure from "Impressions of Japanese Architecture"



1930 YEAR BOOK OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

Published by the House of J. Hayden Twiss, New York. Illustrated by 144 plates; size 10 x 13; price, boards \$4, cloth \$5.

LANDSCAPE architecture by members of the American Society of Landscape Architects is the subject of this book. The material is interesting, well chosen,

and represents various parts of the country. It consists not only of views of private estates but also includes many scenes in public parks. A number of landscape plans are included in the book.

The material was prepared by a committee of which Clarence Fowler was chairman, and included Noel Chamberlin, Richard C. Jenkins, Norman T. Newton, Bremer W. Pond, and Leon H. Zach. A list of members of the Society is given, and there is a foreword by Richard Schermerhorn, Jr., on the history of the Society. Included also is a list of standing committees and a list of special committees for 1930.



Sheraton Writing Desk

THERE is always a certain grace of line and delicacy of proportions to be found in Sheraton designs, which are well brought out in this writing desk. It is especially suited for a lady's use, containing many drawers, and compartments for stationery, supplies, and the like, besides being very spacious.

Lay out in full size the framework for the curved drawer fronts. Before staining, apply two coats of white shellac to all inlay work, to prevent the stain from taking.

This design can be simplified by making the front of the drawers of the desk just straight. In that event, increase the size of the two side rails.

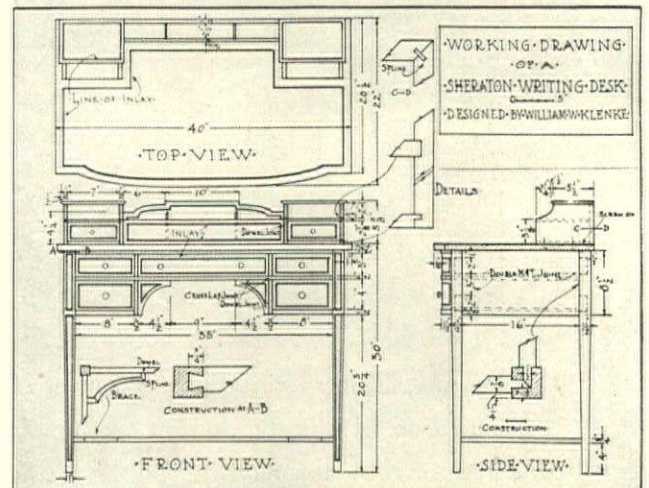


Plate from "Selected Furniture Drawings"

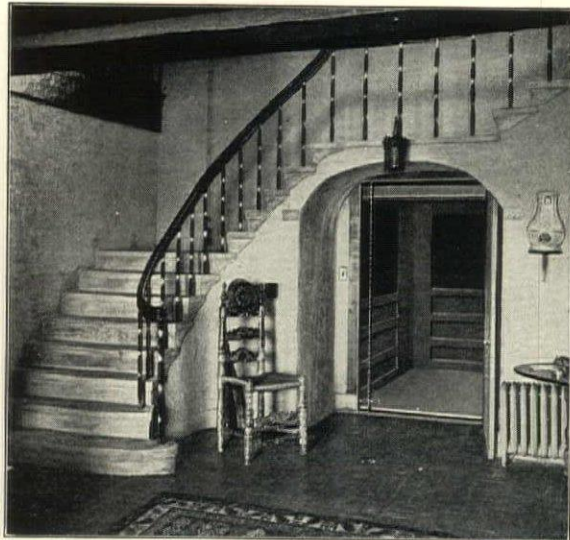
SELECTED FURNITURE DRAWINGS

By William W. Klenke. Published by the Manual Arts Press, Peoria, Ill. Illustrated; 18 pages and 46 plates; size 9 x 12; price \$3.00.

ARCHITECTS or draftsmen interested in making furniture will find this book of considerable interest. It contains a few preliminary pages on how to make furniture, including how to use a circular saw, how to use a lathe, how to use a jointer, and similar machines. Also some hints on wood finishing, drawer construction, methods for fastening tops to rails, etc. The latter part of the book is a series of 46 plates each showing the picture of some piece of furniture with drawings showing dimensions and construction.

Mr. Klenke is instructor in woodworking in the Central Commercial and Manual Training High School, Newark, N. J., and is a registered architect in the State of New Jersey.

Specify



THE
SEDGWICK
INDIVIDUAL
ELEVATOR

A RESIDENCE ELEVATOR

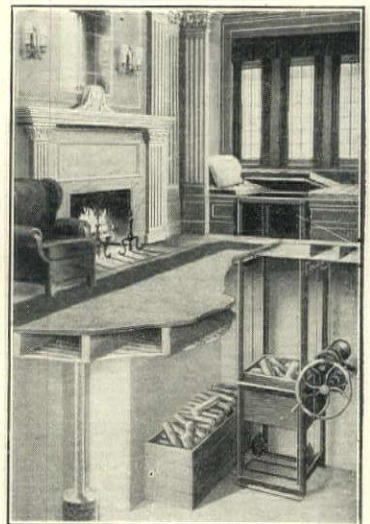
for those who should not or cannot climb stairs

HERE are many instances where an architect, when planning a new residence, must provide for some person who is unable to climb stairs, or who has been ordered by the doctor to avoid stair-climbing. The Sedgwick Individual Elevator exactly meets this condition. Its cost is moderate. It is easy to install, and requires very little space. It is so perfectly constructed as to be operated with the utmost ease, even by a child. Practically no maintenance or attention is required once the installation is completed. This Elevator can also be readily installed in an existing house.

And a SEDGWICK FUEL LIFT *for the Open Fireplace*

MUCH of the charm and delight of an open fireplace is offset by the impractical manner in which fuel must be carried to it. The Sedgwick Fuel Lift overcomes this one great objection by bringing the fuel to a point close to the fireplace. It eliminates physical strain and the tracking of dirt through the house. There are numerous ways in which the lift can be installed without spoiling a carefully planned interior.

TWENTY-ONE standard types of Sedgwick Dumb Waiters, Lifts and Elevators are available for your vertical transportation needs. We have been cooperating with architects for more than 40 years and we welcome the opportunity to submit recommendations and specifications to meet specific requirements.



New Complete Catalog

Contains much helpful data, such as blue prints, specifications, and a special chart of suggested uses of Sedgwick equipment for various types of structures. Copy gladly sent on request.

SEDGWICK MACHINE WORKS

148 WEST 15th STREET · NEW YORK, N. Y.

BALTIMORE, MD.
509 North Charles St.

CHICAGO, ILL.
400 W. Madison St.

DETROIT, MICH.
1233 Griswold St.

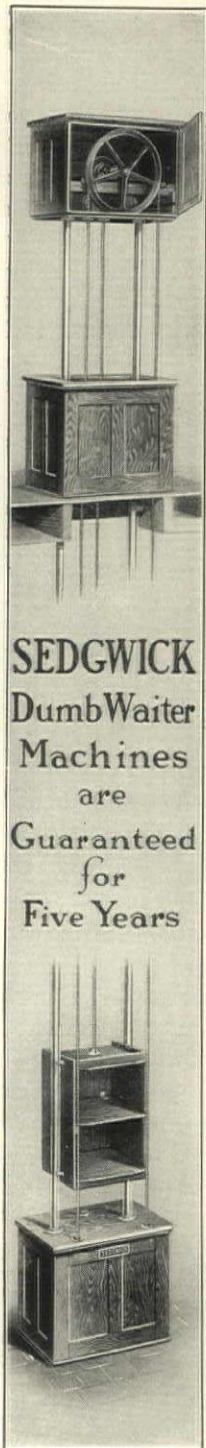
SEATTLE, WASH.
332 Pioneer Bldg.

BOSTON, MASS.
120 Fulton St.

CLEVELAND, O.
1737 E. 18th St.

LOS ANGELES, CAL.
722 Story Bldg.

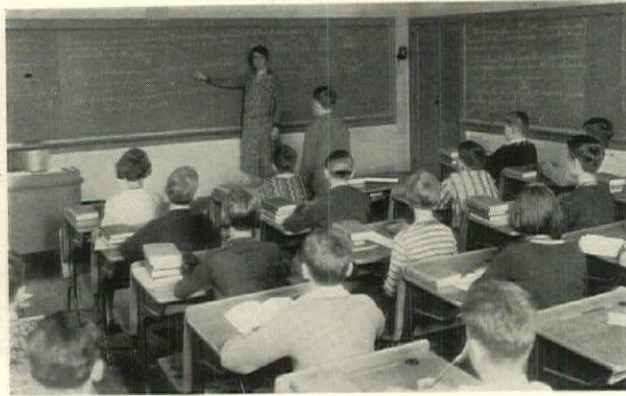
WASHINGTON, D. C.
614 11th St., N.W.



SEDGWICK
DumbWaiter
Machines
are
Guaranteed
for
Five Years

NEW MATERIALS & EQUIPMENT

BRIEF REVIEWS THAT MAKE IT EASY TO KEEP IN TOUCH WITH THE PROGRESS MADE BY PRODUCERS



Colored Blackboards

Porcelain enameled blackboards in various colors for use in schools are now being made by the American Seating Company, Grand Rapids, Mich. The color used may be any shade the architect desires: green, blue, brown, etc. It is claimed that besides permitting the attractive use of color, the new boards are more restful on the eyes. The metal base is Armco ingot iron special enameling sheets; three sheets of vitreous enamel are fused on to the base, the glossy-surface being etched with acid to remove the glaze. The boards are said to have a surface free from reflections and to be well suited to writing and erasing.

Safety Distribution Panel

The square D Company, Detroit, Mich., has announced a dead front safety distribution panel. Complete safety is assured as no live parts can possibly be touched even when the switch door is opened. Opening the door instantly disconnects all live parts and leaves the fuses accessible upon a fixed base, on which is also mounted the switch.

The panel interiors are interchangeable with units of various sizes; each unit may be changed to fit larger or smaller fuses.

Bathroom Combination For Hotels

A bathroom combination has been announced by the Welded Products Corp., Kansas City, Mo. This combination consists of a medicine cabinet, bathroom lighting fixtures, electrical receptacles, towel shelf and water bottle hooks, all furnished in one complete unit.

Webster Boiler Protector

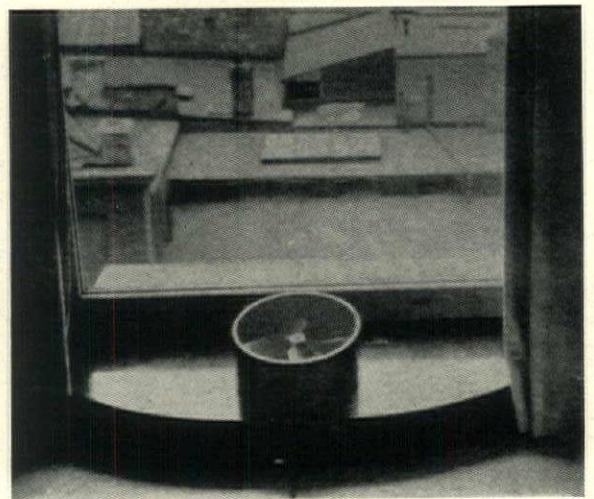
A new boiler protector has just been placed on the market by Warren Webster & Company, Camden, N. J. The purpose of this new device is to protect low-pressure heating boilers against accidental low water line. This protector is an hydraulically operated valve embodying an unusually powerful operating mechanism.

Thermostatic Device Controls Steam Supply

Radiatherm is a new thermostatic device for automatically and individually controlling the steam supply to each radiator on two-pipe systems. Made by the American Radiator Company, 40 West 40th Street, New York City. It is claimed that fuel economies of from 20% to 40% are possible with this device as compared with hand operated valves.

Flame Proof Wood

Distribution of a new fire-resistant and flame proof wood is announced by Henry Klein & Co., New York. The new process, it is declared, does not impair the wood's natural characteristics and enables it to be finished and stained. In a recent test, conducted before public officials in New York, a wooden door treated under the new process was subjected to 1700 degrees of heat for 60 minutes before the fire ate its way through.



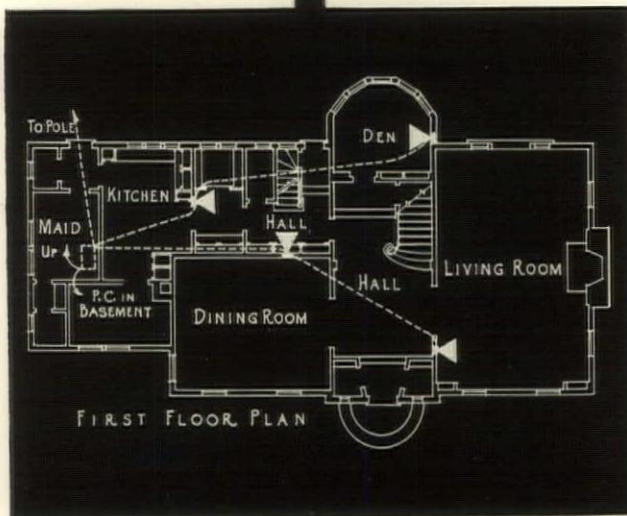
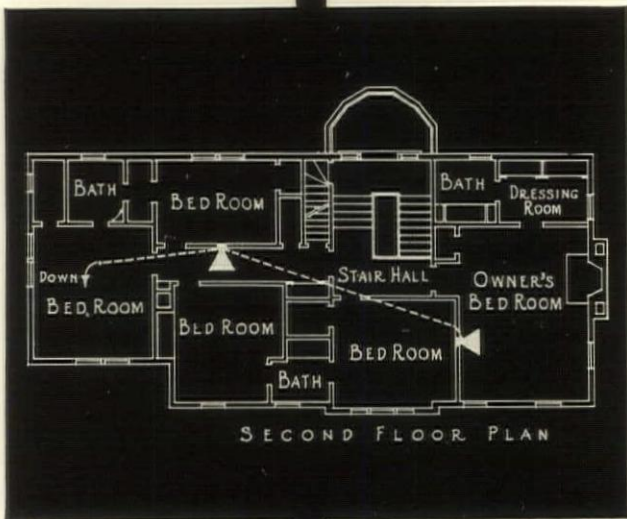
Noise Filter

The Maxim Window Silencer has been placed on the market by the Maxim Silencer Company, Hartford, Conn. This is a device for giving conditions of quiet in an office, hospital room, dwelling, or other place where city street noises enter through open windows. The Silencer is declared to keep noises out as efficiently as if the window were closed. The product has been so designed as to make it serve either as an exhaust fan or as an intake fan, and is equipped with a shutter so that it may be closed entirely in case the natural wind draft is more than desired. Motors may be either alternating current or direct current. An additional device, where greater quiet is desired than afforded by a closed window, is a double window with the silencer. This second window is designed so that it may be easily raised.

Six outlets provide for telephone convenience in the residence of Mr. Charles H. Ingram, 414 North Seventh Street, Tacoma, Washington. Conduit, built into walls and floors, carries all wiring. HILL, MOCK AND MORRISON, Architects; C. N. UDALL, Inc., Builder, Tacoma.



FROM COAST TO COAST, TELEPHONE CONVENIENCE HELPS MAKE HOMES DISTINCTIVE



COMFORT, quite as much as beauty, distinguishes the well planned home today. It is altogether essential to the busy, active lives that Americans live. And in every corner of the country, architects have demonstrated that *telephone convenience* contributes largely to complete home comfort.

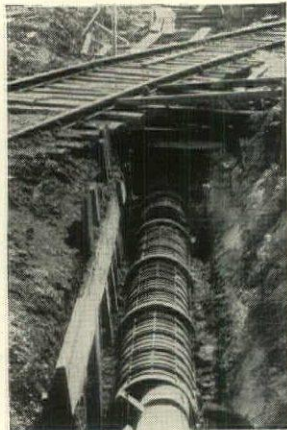
Telephone convenience means the saving of time and steps by having telephones in all important rooms. It is easily and economically provided by planning in advance—by placing conduit in walls and floors during construction. This improves interior appearance by concealing all wiring, insures against certain types of service interruptions, permits telephone outlets exactly where they're wanted, and makes all the home more *livable*.

Your local telephone company will gladly help you plan the telephone arrangements for new or remodeled residences. There is no charge. Just call the Business Office.



RIC-WIL CAST IRON CONDUIT for EXTRA HEAVY DUTY

Extra protection must be provided for steam lines running under heavily traveled highways, railroad tracks and other places subject to unusual loads, shocks or vibration. Ric-wil Cast Iron Conduit provides this extra protection—and eliminates special field construction.



Ric-wil Cast Iron Conduit permanently protects these steam lines under a railroad siding no extra trenching or special construction necessary

Cast Iron Ric-wil is made in 4 foot sections cast in

separate top and bottom halves for assembling in trench. Special reinforcing ribs give it great strength with moderate weight and also give it some flexibility—enough for all practical purposes. Top and bottom sections lock together with special clamps and alignment lugs and then are sealed together with the famous



Ric-wil Conduit provides speedy, inexpensive installations, effective close-under drainage, compact staggered interlocking construction, external pipe supports, and a strength and water-tightness that guarantees permanent dry efficiency.

Ric-wil Loc-liP side joint, assuring a tight, waterproof job. It is installed on special heavy duty tile Base Drain or Cast Iron Base Drain, as conditions may demand.

Ric-wil Cast Iron Conduit is interchangeable with Ric-wil Tile Conduit—the main run may be Tile with Cast Iron only under railroad tracks, etc.



Ric-wil Engineers can successfully and economically solve your underground steam pipe problems. Write for full details and our special Bulletin on Cast Iron Ric-wil. No obligation, of course.

THE RIC-WIL COMPANY

1562 Union Trust Building Cleveland, Ohio

Branches: New York · Atlanta · Chicago
AGENTS IN PRINCIPAL CITIES

REG. U. S. PAT. OFF.

RICWIL

CONDUIT SYSTEMS FOR
UNDERGROUND STEAM PIPES

Paper Architecture

(Continued from page 24)

on the part of the designer and certainly there is none for the picture with which he soothes his conscience.

Fire-escapes and electric signs are not the only issues which architects commonly avoid. The same tendency is evident in many of our tall buildings with their verticals and, more recently, their horizontals. It is quite amusing to compare the actual building with its rendering. It is equally entertaining to observe the haste with which architects will call in the most popular renderer almost as soon as a job gets into the office. Effects are achieved on paper which are beyond realization on the structure. By the time the generous reveals which the artist has shown run the gantlet of engineer and owner, they become mere surface scratches.

Tall commercial buildings are essentially, and in spite of the verticals and horizontals, rectangular masses punched with windows. My point is simple. When an architect creates a design which is vertical or horizontal or even oblique, as Kenneth Murchison has suggested, and the finished product does not achieve the intended effect, we are justified, for the purposes of logic, in calling the designers' attempt a failure. Perhaps we would have fewer failures if our renderings were less successful. Perhaps if the problems of design were faced honestly and sincerely we would get better-looking buildings.

It is not irrelevant to suggest here that verticals or horizontals do not "express" steel. A steel skeleton for a building is neither vertical nor horizontal and will take care of its own expression if given an opportunity. The term "expression" is merely an easy justification of a current fad.

The rational reader does not need to have attention called to the entourage and its abuses. Students are not the only individuals guilty of distracting attention (their own included) from the real problem with foliage, landscaping and reflections in water or wet pavements. Ostensibly the entourage is there to complement the building. I claim that surroundings which would take fifty to one hundred years to approximate the rendering are not of much value and that surroundings which do not exist, except in the fertile fancies of our renderers, are falsehoods.

Consider the architect of a building in one of our canyon-like streets. His perspective "studies" are not hampered by any existing limitation. He blithely goes ahead and takes his station point somewhere in the next block. Neighboring structures which are harmful to the composition of his drawing are omitted. And thus by omission and commission he finally achieves a picture which can never claim realism among its virtues.

Rendering has been defended as a good architectural selling point. No one can deny that. It is obvious too, that the girl in the scanty bathing suit is a good selling point for automobile tires. But when the charms of the young lady obscure the facts that the tires in question are made of inferior rubber and are poorly constructed it is time to ask some questions. Is architectural design to be a serious and honest solution of a problem or merely an illusion on paper? Are architects to become super-salesmen?

(Continued on page 86)



STAATSBURG SCHOOL, DISTRICT No. 2, TOWN OF HYDE PARK, STAATSBURG, N. Y.

C. H. GARDINIER, Albany, N. Y., *Architect.*

The use of Soapstone quoins and trim on Independence Hall, Philadelphia, establishes the precedent for this material in Colonial architecture. In this modern adaptation of Colonial design the natural beauty of the Alberene Stone (soapstone) Spandrels contrasts beautifully with the red brick. Thin Alberene Stone Spandrels save space by providing recessed pockets for radiators; accent vertical lines;—no maintenance cost, no painting, no sand blasting—durable beyond question. (See details and other information overleaf.)

Details of Alberene Stone Spandrels

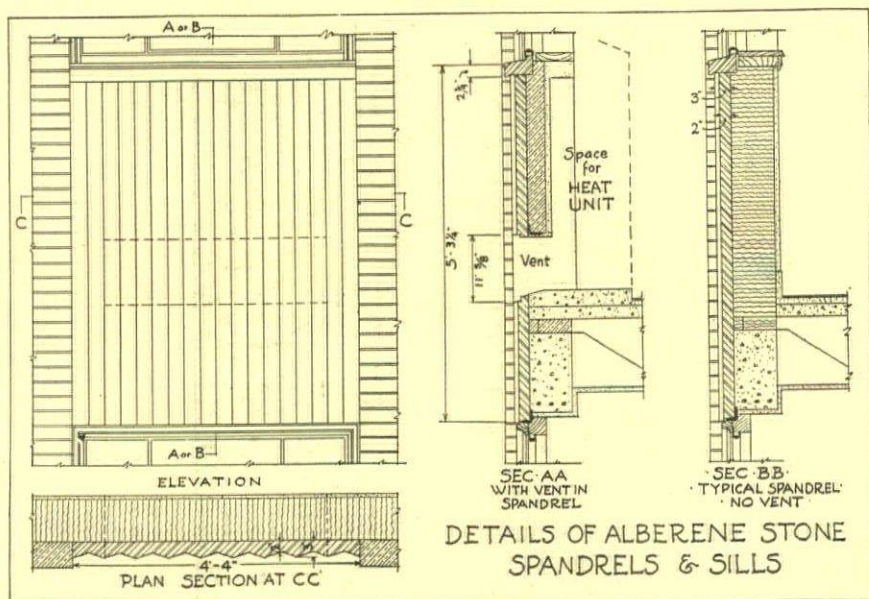


FIGURE 1—ALBERENE STONE SPANDRELS as installed between 1st and 2nd story windows, Staatsburg School. (See illustration on preceding page.)

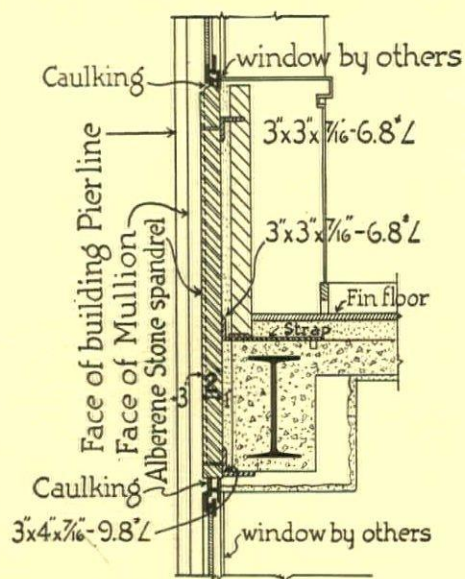


FIGURE 2—An office building installation showing 2" thick ALBERENE SPANDREL with 2" brick backing, thus allowing radiator to be recessed in wall under window.

Information for the Specification Writer on Alberene Stone Spandrels

FIGURE 1 shows single window ALBERENE STONE SPANDREL. Section AA shows vent through spandrel and recess in wall for the installation of self-contained heating and ventilating unit. BB is typical section showing ALBERENE SPANDREL used as veneer over hollow tile wall.

EXTRA FLOOR SPACE

FIGURE 2 shows wall section of a double spandrel job. ALBERENE mullion is also shown. The construction here makes it possible to place the radiator back of the wall line leaving the floor area clear, and reduces materially the weight of the wall.

SPECIFICATIONS

MATERIAL (Double Spandrels). All spandrels to be structurally sound soapstone, grade equal to ALBERENE STONE. Stone not to be less than 1 1/2" thick at thinnest point. Each pair of spandrels to be securely bolted to three horizontal angles extending 2" beyond spandrel at each end.

Bottom angle to be 3" x 4" x 7/16", center and top angles to be 3" x 3" x 7/16". Mullion to be 3 3/4" x 3 3/4" soapstone, rebated and bolted to steel flat 3 1/2" x 1/2".

CONSTRUCTION (Double Spandrels.) Spandrels to be embedded in masonry 2" on each side, angles extending 2" farther into masonry to provide additional anchorage. Center angle to be bolted to unfinished floor by straps on 16" centers.

(Single Spandrels). (a) Spandrels to be embedded in masonry 2" on each side, or (b) where spandrel is not embedded in masonry at sides it shall rest on 3 1/2" x 2" x 3/8" angle and be secured to the wall by anchor straps, or to piers at sides with dowels.

SPECIAL CASES. Where window is set with deeper reveal than face of spandrel, provide counter sill. Counter sill to be rebated for metal window frame and securely bolted to spandrel. Also provide soffit return for lintel at window head. Soffit to be bolted to under side of the 3" x 4" x 7/16" angle.

NOTE. Angles are not needed with single spandrel unless of excessive dimensions requiring multiple units. Where space is not larger than 5'0" x 4'0", we recommend the use of single slab rather than built-up spandrels.

ALBERENE STONE COMPANY, 153 W. 23rd St., New York

BRANCHES: CHICAGO :: PHILADELPHIA :: BOSTON :: NEWARK :: PITTSBURGH
CLEVELAND :: RICHMOND :: WASHINGTON, D. C. :: ROCHESTER

QUARRIES AND MILLS AT SCHUYLER, VA.



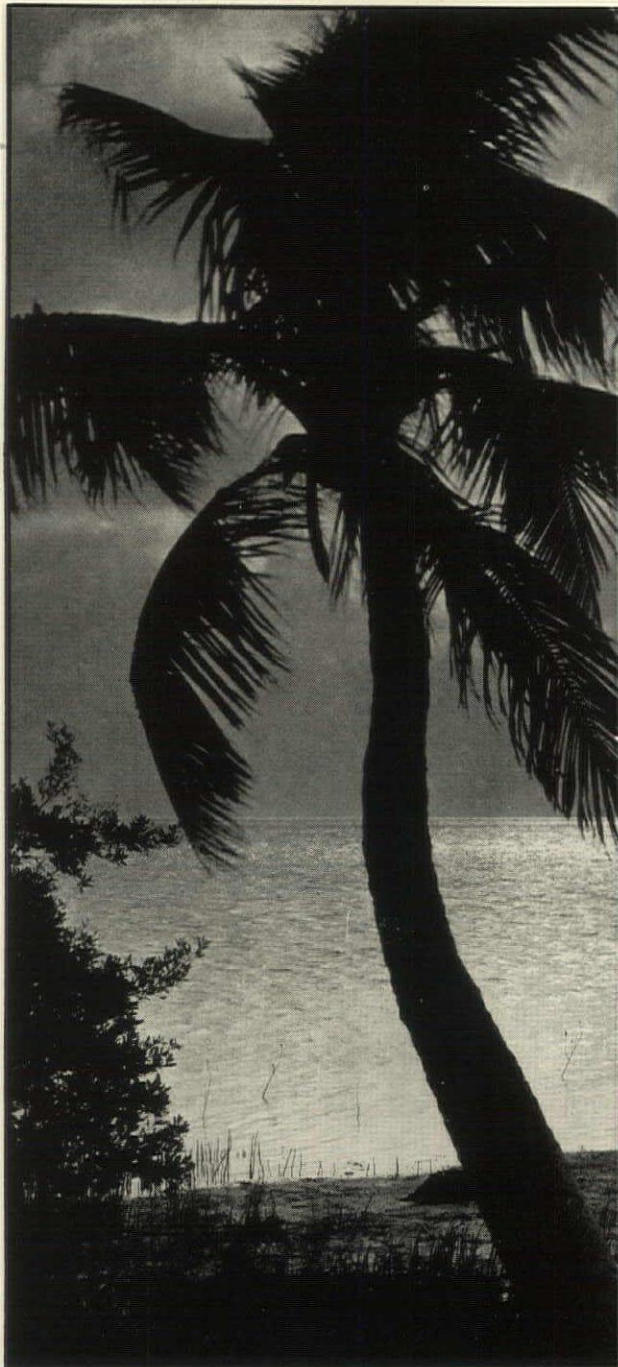
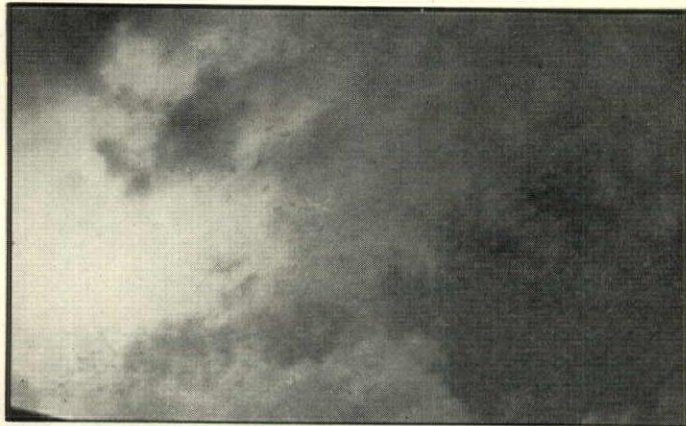
The new City Hall at Buffalo, N. Y., Dietel and Wade and Sullivan W. Jones, Architects, Geo. F. Fisk, Commissioner—Public Works. ALBERENE STONE SPANDRELS used.

Our Architects' Service Department will welcome the opportunity of submitting samples of ALBERENE STONE and of supplying any information desired regarding its fabrication, ornamentation, and physical properties. The brochure "Architectural Alberene" is available, also.

ALBERENE STONE SPANDRELS

THIN SLABS OF NATURAL STONE - BEAUTIFUL - ENDURING

**NO "WRONG" SIDE
TO THIS
FLATTER GLASS**

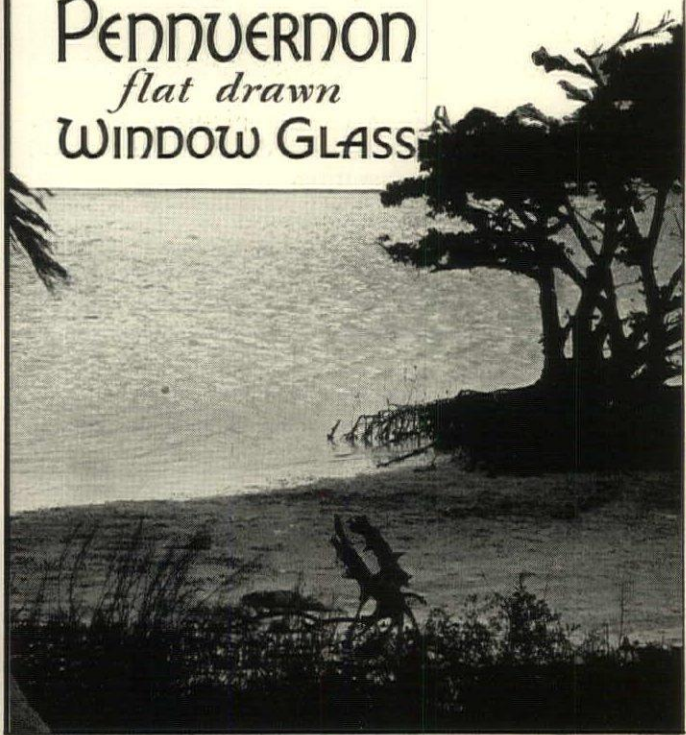


PENNVERNON Window Glass can be glazed *either side out*—for both surfaces have the same flatness—the same remarkable, brilliant luster. This new flatness comes from the new Pennvernon *vertical drawing* process, which keeps the sheet flat throughout every step of its manufacture—and produces glass that has a new, clearer visibility.

You would expect to pay more for a glass like Pennvernon, but the surprising fact is that it costs no more than you are paying for *ordinary* glass.

See for yourself this achievement in modern glass-making. Any warehouse of the Pittsburgh Plate Glass Company is ready to supply Pennvernon promptly. There's a warehouse in your locality. Send for new illustrated booklet containing the story of the new way this glass is made. Pittsburgh Plate Glass Company, Grant Building, Pittsburgh, Pa.

PENNVERNON
flat drawn
WINDOW GLASS



In the Better Homes
VICTORIA VENETIANS
enhance
THE ARTISTIC



TRULY, a part of the picture, Victoria Venetians add to the artistic, the beautiful, in this interesting setting.

For studio, living room, dining room, sleeping room—all windows in the modern home—Victoria Venetians harmonize. More efficient, too, than any other type of window shading—in fact, the only practical solution of day lighting.

The mechanical excellence of Victoria Venetians commends this blind for your consideration.

THE
BOSTWICK-GOODELL CO.
 Blinds since 1894
 NORWALK, OHIO
 Representatives in Principal Cities

See Sweet's for detailed
 specifications



VICTORIA
VENETIANS
The Better Blinds

Hugh Ferriss, in a discussion with Frank Lloyd Wright, made the point that the architect should consider in his design the effect on the average man. No doubt Mr. Ferriss felt, and correctly, that architecture exerts a tremendous influence on people who are in contact with it, though the process is largely a subconscious one. In his answer, Mr. Wright gave the basis of all art. He claimed that the "average" man is a creature of spoiled taste, of poor intelligence and culture and certainly no criterion for a creator's efforts. The true artist is his own judge and is not swerved from his purpose by the demands of the laity. And then in a splendid analogy, Mr. Wright described the difference between the true actor and the actor who plays to the gallery. Of course such ideals are in direct opposition to the standards of modern advertising and high-pressure salesmanship.

The apartment-house owner and the office building owner cater to the "average man." It is their desire to give him what they think he wants. And they bend the architect easily to their will. He strives, under their urging, for the novel and spectacular with a desire to impress that peer of critics, the man in the street. The average man does not want truth or sincerity. He wants romance and illusion and the things he has been taught to esteem. And since he pays for it he gets it, whether it be architecture or period furniture.

Architectural designers will continue to produce "paper architecture" until they are free from the influences which turn them from the straightforward and sincere effort to integrate function, construction and design.

I don't suppose much can be done about all this. Clients will continue to demand pictures and weak architects will continue to hide weak architecture with rendering. It is not my contention that the abolition of rendering in the schools and its discouragement among architects would help improve architecture. It isn't enough of a causative factor and further, the fault is not with rendering. A fine rendering can hide a good building too. But a reform in the attitude of architects and students and the uses to which they put rendering would go a long way toward improving the final appearance of our buildings.

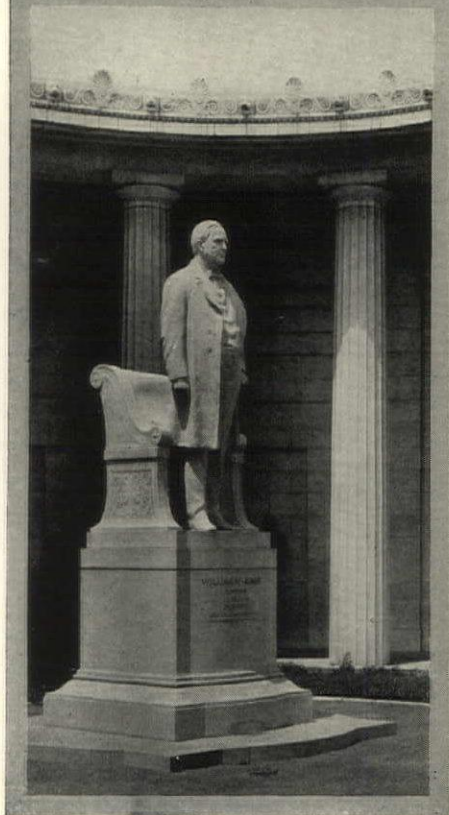
Lest my criticism seem too general, I confess that I know many architects who are above the practices I have indicated. They too are aware of the evils in the misuse of the rendering. I have faith in the line drawing. Frank Lloyd Wright and Corbusier do not feel the need for elaborate renderings. Their work is replete with straightforward line drawings. And excellent architecture is being done in Germany, Denmark, Sweden and Holland without the assistance of artistic paper compositions.

BULLETINS

HOW TO JUDGE A HOUSE. Published by the National Committee on Wood Utilization, U. S. Department of Commerce, Washington, D.C. Price ten cents.

RAT PROOFING BUILDINGS AND PREMISES. Farmers Bulletin No. 1638 of the U. S. Department of Agriculture, Washington, D.C. Price five cents.

GEORGIA MARBLE



NATIONAL MEMORIALS

In addition to the McKinley Memorial, Georgia Marble is also used to perpetuate the memory of two other presidents of the United States—the heroic statue of Lincoln (in the Lincoln Memorial at Washington, D. C.) and the Harding Memorial (recently completed at Marion, Ohio.)

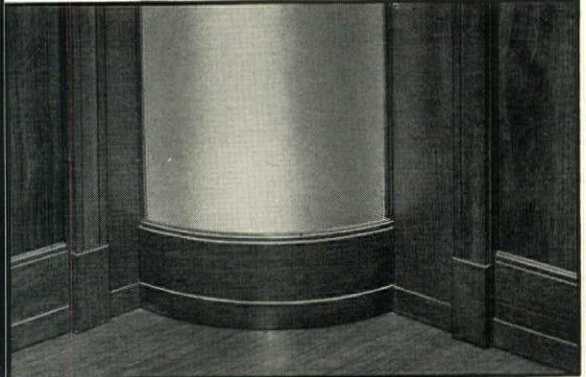
The crystalline beauty, workability, and durability of Georgia Marble account for its extensive use not only for large memorials but for many government buildings in Washington and elsewhere.

The William McKinley Memorial, Niles, Ohio, McKim, Mead & White, Architects. Statue shown at left, J. Massey Rhind, Sculptor. The entire work, including the statue and its pedestal, is built of Georgia Marble. The 28 columns are monoliths 25 feet high.

THE GEORGIA MARBLE COMPANY • TATE • GEORGIA
NEW YORK • ATLANTA • CHICAGO • DALLAS • CLEVELAND



This is No. 4 of a series of advertisements setting forth things to look for when considering partitions.



Partitions often extend from columns as shown above. Joints are neat and trim. A section of standard base mold is carried around the column base.

Hauserman Partitions and Hauserman Steel Panelling harmonize with fine office furnishings to provide attractive business homes.

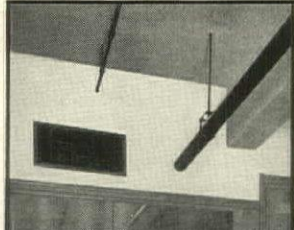
HAUSERMAN PARTITIONS MEET *unusual* CONDITIONS WITH STANDARD CONSTRUCTION

Complete adaptability and interchangeability feature these modern steel partitions . . .

UNUSUAL CONDITIONS and the problems they create are easily solved by Hauserman Partitions. In buildings where ceiling heights vary on different floors, these modern partitions are always interchangeable.

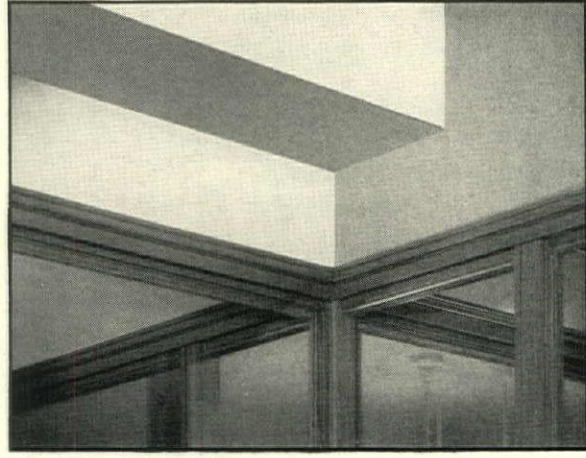
Overhead pipes, beams, sprinkler systems, and other irregularities are met in a way which assures close fit, finished workmanship, and an attractive, clean-cut installation. Uneven floors are compensated for by adjustable plinths, mop strips and by floating door frames.

In connection with partition installations, Hauserman provides such supplemental requirements as hardware, railings, wainscoting, radiator covers, access panels, slide doors, shelves, roofs . . . even a patented picture hook!



Pipes, beams, ventilators and other obstructions are completely enclosed by a top filler extending from the partition to the ceiling.

Visit the 1931 New York
PARTITION SHOW
The next time you're in New York don't fail to see this thorough presentation of modern partitioning methods.
ENTIRE TOP FLOOR
10 EAST 40TH STREET, NEW YORK



Partitions can be extended in one, two, three or four directions from any post. Top filler which is adaptable to different ceiling heights, is usually finished to match the ceiling.



THE E. F. HAUSERMAN COMPANY

A nation-wide organization of Partition Specialists
6824 GRANT AVE. CLEVELAND, OHIO

Factory Directed Planning and Erection Service from these 13 Factory Branches

- | | | | | |
|-------------------|--------------|----------|------------|-------------|
| Newark | Philadelphia | Buffalo | Boston | Kansas City |
| Chicago | Pittsburgh | Detroit | Cincinnati | St. Louis |
| Washington, D. C. | | New York | Cleveland | |

HAUSERMAN MOVABLE STEEL PARTITIONS

THE AMERICAN ARCHITECT

INTERNATIONAL CASEMENTS



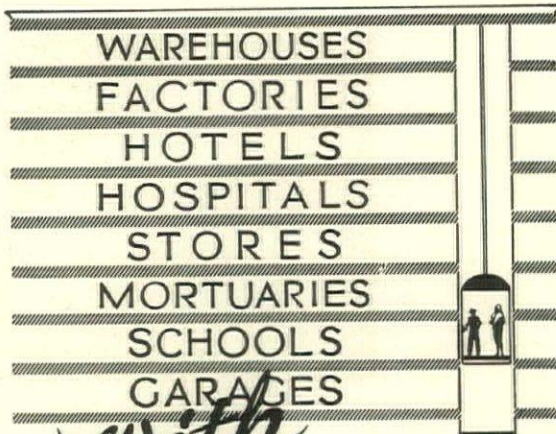
Union Bank & Trust Company, Little Rock, Arkansas Thompson, Sanders and Ginocchio, Architects

THE sub-frames, mullions, spandrels, frets, and rosettes in these windows are of aluminum in natural finish. † † The International Casement Company will be glad to give every assistance to architects in planning structural details of unusual features such as the above.

Descriptive literature will be sent upon request.

INTERNATIONAL CASEMENT CO., INC., JAMESTOWN, NEW YORK

Tying The Floors Together



with
**KIMBALL
ELECTRIC
ELEVATORS**

It may be two floors or forty that you wish tied together with vertical transportation.

There is a Kimball Elevator and Machine made to perform the specific task which you have in mind . . . The ranges in Kimball elevators extend from the simple hand power machines to the passenger speed machines traveling 600 vertical feet per minute. We place an especial emphasis on the Kimball line of inexpensive and easily installed Light Electrics with lifting capacities ranging from 1,000 to 5,000 lbs.

Write for detailed information on the type of machine you require.

KIMBALL BROS. CO.

1119-27 Ninth St. Council Bluffs, Iowa



Branches:

TULSA
SALT LAKE
MINNEAPOLIS
LOS ANGELES
ST. LOUIS
DENVER
KANSAS CITY

What Architects Are Talking About

(Continued from page 61)

building, and 34% that there will be less. On commercial construction, 50% forecast the same amount of construction, 10% forecast more and 40% forecast less. On residential construction, the percentages are 48% the same, 21% more and 31% less; on farm construction, 44% the same, 20% more, and 36% less; on public buildings, 46% the same, 17% more, and 37% less.

A NEW national association of architects is being sought by the State Association of California Architects. This organization recently passed the following resolution.

"WHEREAS The State Association of California Architects realizes that the problem of the architect is no different in this state than it is in every state in the Union. If one state profits by what its Association does it will reflect and be a benefit to other state associations; if one suffers others will suffer likewise.

"And whereas the great majority of architects are unorganized, except as they may be locally or as a state organization, and further, since the general welfare of architects may be bettered by an exchange of views from all sections of the country. Therefore, we believe that the time has come to sound a call to all architects to assemble all such groups or individual architects, who are not identified with The American Institute of Architects, to meet in convention.

"Therefore be it resolved, that The State Association of California Architects undertakes to advise and counsel with all other associations or organizations to consider the feasibility of calling appointed delegates together for the purpose of organizing all such interests and to name a time and place for such a meeting.

"Be it further resolved, that the purpose of such a meeting or organization shall not be held detrimental to the best interests, high aims and purposes of The American Institute of Architects, but in so far as it is possible it shall fill a subordinate position, assuming a place and sphere of work that remains unorganized as a National group."

RICHARD II scoured England in the fourteenth century to find enough glass to repair the windows in one castle for glass was considered a great luxury. Yet Pompeii had glass in its windows.

THE radio cabinet idea contest conducted by the Westinghouse Company was won by a young architect, Peter Copeland, Newark, N. J. The first prize was \$5,000. More than 150,000 ideas were submitted.

DEATHS

HOWARD K. JONES, one of the most widely known architects in Western Pennsylvania, died on January 21. He was the senior member of the architectural firm of Alden, Harlow & Jones, whose offices are in the Farmers Bank Building Pittsburgh. He was an active member of the American Institute of Architects and a past president of the Pittsburgh Chapter.

NEW SANITARY SEATS THAT STAND THE GAFF

Stasco Empire White Seamless Finish Seats

Stasco Empire Seamless Finish toilet seats are built to stand the gaff of hard usage. The surface of these seats is sealed with a continuous covering of dissolved Pyralin applied in liquid form without a joint or lap, and in our opinion is not excelled by any other finish on the market today. No water can penetrate this Seamless, sealed surface. This means not only a more sanitary seat, but a longer-lasting one. This tough, polished, sealed surface is more easily kept clean, sanitary and attractive.

Stasco Empire Seamless Finish toilet seats are surprisingly inexpensive. Architects and owners are making worthwhile economies in their toilet equipment costs by using these inexpensive sanitary seats.

Recommended for private homes, apartments and hotels.

Arch-Built Hard Rubber Seats

Stasco Arch-Built seats are all hard rubber of the highest quality. The arch construction principle makes a light, strong, resilient seat that will stand an unbelievable amount of punishment and abuse. These seats may be sprung apart with a weight of 200 pounds and return instantly to perfect alignment. Stasco Arch-Built seats are made with a uniform protecting wall of hard rubber 3/16 of an inch thick. Corners heavily reinforced. The hinges are imbedded in solid rubber.

MODERATELY PRICED AND FULLY GUARANTEED
Sold Only Through Wholesale Plumbing Houses

Write for our A. I. A. file catalogue folder

STASCO TOILET SEATS

STANDARD TANK & SEAT CO.
CAMDEN, N. J.



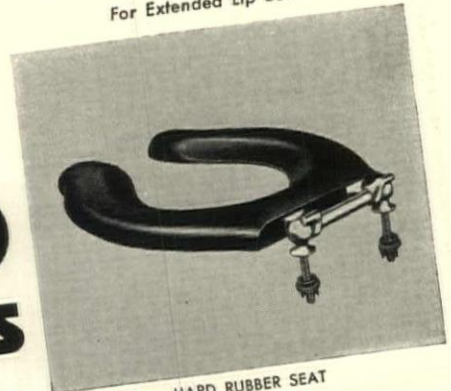
EMPIRE WHITE SEAMLESS FINISH
Seat No. 196
For Standard Bowl



HARD RUBBER SEAT
No. 0901
For Standard Bowl



EMPIRE WHITE FINISH
Seat No. 279
For Extended Lip Bowl



HARD RUBBER SEAT
No. 0970
For Extended Lip Bowl



METROPOLITAN LIFE INSURANCE BLDG.
New York City
Stasco Equipped



THE CAVALIER—Virginia Beach, Va.
Stasco Equipped



THE MITTEN BUILDING, Philadelphia, Pa.
Stasco Equipped



HALF-MOON HOTEL, Coney Island, N. Y.
Stasco Equipped

FOR MARCH 1931

YES...PARAPET WALLS DO LEAK

and FREEZE
and Crash!



YET ~
such disasters can be prevented permanently and economically.

CHENEY

INTERLOCKING THRU-WALL FLASHING
Positively Prevents Seepage - Leaks - Efflorescence

THE INSTALLATION OF CHENEY FLASHING IN MASONRY WALLS ABSOLUTELY PRECLUDES THE POSSIBILITY OF DISASTERS SUCH AS ABOVE DESCRIBED.

Cheney Flashing is the only Ready-to-use Thru-Wall Copper-flashing on the market that runs entirely through the masonry wall and forms a positive unbreakable key-bond in every direction within the mortar bed.

It scientifically prevents seepage, leaks, efflorescence and rusting of steel spandrels and lintels and the DISINTEGRATION OF MASONRY WALLS.

Cheney Flashing is made of 16 ounce copper—comes to the job ready-made to exact shape—to slip easily into the mortar bed as the masonry progresses, without cutting soldering or loss of time; the ends hook together to form a continuous flashing.

Cheney Flashing has been adopted for standard installation by leading Architects, Engineers and Contractors as its use in outstanding building projects throughout the country will attest.

CHENEY SERVICE—Our engineers are generally available to assist in supervising installations and in detailing plans and specifications or plans may be forwarded to our offices for the purpose. There's no obligation.

Valuable information on the use of Cheney Flashing is contained in the New Cheney Catalog. Write for it today.

THE CHENEY COMPANY

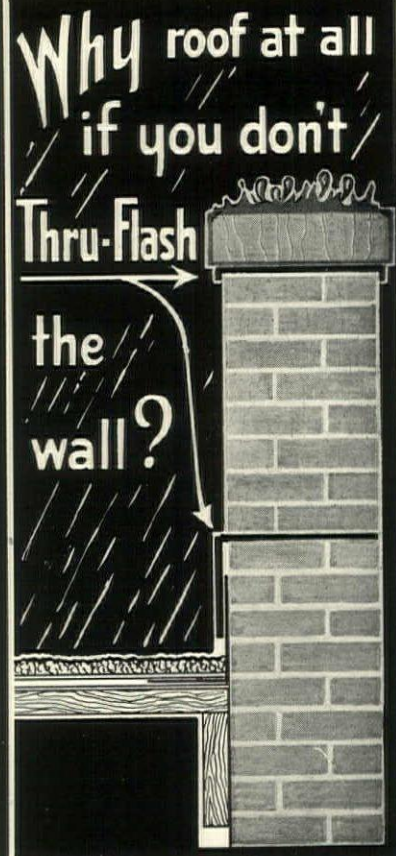
953 Main Street
WINCHESTER, MASSACHUSETTS

NEW YORK

PHILADELPHIA

PITTSBURGH

CHICAGO



where

PIPE ENDURANCE

is imperative



*Boston Garden, Boston, Mass., where clicking skates speed over more than 12 miles of Youngstown steel pipe
Architect—FUNK & WILCOX CO. • General Contractors—DWIGHT P. ROBINSON CO., New York*

BENEATH the smooth, icy surface of Boston's indoor skating arena sixty-five thousand feet of Youngstown steel pipe withstand the corrosive action of ice, moisture and constantly circulating refrigerant. Here, where the endurance of piping is imperative, Youngstown steel pipe again demonstrates the same performance characteristics which have led to its specification and installation in thousands of plumbing, heating, power and refrigerating systems from coast to coast.

The performance records of these instal-

lations are the soundest insurance of permanent piping, and hundreds of architects and engineers accordingly write "Youngstown" into their specifications. Like all Youngstown products, Youngstown steel pipe is handled by leading jobbers everywhere.

The

YOUNGSTOWN SHEET AND TUBE CO.

One of the oldest manufacturers of copper-steel, under the well-known and established trade name "Copperoid"

General Offices: YOUNGSTOWN, OHIO

YOUNGSTOWN

**DISTRICT
SALES OFFICES:**

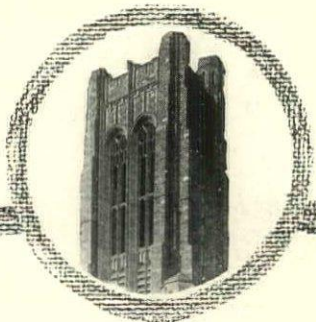
ATLANTA . . . Healey Building
BOSTON Chamber of
Commerce Building
BUFFALO . Liberty Bank Building
CHICAGO . . . Conway Building
CINCINNATI . Union Trust Bldg.
CLEVELAND . Term'l Tower Bldg.
DALLAS . . . Magnolia Building
DENVER . Continental Oil Bldg.
DETROIT Fisher Building

KANSAS CITY, MO. . Commerce
Building
LOS ANGELES . 3000 Santa Fe Ave.
MEMPHIS . . . 42 Keel Avenue
MINNEAPOLIS . Andrus Bldg.
NEW ORLEANS . Hibernia Bldg.
NEW YORK . 30 Church Street
Hudson Terminal Building
PHILADELPHIA . Franklin Trust
Building

PITTSBURGH . Oliver Building
SAN FRANCISCO 55 New
Montgomery Street
SEATTLE Central Building
ST. LOUIS Louderman Bldg.
YOUNGSTOWN . . . Stambaugh
Building
LONDON REPRESENTATIVE
The Youngstown Steel Products
Company, Dashwood House, Old
Broad Street, London, E. C. Eng.

GALVANIZED SHEETS PROTECT , SAVE WITH STEEL

When the Wind Hits Sixty



HOW far can a gale carry a snowflake? Under the pressure of high wind, how far can rain penetrate into masonry joints?

Destructive fumes and bits of organic matter, as well as moisture, work their way into lodging places and hasten the disintegration of mortar and stone. Frost does its deadly work. In no time at all a beautiful tower becomes "weather-beaten."

The nobler man's handiwork, the more protection it deserves. The appearance and even the very safety of a structure—any structure—call for the exclusion of the elements and all other harmful agents. All projecting courses of masonry, particularly, should be calked.

Calking compound must be compounded to remain extremely tenacious and permanently plastic. It must be of non-staining character and frequently must match the colors of various materials. The requirements are very exacting.

The experience and facilities of sixty-nine years of manufacturing contributed to the formula of Pecora Calking Compound. The reputation of a long-established house is back of it. It is an invaluable aid to the architect and one that he can specify with confidence.

Pecora Paint Company

3rd St. and Erie Ave.
Philadelphia, Pa.

Established 1862 by Smith Bowen



PECORA PAINT COMPANY
3rd St. and Erie Ave., Philadelphia, Pa.

Name

Street & No.

Town & State

(CC)

Tomorrow's Building Codes

(Continued from page 47)

new and ingenious methods of accomplishing results. Under such circumstances existing building code provisions had a hard time. Their sanctity was questioned. A spirit of levity about many of them, unhappily justified, tended to destroy confidence in the whole structure of building regulations. Hence a re-examination of the whole system, a tendency to compare and analyze and grope for something better and more logical. Old ideas started to topple and inconsistencies were brought out that plainly could be answered only by more research and less rule of thumb. Code committees both regional and national sprang up. The results of all this activity are now becoming discernible. It is time to take inventory.

This was also the period of the flowering of the building material associations. Far from discouraging organizations of manufacturers, the government cooperated with them so long as their energies were directed not toward price regulation or other dubious activities, but toward ends clearly in the public interest. Research into fundamental properties, improvements in methods of manufacturing and installation, development of new products—these proved to be a rich field which, accompanied by suitable publicity, soon brought about more intelligent and economical building. The growth of the work of these associations has been astonishing, and their contribution to the general result has been of marked value. Inevitably they have reached a point where sharply competitive conditions result in enthusiastic claims and counterclaims. The evaluation of these constitutes a major problem to-day but can probably be handled by test requirements.

THEN there is the growth of the professional and technical societies. Many of these are of long standing but with a noticeable increase in activity since the war period. The record of growth in scientific knowledge contained in the proceedings of these bodies is noteworthy. Little by little they have pieced together our information on strength and other characteristics of materials, providing a continuous record of patient and laborious investigation, until the cumulative effect is to enable the use of these materials with considerable confidence. Naturally we know a great deal more as a result of this process than we did ten or fifteen years ago and can deal with code requirements with correspondingly greater fairness and good judgment.

A third development has been the increased attention paid by the enforcing officials to the technique of their profession. Since the war there have arisen organizations of such officials whose object is to improve their administrative methods and develop more uniform requirements through interchange of experience. Starting through the foresight and enthusiasm of a comparatively small number of individuals, these organizations have grown to a position of considerable influence. They afford an opportunity for the administrator's point of view to be registered.

The resultant of these forces inevitably will be better and more uniform requirements. For a time, individual opinions may color the result to an extent which may

Such INTERESTING things can be done with CONCRETE



*Concrete Masonry residence at
Beverly Hills, Calif. Archi-
tect, Roy Seldon Price, A. I. A.*

Concrete Masonry is a term applied to block, brick, or tile building units molded from concrete and laid by a mason in a wall. The concrete is made by mixing portland cement with water and other suitable materials, such as sand, pebbles, crushed stone, cinders, burned shale, or slag.

THERE are so many ways in which portland cement concrete may be handled that it, alone, comprises almost every structural material the builder needs.

It builds rugged walls of highly interesting character, or provides a smooth surface for interior and exterior walls, and floors. It can be textured in many designs, or grained like lumber. Where other than "natural" finish is desired, it can be painted any color, or coated with portland cement stucco which, also, is available in colors.

Concrete can be pre-cast or cast in place—moulded or modeled. It creates its own decorations. Wherever and however used, concrete provides *firesafety*, and its exceptional durability makes it most economical. Write for free information.

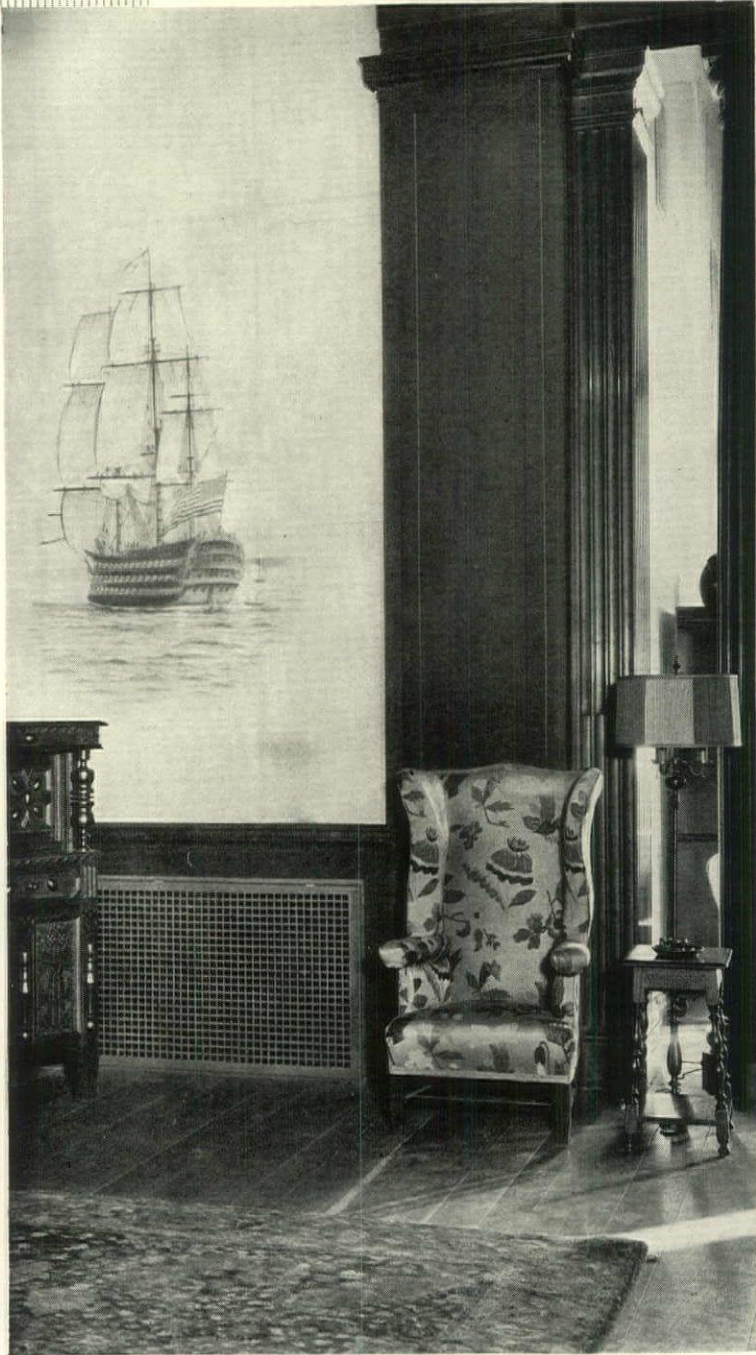
PORTLAND CEMENT *Association*

Concrete for permanence and firesafety

33 W. GRAND AVENUE
CHICAGO

FERROCRAFT

The first and last word in **GRILLES**



A corner of the Girls' Club Room—new Aetna Life Insurance Building, Hartford, Conn.

"Ferrocraft" was specified by James Gamble Rogers for this attractive installation—one of many spots beautified by Tuttle & Bailey in the most important rooms of the \$8,000,000 building of the Aetna Life Insurance Co., in Hartford, Conn. Furnished to rigid specifications, Ferrocraft Cast Grilles are increasingly the choice of modern architects for modern economy in modern buildings.

TUTTLE & BAILEY MFG. CO., INC.
441 Lexington Ave., N. Y.
Offices in Boston, Chicago, Kansas City, Los Angeles

TUTTLE
AND
BAILEY
MANUFACTURING
COMPANY
ESTABLISHED 1846



PLATE 5
The Modernistic
Movement

This picture represents one of the panels of Verde Antique marble in the Indiana Power Company Building, South Bend, Indiana. The work was finished under the supervision of the

Art Terrazzo & Tile Company.

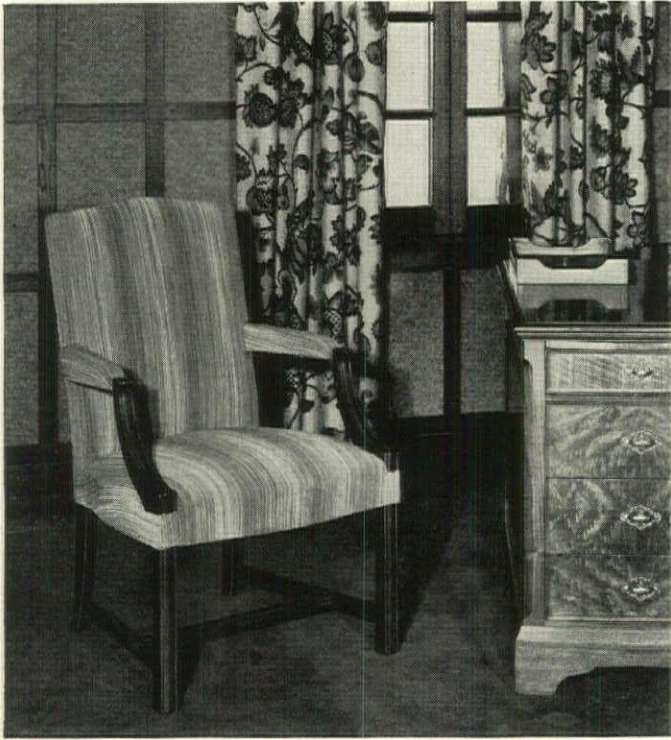
Here is a case where the design is well adapted to the business it symbolizes—where the modern features are strengthened by the contrast between the cut and polished surfaces of the marble.

VERMONT MARBLE COMPANY—PROCTOR, VERMONT

Branches in the larger cities

See Sweet's Catalog for Specifications and Other Data

VERMONT MARBLE



Chippendale Arm Chair No. 2826

CHAIRS . . .

that reflect the best traditions
of cabinet making

Based on the best traditions of the old masters of chair making authentically designed and fashioned from beautifully figured cabinet woods . . . B. L. Marble Business Chairs harmonize with the friendly note of the modern office.

With half a century of experience in the designing and production of quality chairs, and backed by unlimited manufacturing facilities, it is only natural that the B. L. Marble organization should be the acknowledged leader in its field.

Today, B. L. Marble Business Chairs will be found in hundreds of banks, city halls, court houses, libraries, schools and other public and private institutions where they are giving efficient and economical service. In many instances, the chairs originally installed have outlived the buildings themselves.

The B. L. Marble Catalog includes chairs for every office requirement. Your copy will be mailed on request.



We are qualified to originate special designs or to build chairs from Architects' specifications and drawings.

The

B. L. MARBLE CHAIR COMPANY

BEDFORD, OHIO

New York Office: 101 Park Avenue • Telephone: Caledonia 5-7026

obscure the trend but good sense and economic pressure will break down what minor distinctions survive. Recommendations suitable for use on a nation-wide basis are available and are already finding wide use. Several projects aimed at breaking down local differences through proposed regional codes are also showing promise. Prospects are bright for freeing the designer from many meaningless variations in requirements, thus enabling him to make the most effective use of materials regardless of geographical considerations.

If the code is to be something more than a mere collection of words, it must deal sympathetically and efficiently with the problems of the city or town which it controls. What are logical fire limits? How high should buildings be permitted in view of the local water pressure? What standards of light and ventilation will the community set for itself? What locally available materials have demonstrated peculiar virtues as a result of long experience and familiarity of local artisans with their use? These are questions that cannot be answered from Olympus. They must be covered by intelligent study of local conditions and fitted into the master plan.

SO the trend toward uniformity is not stifling the best that local experience has brought out. Rather it is relating it to the larger experience that comes with contact and comparison with other usages. It is weeding out those things that have arisen from prejudice and cannot be defended, leaving that which is really fine and useful.

In presenting requirements, there are two distinct trends that are deserving of thoughtful scrutiny. One seeks to make of the code a detailed manual to which the building official can turn with confidence, pointing out the verse and line which governs a particular decision. This attempt to cover everything appears hopeless in view of the constant accession of new methods of construction. Its merit is definiteness. There can be little room for argument when the exact point is found, and little claim of partiality on the part of the building official. To many a harrassed inspector it appears to offer a conclusive method of dealing with building regulation, relieving him of long arguments and recriminations. Carried to its logical conclusion, it makes of the inspector little more than a robot who is sensitized to a statement of conditions and turns automatically to the answer to a question.

IF the building materials never changed and methods would only stand still there could be no quarrel with this method. But we have seen that progress is sweeping aside old methods and bringing forward new ones. Whether he likes it or not, the building official is forced into a position where his inflexible set of regulations will not serve. Either he must take a positive stand and forbid the new constructions until the slow processes of code revision catch up and acknowledge them or he must make a series of interpretations very informally and without strict legal sanction. Once the letter of the code is violated its beauty as an infallible guide containing everything needful is destroyed.

In the other direction is the trend toward simple basic requirements expressed in terms of results, depending on tests as a basis for acceptance or rejection of new constructions, and entrusting the building official with discretion to an extent which elevates him to a

Sometimes Wear
is the Most
Important
Factor --



and
sometimes

B E A U T Y

SOMETIMES when an architect is specifying linoleum, wear is the most important factor. For example: general offices, factories, elevators, display rooms and corridors where traffic is heavy.

Sometimes beauty is the first consideration. For example: Private homes and offices where traffic is light.

But sometimes beauty and wear must be given equal consideration as in the Y. M. C. A. building at Albany, N. Y. Here the architect solved his problem by selecting W. & J. Sloane Clearline Inlaid Linoleum in the attractive pattern shown above. He made his selection not only

because this distinctive pattern harmonizes so well with the decorative scheme and because he knew the quality would withstand the daily abuse of thousands of scuffing feet but *because the linoleum is double-waxed.*

Which means that it can be used as soon as laid; that it is easy to keep clean; that the beauty of pattern is intensified.

When you specify W. & J. Sloane Double-Waxed Linoleum you assure your client of the finest money can buy. Examine this superfine finish before you write the specifications. We will gladly send you quality samples and reproductions of our many beautiful new patterns.

W. & J. Sloane Clearline Inlaid Linoleum, Pattern 1445, is used in the lobby of the new Y. M. C. A. Building, Albany, N. Y.



This Service Free to Architects

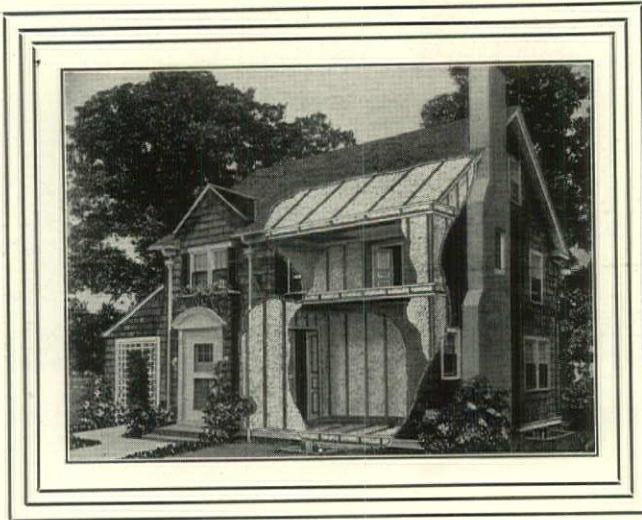
We maintain a service department to assist architects in planning or specifying linoleum floors. This service is at your disposal without charge. Write for copy of Architects Data Book and ask for a representative to call if you wish advice on specific problems. Address: Architects Service Department,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

W. & J. SLOANE DOUBLE-WAXED LINOLEUM

Insulate with U. S. MINERAL WOOL

The perfect insulator

COLD PROOF . . . HEAT PROOF . . . FIRE PROOF
SOUND PROOF . . . VERMIN PROOF



You Reduce Upkeep Expense!

In building or buying a home the question of upkeep is of vast importance.

Insulation with Mineral Wool supplies a most effective way to reduce upkeep. It actually saves money year after year and adds untold comfort to any home.

Savings Effected

- about 30% less fuel consumption
- smaller heating unit required
- reduced fire hazard
- installation cost, the lost cost
- greater resale value

Comforts Added

- warmer rooms in winter
- cooler rooms in summer
- sound-deadened rooms
- vermin-free homes

This FREE booklet explains how upkeep can be minimized. Send for it and free sample of Mineral Wool.



UNITED STATES MINERAL WOOL CO.
280 Madison Avenue, New York

Western Connection—Columbia Mineral Wool Co.,
South Milwaukee, Wisc.

U. S. MINERAL WOOL CO., DEPT. F
280 Madison Ave., New York

Send FREE sample and illustrated booklet to

Name

Address

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

true professional status. The safe use of familiar materials and constructions necessarily is still covered in considerable detail but with care not to limit construction to a few set forms. Rather the code permits and encourages the ingenious and exceptionally skilled to design as they will, restricting them only by demanding proof of the expected results. The building official becomes a person to whom the code attributes intelligence and true responsibility. He carries with him no legislative power but without the broad requirements of the various code provisions he may exercise reasonable discretion in accepting or rejecting proposed constructions. Naturally he must be an expert, trained, paid, and recognized as such. He no longer turns away an architect by pointing with finality to a particular typed line. Rather he requires proof that the proposed plans are adequate, examines collateral test data in the case of hitherto unused construction, and makes his decision as a responsible and conscientious official.

THE advocates of this method admit that such power where accompanied by politics may lead to abuses, but maintain that that is no reason for holding back safe and economical construction. They say that the safeguards that must be built up around the office require no more ingenuity than those erected around police or fire departments which have equal or greater bearing on public safety. They point out that the code that insists on and clings to older conceptions of construction will have to proceed by successive mutations while its more adaptable brother will simply demand proofs and adjust itself unobtrusively and inexpensively to the changed conditions. Through it, principles rather than details will govern.

Finally, it might be said that the approximate uniformity toward which we are undoubtedly moving will be accelerated by willingness to submerge individual opinion in favor of group judgment. We must have something more than enthusiastic advocacy of uniformity as an ideal. The celestial system is possible only because the same laws govern it throughout. A diversity of principles, each beautiful in itself, would result in collisions and cosmic anarchy. So if we are to bring our regulatory system for construction into something more than a superficial resemblance to the orderliness of the celestial one, we shall each have to yield some portion of our pet ideas. In this, in patience, and in infinite labor to adjust the baffling legal problems that have grown up, lies the hope of better conditions for the coming years.

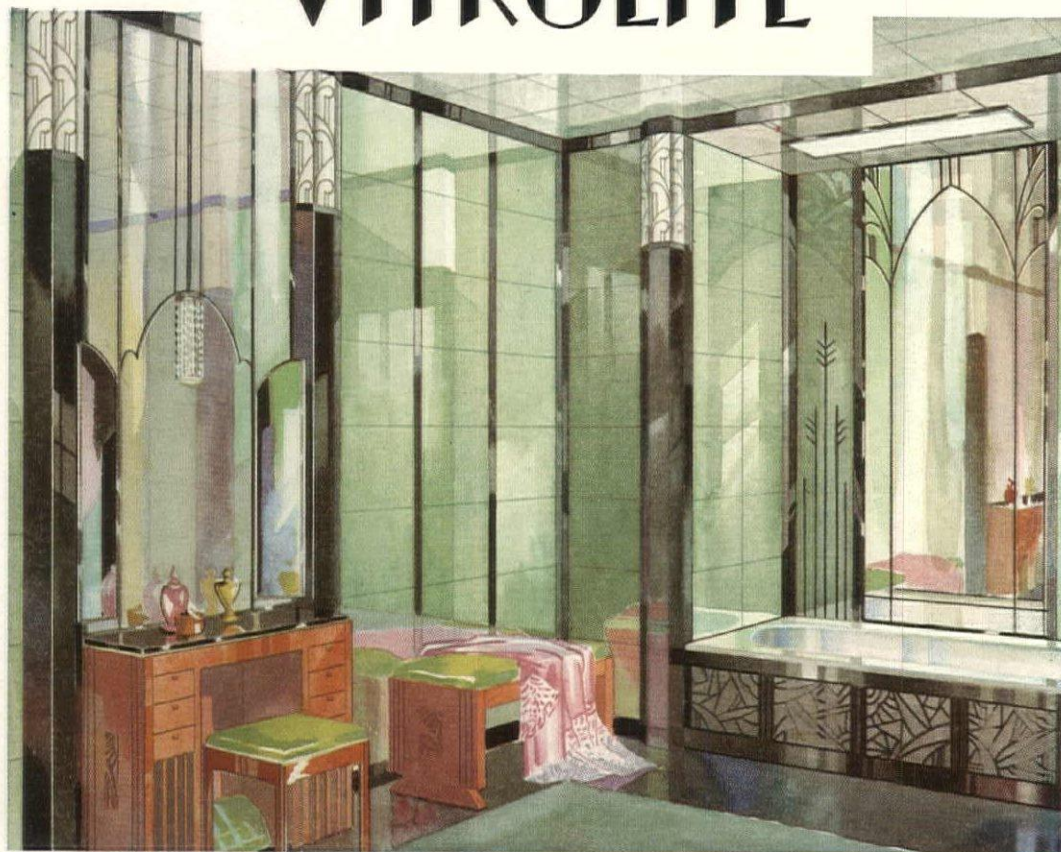
PERSONALS

Maxwell A. Norcross, A.I.A., and J. Byers Hays, A.I.A., formerly a member of the firm of Walker & Weeks, have formed a partnership for the general practice of architecture at 7016 Euclid Ave., Cleveland.

The name of the firm of Fred Wesley Wentworth, architect, has been changed to Wentworth & Vreeland, Citizens Trust Building, Paterson, N. J.

Robert M. Farrington, architect, formerly of Beverly Hills, and Wm. S. Stickney, architect, formerly of Van Nuys, have formed a partnership with new offices at 9713 Santa Monica Boulevard, Beverly Hills, Cal.

Leading Architects express the *modern trend* with **VITROLITE**



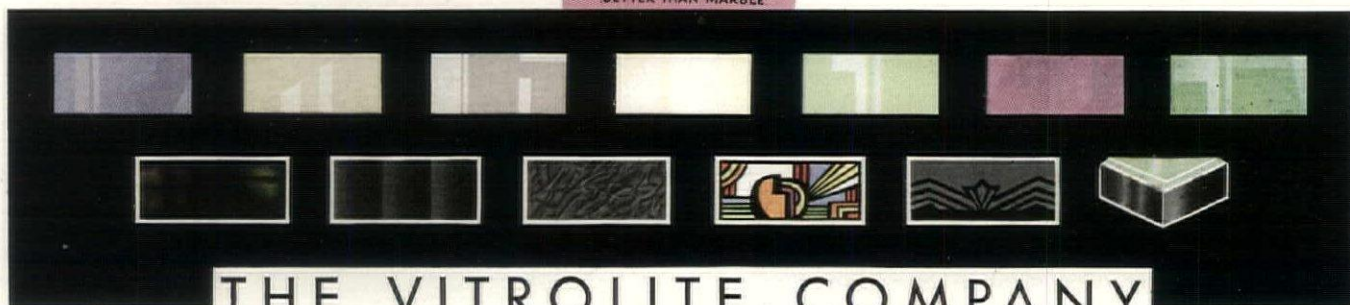
AND now — into the architect's hands has come a material, so adaptable as to color, surface texture, and slab size, as to enable him to put into reality his dreams of modern design.

Beautiful Vitrolite — sanitary, impervious to moisture and stain — Vitrolite that lasts a lifetime and can be kept spotlessly clean with a damp

cloth, Vitrolite the answer to modern architectural demands.

Vitrolite bathrooms, toilet partitions, shower compartments, corridors, lobbies, kitchens, store fronts, etc., are increasingly being installed by leading architects both here and abroad. Send for Vitrolite samples and specification catalog.

VITROLITE
"BETTER THAN MARBLE"



THE VITROLITE COMPANY

120 S. LA SALLE ST., Room 1112, CHICAGO, ILL. — Factory: PARKERSBURG, W. VA.
REPRESENTATIVES IN ALL PRINCIPAL CITIES IN U. S. AND CANADA

Hand in Hand with the New Architecture

Within a few brief decades, cities have swallowed up their open spaces, and man has turned his vision aloft. Steel has kept pace with his most soaring visions and, story by story, buildings rise ever higher. Now, builders of the Central West may enjoy a near-by source for C. B. SECTIONS . . . Steel's latest contribution to the new architecture.

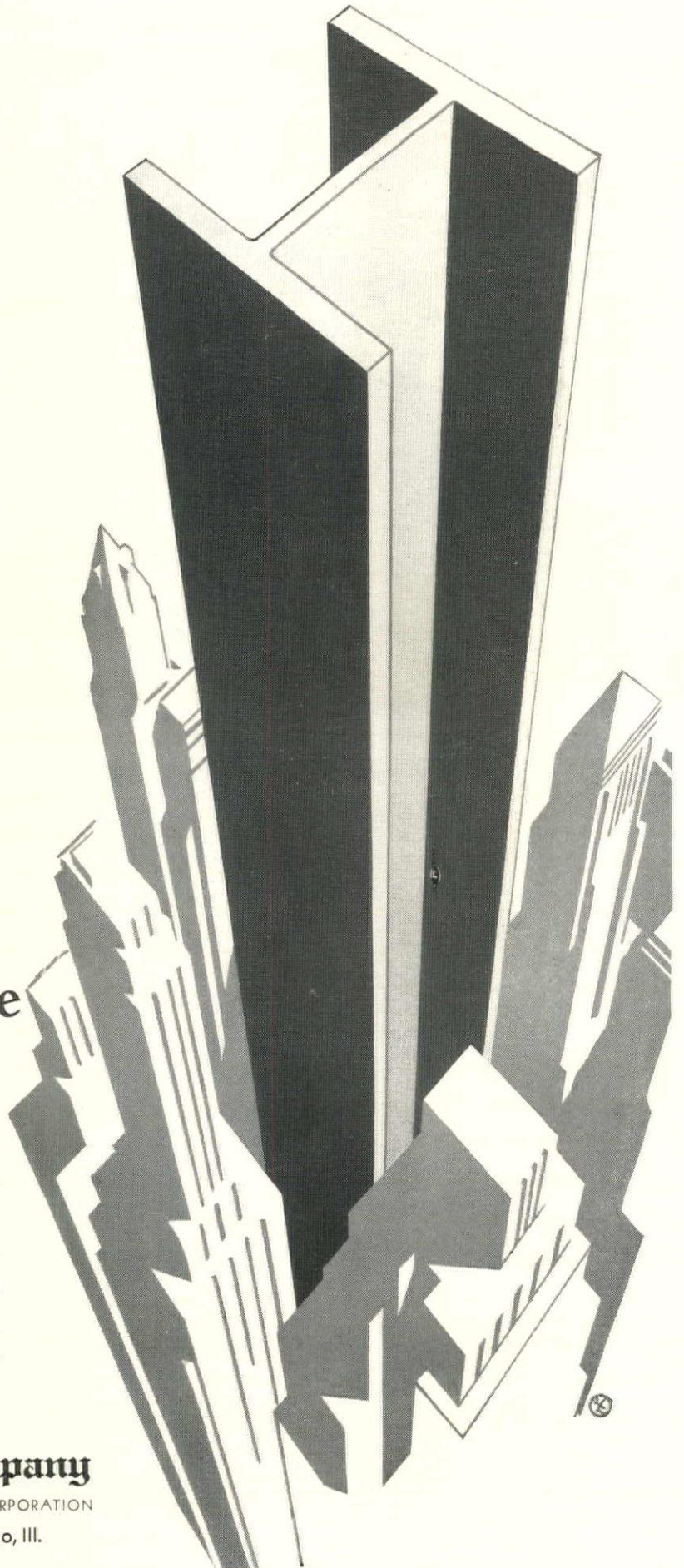


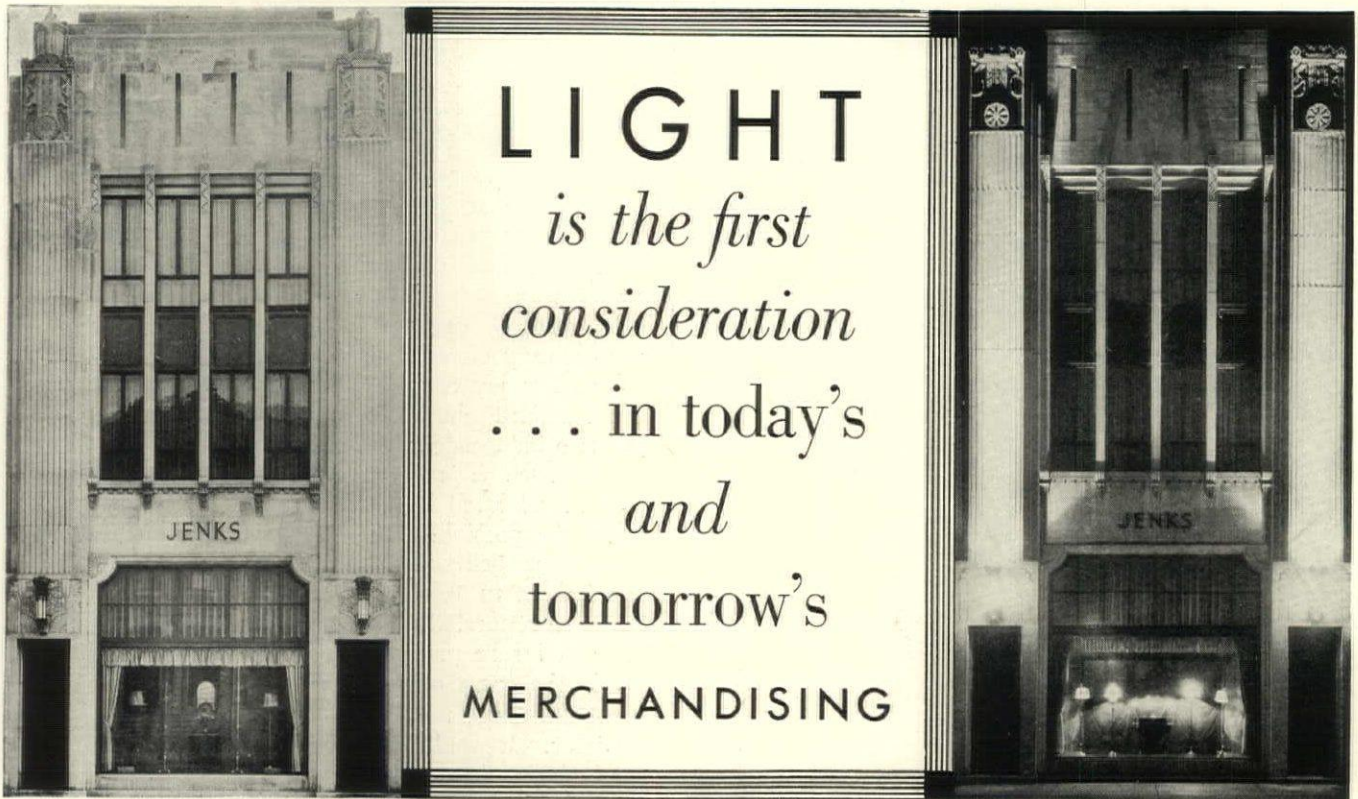
Illinois Steel Company

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

208 South La Salle Street, Chicago, Ill.

C. B. SECTIONS





LIGHT
*is the first
 consideration*
 . . . in today's
and
 tomorrow's
 MERCHANDISING

By CARL M. LINDNER, *Architect*, Richmond, Virginia

IN commercial buildings of the present day, beauty of line, of contrast and of texture, alone, do not fulfill the architectural requirements of modern merchandising. Individualized lighting of the most thorough and skilled design has become both a practical and an artistic essential.

Nowhere is the consideration of lighting more important than in the design of a commercial structure such as the Jenks Building in Richmond. Required primarily to house an electrical store, the design of this building demanded skilled use of light not only to meet modern merchandising standards, but also to exemplify the high development of lighting resources made available by the electrical industry of the present day.

Throughout the planning and construction of the Jenks Building, the close co-operation of lighting

specialists from the local light and power company proved invaluable. Their intimate knowledge of recent developments in floodlighting and interior lighting afforded many helpful suggestions in providing effects and equipment of the latest type. To them goes much of the credit for the development of the exterior lantern floodlights which accomplish the desired combination of flood and ornamental lighting.

The total connected load in the Jenks Building is 41 K.W. for lighting and 5 K.W. for power. The experience of the local light and power company in estimating future progress in the use of lighting is largely responsible for the wise provision of a 30 per cent surplus in all wiring capacities. Thus, at negligible added cost, the Jenks Building is positively insured against early electrical obsolescence.

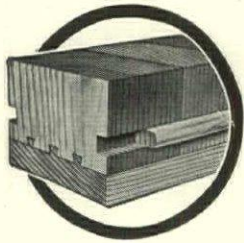
For information about trends in lighting standards, and about adequate wiring, call on the Lighting Bureau of your local electric service company, or write direct.

NATIONAL ELECTRIC LIGHT ASSOCIATION, 420 LEXINGTON AVENUE, NEW YORK, N. Y.

A Bloxonend Floor in the I. E. Young Junior High School, New Rochelle, N. Y. Architects—Starrett & Van Vleck, New York City.



A FLOOR that can't Splinter



This feature alone would justify the use of BLOXONEND in the average school gymnasium. But in addition

to being splinter-proof, a floor of BLOXONEND has other outstanding characteristics. It outlasts the average building, provides firmness without sacrificing natural resiliency, presents a handsome appearance, has high sound absorbing qualities and stays smooth.

A BUILT-UP END GRAIN FLOORING

BLOXONEND is furnished in 8 ft. lengths 2½ inches thick. The end-grain fibres form its surface. It lays smoother and with tighter joints than the finest parquetry floor. Specified by leading architects for gymnasiums and shops. Also widely used by foremost industrialists.

Write for sample and specifications.

Carter Bloxonend Flooring Company

Kansas City, Missouri

(See Sweets)

BLOXONEND
Lays Smooth **FLOORING** *Stays Smooth*

Fireproof Structures Are Not Fireproof

(Continued from page 39)

along such lines as will bring about the lowest possible rate of premium for fire insurance coverage. Fire insurance rates are usually based upon the maintenance of an amount of insurance equal to at least 80% of the market value. The value of low rated construction features, those that make up ideal risks, is therefore conspicuously obvious.

Ideal fire protection in high fire resisting structures is a standard automatic sprinkler equipment with at least two independent automatic water supplies of ample capacity such as pressure and gravity tanks. These are preferably located inside of roof structures thus eliminating the possibility of damage from weather conditions and reducing the possibility of freezing. In buildings 150 ft. to 400 ft. or more in height the supplies should be connected to the sprinkler system in a manner that will insure protection throughout the structure so that in the event of a fire on an upper floor a simultaneous fire on a middle or lower floor will also be provided for. It would be desirable in buildings exceeding 400 ft. in height to have water tanks supplying sprinklers exclusively at the top of the building and on intermediate floors, one additional tank for every 200 ft. to 300 ft. of height above 400 ft. from the grade level.

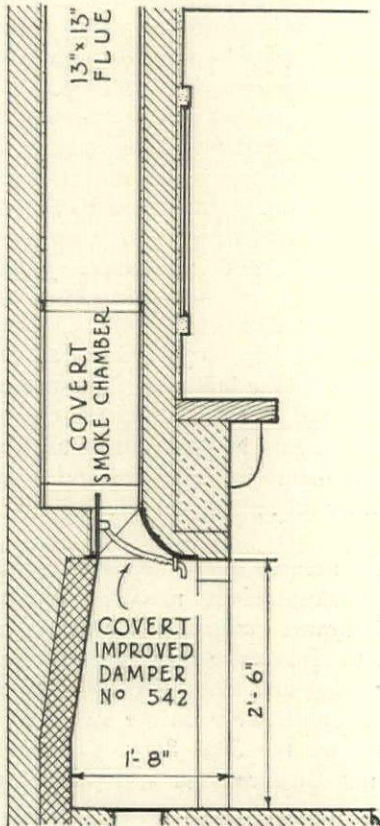
Up to the present, comparatively few of our modern office and light hazard mercantile buildings have been provided with automatic sprinkler protection, chiefly because of the initial cost of installation. There appears to be no good reason why this cost cannot be modified to a considerable extent by the introduction of a new set of sprinkler requirements adequate for the control of fire in mildly hazardous occupancies, but considerably less expensive than the present requirements which were designed for all buildings of all types of construction, housing all classes of hazards. The spacing of the sprinkler heads, for example, might safely be widened possibly twenty-five to fifty per cent, thus radically reducing the number of sprinkler heads, and pipe sizes, necessary on the various floors. There are other items of initial cost that might also be reduced, thus making the subject of sprinkler protection more attractive to building owners.

Adequate standpipe protection should be provided on all floors of fire resisting buildings with an ample supply of standard linen hose either 2½ inch or 1½ inch with reducing coupling attached to standpipe outlets of standard sizes and having standard thread so that fire department hose can be promptly substituted. These standpipes should be constantly wet with water under pressure from a gravity tank at the top of the building reserving at least 3,500 gallons of water for the exclusive use of the standpipe system.

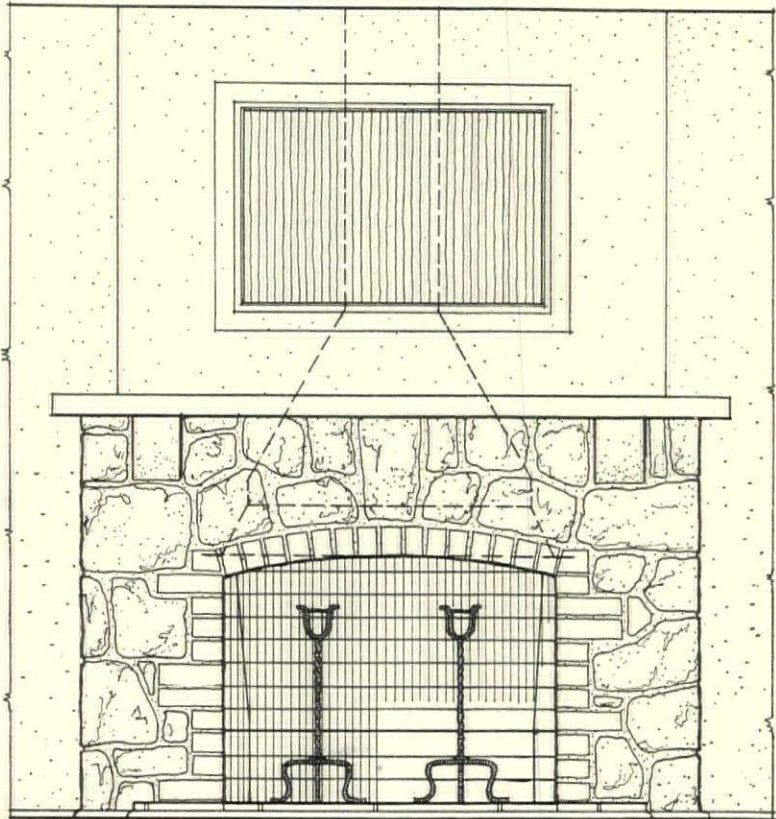
In the absence of automatic sprinkler protection, buildings in excess of 400 ft. in height should have 5,000 gallon gravity standpipe supply tanks on intermediate floors at floor levels 250 ft. to 300 ft. apart. Standard 500 or 750 gallon fire pumps should be provided on intermediate floors of buildings exceeding 500 ft. in

COVERT

Fireplace Construction

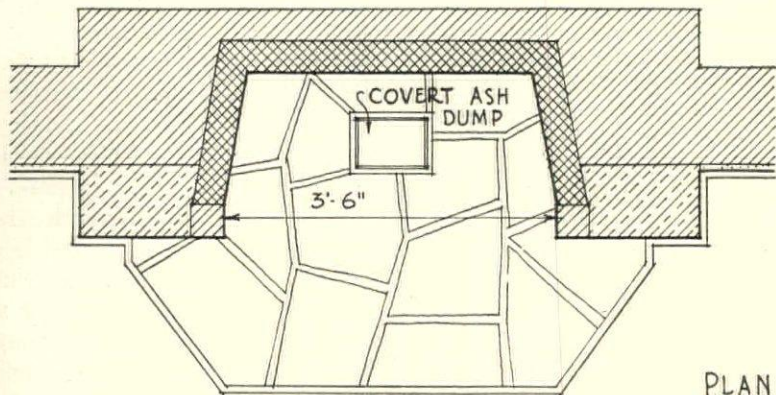


SECTION



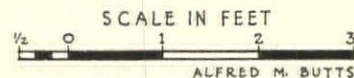
ELEVATION

FIREPLACE - RESIDENCE OF J. D. COVERT, ESQ., - LARCHMONT, N. Y. - S. S. COVERT, DESIGNER



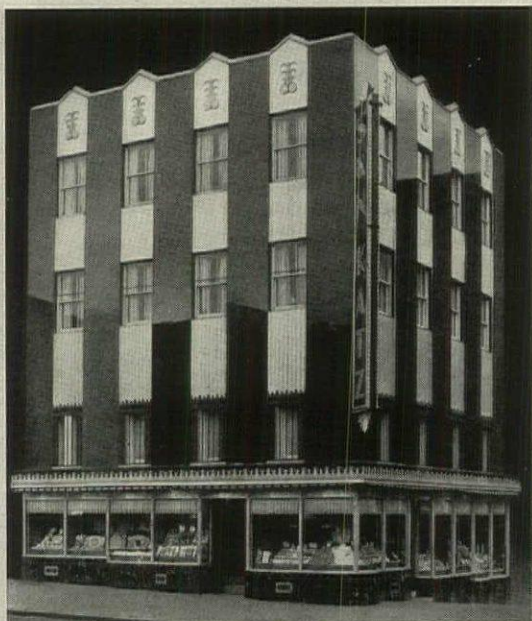
PLAN

COVERT
FIREPLACE DAMPERS



THIS IS THE THIRD OF A SERIES ON "SUCCESSFUL FIREPLACES"
IF YOU WILL SEND US YOUR ADDRESS WE SHALL GLADLY FORWARD YOU A COMPLETE SET OF THE SERIES
THE H. W. COVERT COMPANY, 229 East 37th Street, New York

MODERN STORE FRONTS



S. & N. Katz, Baltimore, Md. Archts., Smith & May

Modern Store Fronts by Kawneer combine quality of material and excellence of craftsmanship . . . Architects' designs are completely fabricated in our shops, including metal doors, windows, spandrels, cast and wrought crestings, grilles and other enrichments . . . Write for free Book of Store Front Installations and Portfolio "N."



THE
Kawneer
COMPANY
NILES, MICHIGAN
and subsidiaries

RUSTLESS METAL STORE FRONTS, WINDOWS AND DOORS
ARCHITECTURAL CAST BRONZE AND IRON

height, pumps to be installed at floor levels 250 ft. to 300 ft. apart and supplied by suction tanks with 5,000 gallons of water reserved for pumps. Buildings in excess of 250 ft. in height should have an approved type of 750 gallon fire pump standpipe supply located in a fire resisting room in the basement taking water from a suction tank of at least 10,000 gallon capacity. The suction tank should be automatically filled by a 6 inch pipe connection to city main. There should be a by-pass connection between the 6 inch connection to city main and the fire pump around the tank so that in the event of the suction tanks being drained as a result of a stubborn fire, the pump could continue to function, taking water direct from the city main as long as desired.

The fire underwriting merits of fire resisting builders risks, particularly high structures, depends in a large measure upon the private fire protection equipment maintained during construction. Ample standpipe protection should be installed and maintained in constant usable condition as the work proceeds. Chemical extinguishers should be distributed on all floors in the vicinity of combustible materials, shanties and offices. Barrels of water and pails should be distributed on all floors in non-freezing sections of the building. The use of wood fuel in salamanders and open fires should be prohibited. Watchclock stations should be provided on all floors and sufficient watchmen should be employed and required to make rounds visiting all sections of the building hourly at night.

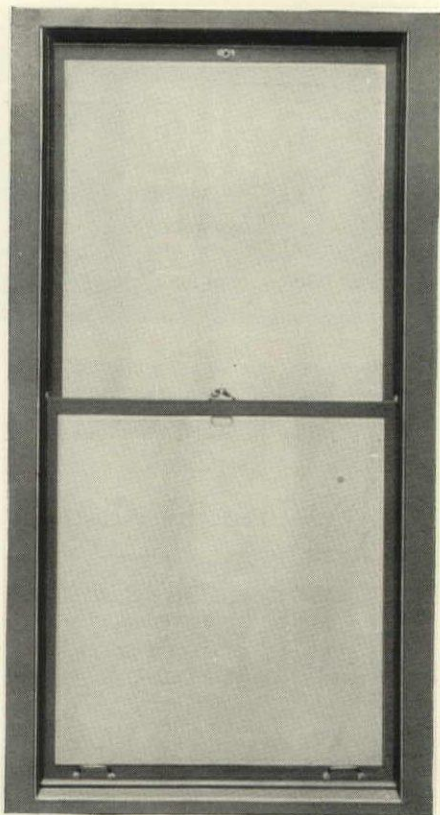
There have been numerous fire losses of serious proportions in fire resisting builders risks. In one instance, the fire loss to insurance companies amounted to about sixty per cent of the insurance carried, in another close to twenty-five per cent and in a third about twenty per cent. Two of these fires were on the lower floors, one started at the top, on the 38th floor. The latter fire probably would not have reached such disastrous proportions had there been adequate standpipe fire protection properly maintained, in the absence of which the fire spread practically unresisted for some time. In all three cases the disastrous damage was attributable largely, if not entirely, to the presence of quantities of temporary woodwork. All three probably resulted from carelessness with or neglect of open fires or lights as do most of the fires in this class of risk.

WITH the use of fireproofed wood, ample standpipe protection and watchmen with approved watchclock service in connection with fire resisting builders risks, lower fire insurance rates should be obtainable.

Manufacturing, large occupancy mercantile and storage buildings are likely to involve occupancy hazards and house contents of highly inflammable and explosive nature, depending of course upon the processes and nature of stocks, materials and supplies handled.

For example, it is not uncommon to find several tons of pyroxylin stock in sheet, block, bar and tube form on the premises of factories engaged in the manufacture of articles composed entirely or in part of pyroxylin, such as optical and hand bag frames, buttons, buckles, etc., and on the premises of motion picture concerns, many of which have located in high fire resisting buildings of multiple occupancy. Stocks of this nature should be confined as far as possible to readily accessible floors of low, fire resisting, sprinklered buildings. (Continued on page 110)

Windows of Quality for Modern Commercial and Public Buildings



Double-Hung Steel Windows. A product of the highest quality. Galvanized steel throughout. Spring bronze weatherstripping. Welded frames. Simple screening. Easy operation.

Heavy Type Steel Casements. A superior type of steel casement built of heavy copper bearing steel sections. Double contact (3/8" flat surface) weathering. Available with screens, transoms, and hopper vents.

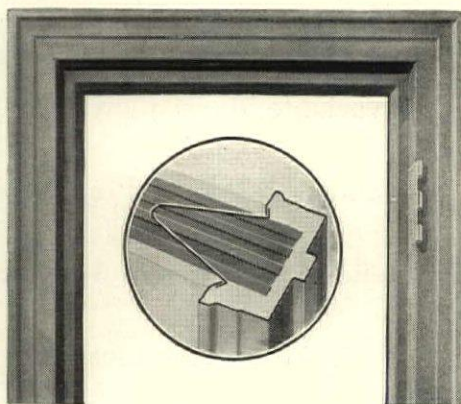
Steel windows are a distinguishing feature of modern buildings. Architectural attractiveness is enhanced by their trim, clean-cut lines. Daylighting is increased by the narrowness of their members. Fire protection is provided at the most exposed portion of the building. Maintenance and depreciation are reduced to a minimum.

Truscon has perfected steel windows of superior quality, suitable for the finest commercial and public buildings. Types and sizes are available for every architectural requirement. Their distinctive design, fine workmanship, excellent hardware and easy operation combine to give enduring satisfaction. Their moderate cost makes them practical for all buildings.

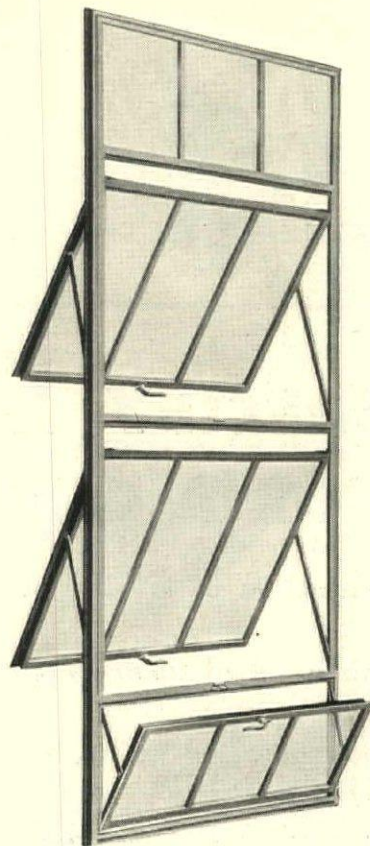
Complete information and catalogs on request.

TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO

Engineering and Sales Offices in Principal Cities



Door Frame and Trim. A complete unit built into the wall during its construction. Used in interiors of all buildings.



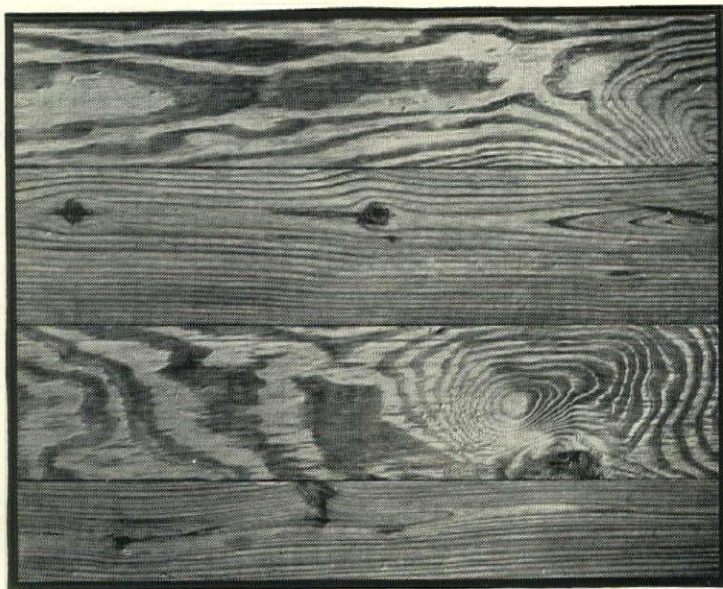
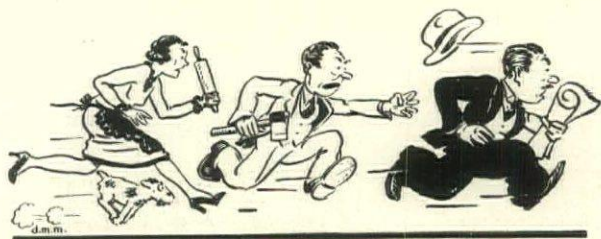
Monumental Projected Steel Windows. A superior type of projected steel window for good buildings. Superior workmanship and hardware. Available in a complete range of types and sizes.

Donovan Awning Type Steel Windows. Lower sash operates upper sash. Bottom, top, or all sash may be left open. Shades on upper sash act as awnings. Diffused sunlight. Draftless ventilation.

TRUSCON

STEEL WINDOWS - STEEL DOORS - STEEL JOISTS - METAL LATHS - STEELDECK ROOFS - REINFORCING STEEL

**NOTHING UPSETS A CLIENT LIKE A
BAD PAINT JOB!**



**SPECIFY LUMILEAD PRIMER
FOR A QUIET LIFE!**

No doubt about it, ever since the practical extinction of good grades of Soft Pine and Spruce, the architect has been up against it, when called upon to specify on new paint jobs! The inferior woods, that must be used nowadays for siding, are certainly refractory paint subjects. *But now comes Devoe with the solution to the problem — LUMILEAD PRIMER!* Lumilead—which contains aluminum—has been specially designed to counteract natural defects—such as high resin or oil content, cross-grains, knots and variable density. Careful tests on many specimens of poorer grade Georgia Long Leaf and Short Leaf Pine, North Carolina Pine, Cypress and Fir have given Lumilead the high efficiency rating of 85%. **SPECIFY LUMILEAD PRIMER to save trouble on paint jobs!** • Write for booklet with technical details on Lumilead Primer. **DEVOE & RAYNOLDS CO., INC., 1 West 47th Street, New York City.**

DEVOE



LUMILEAD PRIMER

Largest Church

IN STOCKHOLM, SWEDEN

Is Made Acoustically Correct with the Aid of

INSULITE

the Wood-Fiber Insulating Board



In the New Filadelfia Church, Stockholm, Sweden, Insulite was used for Acoustical Correction. Birger Jonson was the Architect.



Two interior views of the Filadelfia Church showing the application of Insulite on the rear walls of the balcony.

IN the buildings you design, when you desire to absorb excess sound energy . . . consider the advantages of Insulite.

In the new Filadelfia Church in Stockholm, Sweden, Insulite Wall Board was used extensively and the acoustical results are marveled at by all who visit this ultra-modern edifice. This great structure seats almost 5,000 people; yet every word spoken in the pulpit can be distinctly heard, even in the farthest seats of the balcony.

While Insulite Wall board is effective in absorbing sound energy, the superior material for correcting acoustics in theatres, auditoriums, churches, offices, etc., is Insulite Acoustile. Acoustile is more uniformly efficient over the entire frequency range than any other material. At a frequency of 512, the sound absorbent coefficient of 3/4" Acoustile is .37, and the 1 1/2" Acoustile has an efficiency of .44.

Another advantage of Insulite Acoustile is the ease and speed with which it can be applied to new or old surfaces. The pleasing textured, tile-like units can be arranged in an unlimited variety of patterns to harmonize with any architectural scheme and can be beautifully decorated to achieve any desired color effect.

Insulite Lath is another Insulite product that has many superior advantages. As a base for plaster, Insulite Lath not only grips plaster with much greater strength than wood lath, eliminates lath marks, and guards against unsightly cracks, but when used in partitions, it also prevents noise penetrating walls from room to room.

USE THIS ENGINEERING SERVICE

If you have a special insulating or acoustical problem, let the Insulite Engineers assist you. There is no charge or obligation on your part for this service. Let us send you additional information about Insulite products and samples. Write today for the Insulite A. I. A. File of Specifications and Details.

THE INSULITE CO.

{A Backus-Brooks Industry}

1200 Builders Exchange, Dept. 23C
Minneapolis, Minnesota

OFFICES IN ALL PRINCIPAL CITIES

INSULITE

the Wood-Fiber Insulating Board



Any prowler with a jimmy can make short work of ordinary household locks.

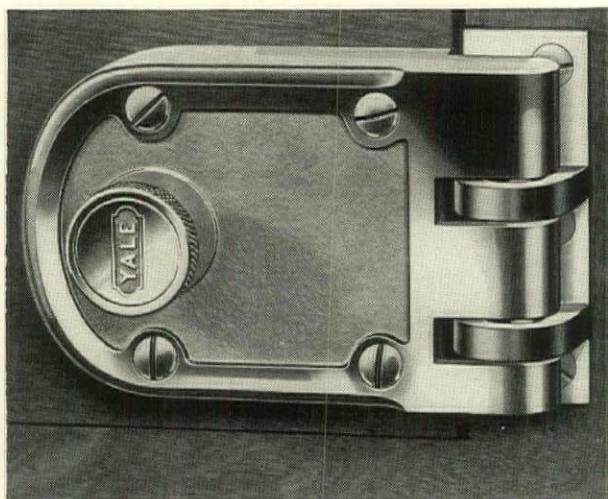
TRADE **YALE** MARK **Jimmy-Resisting Guard Locks**

WHEN YOU are called upon to remodel a home or other building, consider whether it has adequate protection against burglary. One of the greatest improvements you can make is to give it the modern security of Yale Guard Lock No. 197 on its outside doors.

The Yale Guard Lock is jimmy-resisting. Its unyielding bar of steel defies the most skilled and daring house-breaker. It is endorsed by insurance inspectors, by expert locksmiths and by the police.

Write for illustrated folder.

THE YALE & TOWNE MFG. CO.
Stamford, Conn., U. S. A.



The most skilled burglar is powerless against this Yale Jimmy-Resisting Guard Lock No. 197.

Segregations of other inflammable stocks and other contents in accessible parts of fire resisting buildings, such as in basements and sub-basements and on the upper floors not accessible to fire fighters except through inside stairways which are likely to become impassable in the event of serious fire, should also be given considerations as possible breeders of abnormal fire damage.

Serious below grade fires in fire resisting structures, inaccessible to fire fighters are very difficult to reach and extinguish. They are likely to seriously damage the building equipment much of which is below grade, thus rendering the building practically untenable until repairs are made. Basements in which quantities of inflammable contents are likely to be kept should invariably be equipped with automatic sprinklers. Weakly protected or unprotected structural members exposed to such a fire are likely to be seriously damaged.

Below grade fires are likely to find access to the upper floors through imperfectly protected openings into stairway, elevator, chute, duct, vent, pipe and other shafts which frequently pierce all floors from the lowest basement to the top of the building. Serious above grade fires, inaccessible from the street or neighboring structures, such as might occur on the upper floors of any of our modern skyscrapers, might easily gain such proportions as to make stairway and elevator shafts impassable at the fire level, thus keeping fire fighters below the fire and introducing the possibility of fire spreading throughout all floors above, if the floor openings are insufficiently protected to prevent the heat and flames from reaching combustible contents on the floors above.

The fact that dwelling apartments, office and light mercantile occupancies are classed as mild hazard, does not in any sense imply that these occupancies are free from the probability of becoming involved in serious fire problems. Many costly and disastrous fires have started in offices and living rooms. As a matter of fact, up to the present time practically all of these fires have been well within reach of fire department workers who therefore experienced little difficulty in controlling them.

With the introduction of extremely high buildings and the tendency of these mild hazard occupancies to locate on the upper floors, disastrous fire experiences appear likely to occur unless adequate measures are taken to prevent them. Only recently a fire occurred in a small front office on the 2nd floor in a modern fire resisting office building which gave the fire fighters a lot of trouble notwithstanding the fact that the fire was readily accessible to hose streams from the street and by stairways and elevator passages from the grade floor. This fire was extinguished with difficulty. Had such a fire occurred on an upper floor of one of our skyscrapers where outside hose streams would not have been made available, it might easily have involved the entire floor on which it started, thus making the stair and elevator shafts impassable, preventing firemen from reaching the fire, and enabling the fire to spread.

It is quite possible for such a fire to occur on a high intermediate floor and develop to disastrous proportions so quickly that the lives of any tenants that happen to be on the floors above at the time may be gravely threatened. Obviously, therefore, automatic fire protection is highly desirable in the protection of life and property in our modern skyscrapers and should be given favorable consideration when they are erected.



Careystone The NEW ...
ARTISTIC · LOW COST SHINGLE
 colorful
 .. fireproof
 ... permanent

The new CAREYSTONE Shingle combines colorful permanency with low cost. Made of Asbestos and Portland Cement, its life is not limited by rust or decay, and it is as fireproof as stone.

Five artistic shades offer a wide choice of plain or variegated roofs—Bristol Green, Georgian Red, Tudor Black, Windsor Gray and Weathered Brown. The colors are integral with the shingle—not veneered or pressed on the surface. As the illustration shows, these shingles have the appearance of hand hewn

stone and entirely eliminate the fixed pattern effect of smooth surface roofs.

CAREYSTONE Shingles add greatly to the value of homes which they protect, but because of a new, exclusive CAREY manufacturing process, they are sold for less than roofs which do not approach them in appearance and durability. Distributors in all principal centers can give prompt service.

Write for samples and complete information.

THE PHILIP CAREY COMPANY × Lockland, Cincinnati, Ohio
 Branches in Principal Cities

BUILT-UP ROOFS
 ASPHALT PRODUCTS
 ELASTITE EXPANSION JOINT
 WATERPROOFINGS
 ROOF PAINTS



HEAT INSULATIONS
 ASBESTOS MATERIALS
 CAREYSTONE CORRUGATED SIDING
 ASFALTSLATE SHINGLES
 BUILDING PAPERS

Easy to Add Four Stories

(Continued from page 58)

inch topping completed its conversion into a one-hundred-pound live load floor.

Now for the footings. The existing footings could not be disturbed nor given any additional load. After a bit of "heavy pondering," the solution unfolded itself, as shown in Figures 3 and 6. In the case of the interior columns, the new load was divided by two and a concrete mat of sufficient area to take each half was placed at opposite sides of the existing footing. Each mat had two "H" beams for a grillage to take two girders made up of two channels riveted back to back with two plates between and tie bolts to hold them in place during construction. These girders were placed so as to leave clearance above the existing footing and asphalt used to keep the concrete from running into this space. This eliminated the possibility of any additional load coming on this footing. Two short beams rest on the girders and take the loads from the four angles that form the column. These beams are made up of two channels riveted back to back to get the necessary web thickness which is not found in a standard beam. The entire steel structure thus formed was painted and then covered with concrete which in turn was waterproofed with membrane waterproofing, where in contact with the earth.

The sidewall columns were milled on the bottom and fastened with plate and angle webs to channels, riveted

back to back with a plate between and milled on the top side for bearing. The channels were let into the existing wall and also projected out into the building far enough to get the required concrete area for bearing. They rested partly on the existing footing and partly on a new supplementary footing which was built to bond in with the original, making a homogeneous mass.

I have described the operation according to the successive steps taken in the solution of the problem, which is just the opposite of the manner in which it was executed. The work in the existing building was completed and fireproofed first, with practically no serious interruption to business, and took about one month to complete. Another two months saw the superstructure completed and occupied. The entire cost, including a new elevator and extensive repairs was about \$52,000.

It may be interesting to know that the owners had approached several large contracting firms in a nearby big city, with a request for two additional stories. Some of them declared that it was impossible while others said that, while possible, it was a very risky undertaking and the cost would be prohibitive, possibly sixty or seventy thousand dollars. They now have four more stories, a new elevator costing about \$6,000 and about \$2,500 worth of repairs to the old building that were not originally contemplated, all for the sum of \$52,000.



HALBACK Assumed Responsibility for Materials and Execution

ON the Manhattan Company Building, all ornamental iron work was executed and installed by Halback.

Included are cast iron spandrels and window frames, all stairs, and even an interesting combination folding platform and access door set into the highest roof, from which to raise and lower the flag in safety.

The execution of such unusual details is entirely usual with Halback, fully organized and manned for the production of metal work, in bronze, cast or wrought iron.

The Manhattan Company Building,
40 Wall Street, New York City
H. Craig Severance, Inc., *Architect*
Yasuo Matsui, *Associate Architect*
Starrett Brothers and Eken, Inc., *Builders*

C. E. HALBACK & Co.
BANKER STREET, BROOKLYN, N. Y.

⊗ WORKERS IN METALS FOR ARCHITECTURAL PURPOSES ⊗



Crane Louis XVI Trianon
Fittings Gold Plated

Helping American home-makers to create a new room

Rich resources of the world have been brought together by Crane Co. to help home planners create a new, distinctive American room... the bathroom of today.

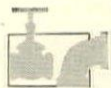
From Italy was imported the Brocatello Sienna marble of the *Chateau* lavatory and the dental lavatory illustrated above. The designs of the lavatory and the Louis XVI metal-work and trimmings used throughout this bathroom are the work of French artists. The colored porcelain of the marble-enclosed *Tarnia* bath and the vitreous china of the closet, reviving an ancient and beautiful art, were produced by Trenton potters. The working parts of the quiet *Corwith* closet, the sure-action pop-up *Accesso* bath waste, the mechanical perfection

of the glass-enclosed shower, have been developed by the most resourceful modern production engineers.

In Crane Exhibit Rooms in every important city in America, such materials... and a wealth of other ideas for the smallest Cape Cod cottage as well as for town houses in chateau or villa style... are on display. See them.

No one nowadays should make the permanent investment in plumbing and heating upon which the comfort, convenience, and value of a house depends without visiting these Rooms. Your architect will help you plan. For purchase and installation, see a Crane Qualified Contractor-Dealer, always a highly skilled master plumber or heating contractor.

*"Your architect will help you plan," says this advertisement appearing in 3,678,848 copies of nationally distributed magazines for the month of March. In all Crane advertising and selling, the fact is stressed that in planning any plumbing installation, and especially in color decoration and modern arrangement, the architect's service is essential.

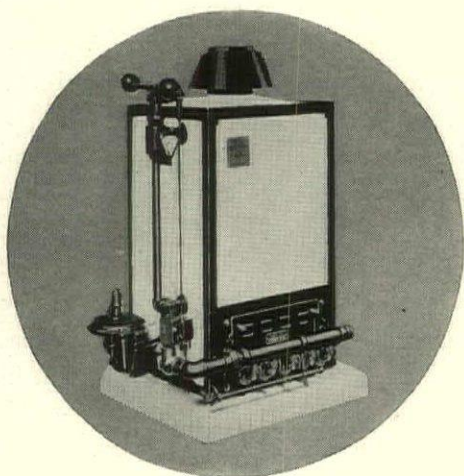


CRANE

FIXTURES, VALVES, FITTINGS, AND PIPING,
FOR DOMESTIC AND INDUSTRIAL USE
Crane Co., General Offices: 836 S. Michigan Ave.
Chicago • 23 W. 44th St., New York
Branches and sales offices in one hundred
and ninety-six cities



Every basement can be **LIVABLE** *with an*
IDEAL GAS BOILER



**IDEAL GAS BOILERS HAVE THESE
 6 OUTSTANDING ADVANTAGES**

1. Manufactured by American Radiator Co.
2. Attractive insulated gray enameled jackets.
3. Pin type heating section.
4. All controls centered in one valve.
5. Positive mechanical controls.
6. Vapor-tension thermostatic pilot.

When you specify an Ideal Gas Boiler you give the owner *automatic* heat that is absolutely dependable, and you have the opportunity of giving your client additional livable space designed according to his individual needs and tastes.

The convenience, the freedom from care that comes with an Ideal Gas Boiler, appeals instantly to every owner. And the knowledge that it is a product of this company makes him confident that its performance will live up to the highest standard of efficiency.

AMERICAN RADIATOR COMPANY

Division of
 AMERICAN RADIATOR & STANDARD SANITARY CORPORATION
 40 West 40th Street, New York

Value—

on the Surface—and Beneath

The value of Stedman Reinforced Rubber Flooring cannot be measured by its good surface appearance alone. Owing to its reinforced construction in which minute cotton fibres uniting with rubber under high pressure and heat become an integral part of the material, lasting value is built-in and goes straight through the tile.

Therefore, Stedman Tiles have a remarkable resistance to wear.

Floors of this modern material laid 10 years ago, are still fresh looking, still resilient, still taking all the punishment that hard use can give them. We make only this single product and in one quality only,—the best that it is possible for us to produce. Send for catalogue with color plates.

STEDMAN RUBBER FLOORING COMPANY, South Braintree, Mass.

Stedman Reinforced* Rubber Tile



* **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.

Directors' Room, new offices of Spencer Trask & Company, New York City. The design is a combination of Black Gold and Gold Black Squares. Spencer Trask & Company writes: "We wish to say we are very much pleased with the floor and highly recommend it."



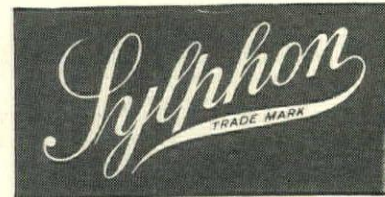
© FOWLER

COMPARE THE **NEW** WITH THE OLD

SYLPHON INSTRUMENTS ARE IMPORTANT IN MODERN BUILDING



This handsome Southwestern Bell Telephone Bldg., lifting its 30 stories above the shadowed land marks of St. Louis' early days, presents a graphic picture of architectural and engineering progress.



PACKLESS

Expansion Joints

on its steam and return risers make this structure as modern as tomorrow in scientific heating equipment. They save in construction costs, permit more harmonious design and contribute to heating economies. Sylphon Packless Expansion Joints do away with vertical space wasting "Expansion Loops," and "sliding sleeve" expansion joints almost impossible to repack when a riser is concealed in furring. They require no attention, and yet allow perfect freedom of motion without danger of "jamming." In thousands of installations Sylphon Packless Joints have proved far superior to joints stuffed with commercial packing, always a temporary makeshift and wholly unfit for a vacuum system, or one where a slight vacuum is pulled. Hundreds of architects and engineers who have specified them consider it an extravagance to attempt to do without these Sylphon Expansion Joints. Write today for complete descriptions. Ask for Bulletin EJ-300

Architect—J. R. Tomlin—Mansan, Russell and Crowell.

Engineer—H. H. Morrison.

Heating Contractor—Am. Plumbing & Heating Co., Minneapolis.

Our Representatives—O'Brien Equipment Co., St. Louis.

STEAM TIGHT NOW AND MANY YEARS FROM NOW



SAVE ASSEMBLY COSTS—Sylphon Packless Expansion Joints are self contained units, and save the cost of skilled labor in assembling ordinary expansion "loops" on the job. They require very little more space than a regular pipe fitting.

European Representatives, Crosby Valve and Eng. Co., Ltd., 41-2 Foley St., London, W. I., Eng.

FULTON SYLPHON Co.
KNOXVILLE, TENN., U.S.A.

Canadian Representatives, Darling Brothers, Ltd., 140 Prince St., Montreal, Que., Canada.

REPRESENTATIVES IN ALL THE PRINCIPAL U. S. A. CITIES



Note how Desco Store Front construction used in this J.C. Penney Co. store in Seattle, Wash., enhances the value of the window displays.

Desco
METAL

REG. U.S. PAT. OFFICE

STORE FRONTS

are Preferred from Coast to Coast

ARCHITECTS for progressive merchants throughout the country are indicating their appreciation of quality construction by specifying Desco Store Fronts for new buildings and remodeled stores. They realize that the modern designs of Desco Store Fronts set off the window displays to best advantage and harmonize with any building design. They recognize the ability of Desco Store Fronts to protect the glass against abnormal wind pressure. They like the wide variety of metals in which Desco Store Fronts can be obtained, including copper (plain or embossed), solid bronze in all standard finishes and aluminum alloy (white metal). Consider these advantages when preparing the specifications for your next building.

DETROIT SHOW CASE CO.

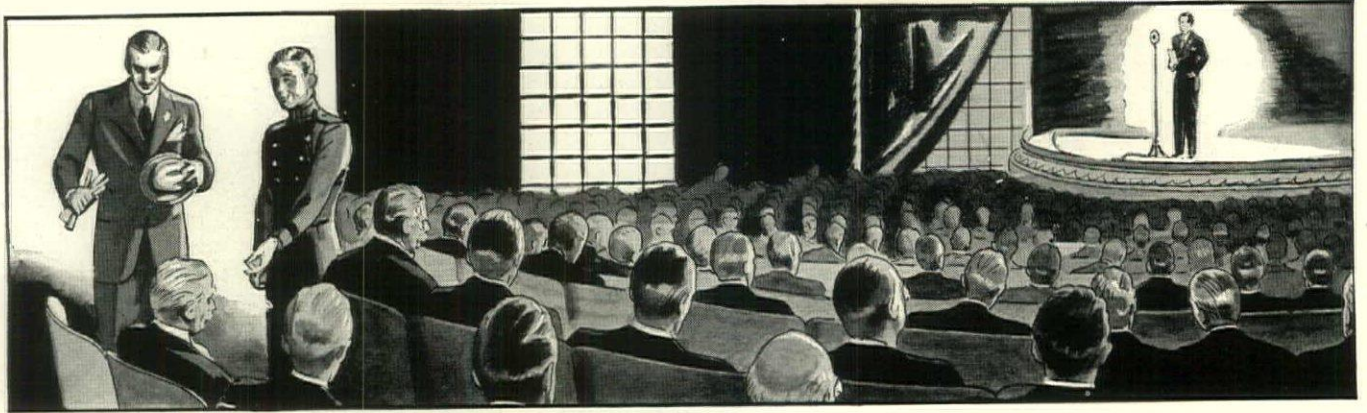
1670 West Fort Street Detroit, Michigan

New York City Office and Warehouse — 344-346 East 32nd Street
Pacific Coast Office — 450 Skinner Building, Seattle, Washington

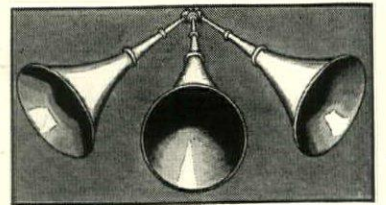
For full architectural details see Sweet's catalog. Write us for complete working data and price list. Remember, too, wherever you are there is a distributor near you. We also carry a complete line of "Desco" construction material in our New York City Warehouse.



The last shall be first



when it comes to hearing



The last-minute last-seat arrival hears every syllable with front-row ease. Thanks to the architect who has seen to it that the Western Electric Public Address System was included in the plans. In hotels, schools, clubs, city halls, public buildings this equipment contributes to the success of meetings, dinners, large affairs of every kind . . . Reproduction meets the high standard of Bell Telephone makers. Experienced engineers cooperate with architects on problems of acoustics and wiring for new or existing buildings.

GRAYBAR ELECTRIC CO., AA3-31
Graybar Building, New York, N. Y.

Gentlemen: Please send us the story of the Public Address System.

NAME

ADDRESS

CITY.....STATE.....

Western Electric

PUBLIC ADDRESS AND MUSIC REPRODUCTION SYSTEMS

Distributed by GRAYBAR Electric Company

You may never design a **PLANETARIUM** or a **QUICK-FREEZE PLANT..**

Each requires a different insulation, but these unusual Armstrong installations may help you with other jobs.

FEW people can tell you what a planetarium is. So far as we know, there's only one in the United States—the Adler Planetarium in Chicago. It's a miniature universe, with planets and stars in exact duplication of the solar system. Intricate machinery causes each to move in its actual orbit in relation to the others.

Controlled temperature and freedom from ceiling condensation are essential in such a building. So the architect, Ernest A. Grunsfeld, Jr., called on the Armstrong Cork & Insulation Company—and the practical answer given by Armstrong engineers was a 2-inch layer of Armstrong's Corkboard on the building's dome-shaped roof, providing ideal insulation.

Heat cannot pass the roof of the new Adler Planetarium. Armstrong's Corkboard forms a perfect barrier. Architect, Ernest A. Grunsfeld, Jr., Chicago.

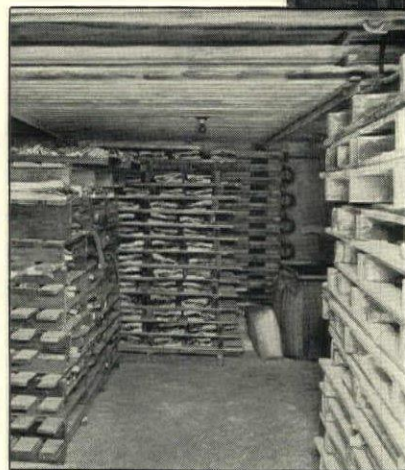
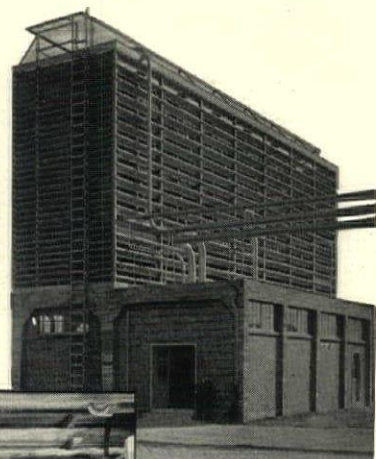


HOW TO HOLD 50° BELOW ZERO? Just as interesting, in another way, are two plants recently built for the quick-freezing of foods. Cudahy Brothers Packing Company of Milwaukee freezes meats; Vita Fruit Products, Inc., of Lodi, California, fruits. In each case, this freezing is done at 50 to 60 degrees below zero—mighty cold temperatures to maintain.

Armstrong engineers advised 12 inches of Armstrong's Corkboard on walls and ceiling. Because of

cork's efficiency, these freezing rooms are now permanently insulated to hold low temperatures.

CUSHIONING A FACTORY FLOOR. In Canada, the Canadian Goodrich Company, Ltd., found itself faced with the problem of installing heavy, vibrating machinery on the third floor of its new building. Placed over beams, column bases, and floor joists, Armstrong's Cork Machinery Isolation cushions the whole third floor. Vibration cannot harm this building now.



Outside view of one of the coolers of Vita Fruit Products, Inc., Lodi, California. Armstrong's Corkboard insulates the plant throughout.

This room in the new quick-freeze plant of Cudahy Brothers' Packing Company, Milwaukee, is insulated with 12 inches of Armstrong's Corkboard.

We could mention many similar installations. Each day sees some new question, some new situation. For these and other Armstrong Insulation Products serve many purposes—in ways that might never occur to you. Next time you are confronted with a puzzling installation—and what architect isn't?—see if cork won't do the job. Put it up to Armstrong engineers. Their experience may suggest just the method you are looking for. Write to Armstrong Cork & Insulation Company, 936 Concord Street, Lancaster, Penna.

Armstrong's
A
Product

Armstrong Cork & Insulation Company

Corkboard . . . Cork and High Temperature Pipe Covering . . . Corkoustic . . . Cork Machinery Isolation . . . Insulating Brick and Block

Accurate Estimates

(Continued from page 41)

gives the cost per square foot of the different costs of floors generally used in non-fireproof buildings, and schedules for roofs. Partitions and other items are also arranged. Schedules are prepared to give the cost per foot in height of the different size and type chimneys.

Schedule for doors; windows and other millwork are arranged to show the cost per opening complete for the different kind of woods in general use. This cost covers each opening complete including all labor. See schedule marked "C". Stone and Terra Cotta trim is figured by the foot with allowances made for carving and other factors. We also have schedules for estimating finishing hardware and sheet metal work.

For fireproof construction we have schedules prepared that give the approximate cost per hundred feet of floor of different thickness, of the different types of construction. The thickness of floor can usually be determined by the span and loadings required. The size required for concrete columns, beams, girders and footings must be estimated and cost computed from schedule giving the cost per cubic foot of concrete in place, including reinforcing and forms. If steel is used the weight of columns and beams must be estimated and cost computed by the price per pound for the steel in place.

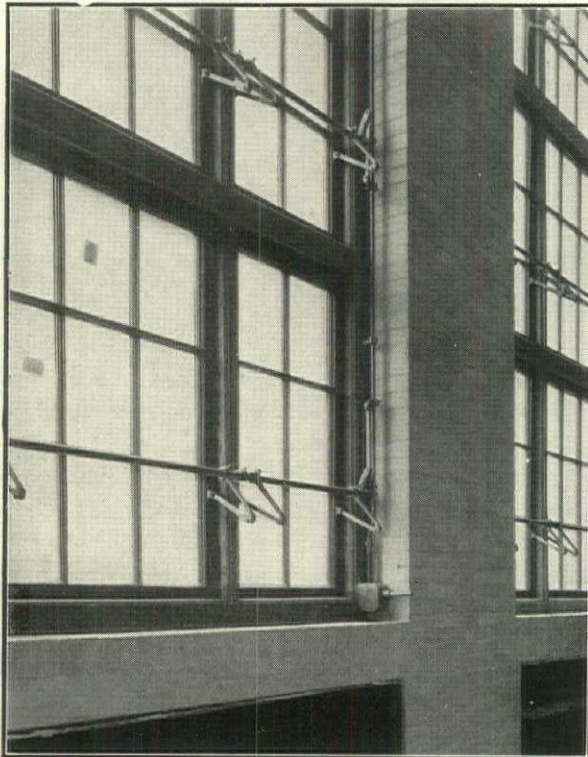
Plastering and painting are usually figured by the square yard. We have schedules prepared giving the

factor to use in computing by the foot to give the same results. We also have a schedule showing proper factor for figuring excavating by the cubic foot instead of by the cubic yard.

Electrical work is figured by the opening. Our schedule gives the approximate cost per opening for different type of work. The approximate cost of the heating system is determined by figuring the approximate number of square feet of radiation required, and referring to a schedule showing approximate cost per foot for installing the different type systems including boiler and piping. Plumbing is estimated by the fixtures, including all piping valves and minor items, the schedule giving the cost for the different qualities and types.

There are of course many items entering into most jobs that cannot be well taken care of in schedules, but they are usually of such nature that individual estimates can be made of their cost. With this information available a person by using good judgment can quickly make up an estimate that is fairly reliable.

The estimate reproduced shows the use of our method of preparing it and the allowances necessary to take care of contractors expenses and profit. Of course when prices fluctuate, proper allowance must be made, as must also be done when the location of building makes additional transportation costs necessary.



Windows of the new gymnasium, Barringer High School, Newark, N. J.
Guilbert & Betelle, Architects
Frank Briscoe Company, General Contractors

Sash Control For Natural Ventilation in Gymnasiums

All the sash units in each bay of the new gymnasium, at the Barringer High School in Newark, N. J., are operated simultaneously.

The operating equipment is entirely between the inside face of the window mullions and the protecting screen at the wall line. A minimum space of only eight inches is necessary for this equipment. Specifications call for Lord & Burnham's screw-thread gymnasium sash operating devices.

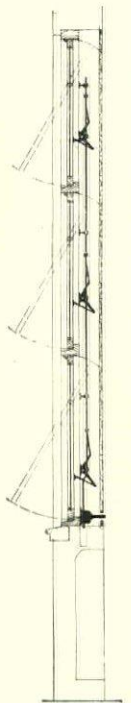
Standard or special equipment is furnished and installed by Lord & Burnham to meet every sash operating problem.

Lord & Burnham Co.

SASH OPERATING DIVISION

Graybar Building, New York City

Representatives in principal cities of the
United States and Canada

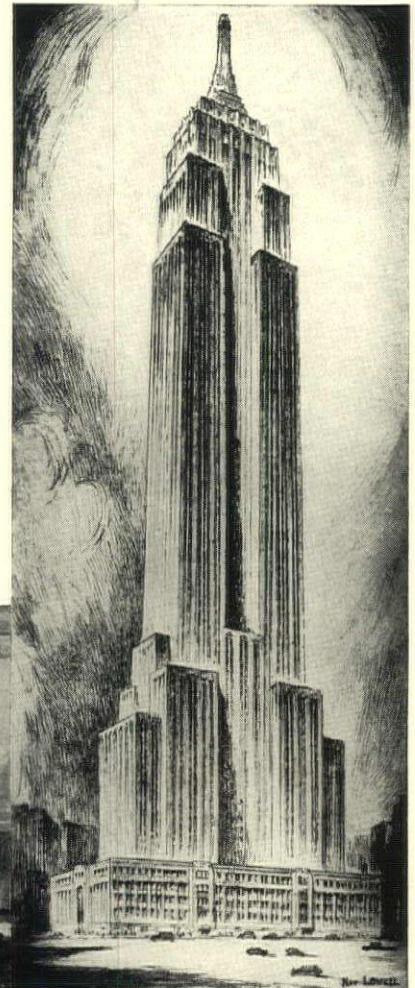


Vertical section through windows, showing control rod and gear case.

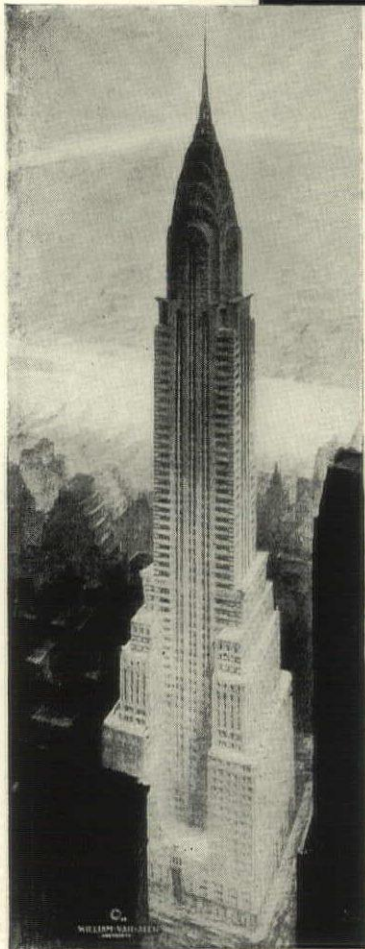
Stanley Ball Bearing Hinges
swing the doors
of the
Most talked of Buildings
in the World



MERCHANDISE MART, Chicago
Architects: Graham, Anderson, Probst & White



EMPIRE STATE BUILDING, New York
Architects: Shreve, Lamb & Harmon

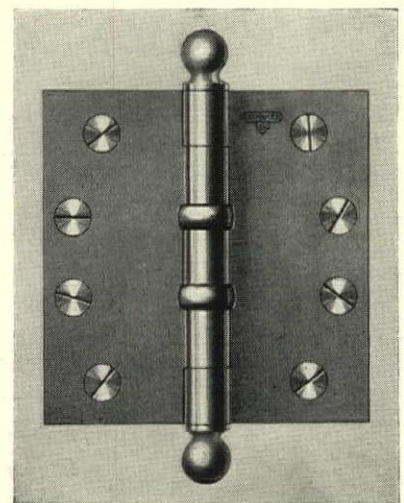
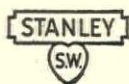


CHRYSLER BUILDING, New York
Architect: William Van Alen

These famous buildings are permanent monuments to the skill of the architects who designed them.

The selection of Stanley Ball Bearing Hinges for the tens of thousands of doors in these key buildings is the best compliment that can be paid to their ability to insure smooth trouble-free operation of doors in any building.

THE STANLEY WORKS
New Britain, Conn.



**STANLEY
BALL BEARING
HINGES**

To provide

FRESH,

TEMPERED,

THOROLY DIFFUSED

A I R

QUIETLY AND
WITHOUT DRAFTS

BUCKEYE HEATOVENT
BUCKEYE THERMOVENT

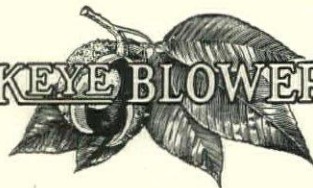
UNIT SYSTEM OF
HEATING AND VENTILATING

for

SCHOOLROOMS, AUDITORIUMS, GYMNASIUMS,
HOSPITALS, ARMORIES, LODGE ROOMS,
RECREATION HALLS, ETC.

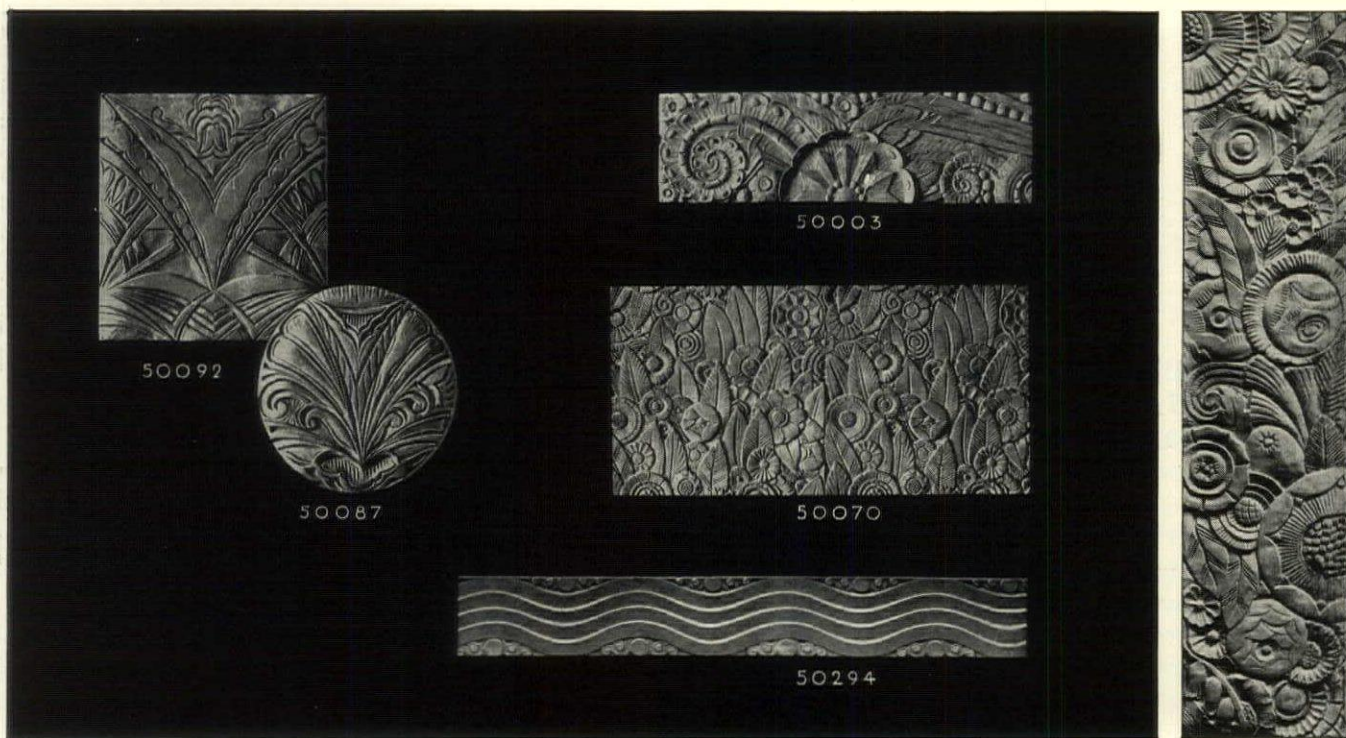
THE BUCKEYE BLOWER COMPANY

Main Office
& Factory



Columbus,
Ohio

Branch Sales and Service Offices in Principal Cities



MODERNE

approved ornament from our Chicago Studios



*Prof. Rexford
Newcomb, Pro-
fessional Ad-
visor to our
Chicago Studios.*

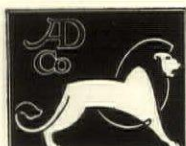
Architects everywhere will be interested in the modern plaster ornaments being produced in our Chicago Studios. A portfolio of this new and brilliant ornament has just been prepared and is available for architects and designers. In this portfolio you will find not one type of ornament but a variety to suit the individual tastes of the designer. This book will prove a helpful tool in designing and creating interiors of good taste in the modern manner.

At this time we wish to also announce to architects the retention of Professor Rexford Newcomb of the University of Illinois, as professional advisor to our Chicago Studios. Mr. Newcomb is Professor of the History of Architecture at the University of Illinois and is the author of many well-known architectural books. He will act as our advisor and consultant to insure our clients approved designs of authenticity and beauty. This is just another step on the part of the Architectural Decorating Company to insure our clients the most complete service possible in the plaster ornament field.

ARCHITECTURAL DECORATING CO.

1600 South Jefferson Street

CHICAGO



ILLINOIS

PLASTER
ORNAMENT
MANTELS
COMPOSITION
ORNAMENT

*Send for New
Portfolio FREE*



ARCHITECTURAL DECORATING COMPANY
1600 South Jefferson St., Dept. C, Chicago, Illinois
Please send me your Portfolio of Moderne Plaster Ornaments.

Name.....
Address.....
City.....

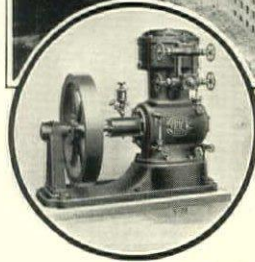


The Refrigerating Machine That Made Refrigeration Dependable

will give the same efficient refrigerating service in the mammoth Department of Commerce Building that it has shown in many older and very exacting cases. Eight separate Frick plants will cool the drinking water, hold proper temperatures in the storage rooms, and condition the air.



Department of Commerce Building
Washington, D. C.

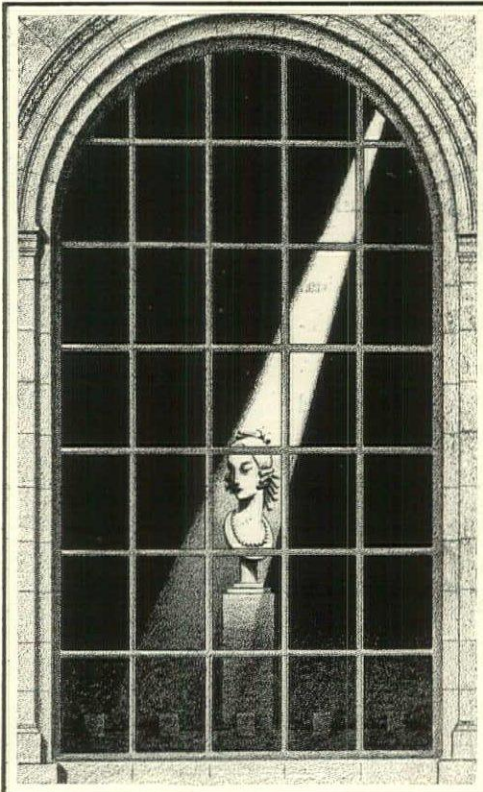


Each of the machines on the eighth floor is a Combined Unit, connected to an open-type drinking water cooler. The 7x7 machine furnishes cold water for the air conditioning system. Ten rooms, attached to the restaurant kitchen, are refrigerated by the 5x5 machine in the basement.

Branch offices and distributors in 80 principal cities.

Frick Company
WAYNESBORO, PA., U. S. A.
ICE MACHINERY SUPERIOR SINCE 1862

Send for copy of Architects Catalogue Binder.



SPOTS of LIGHT and COLOR

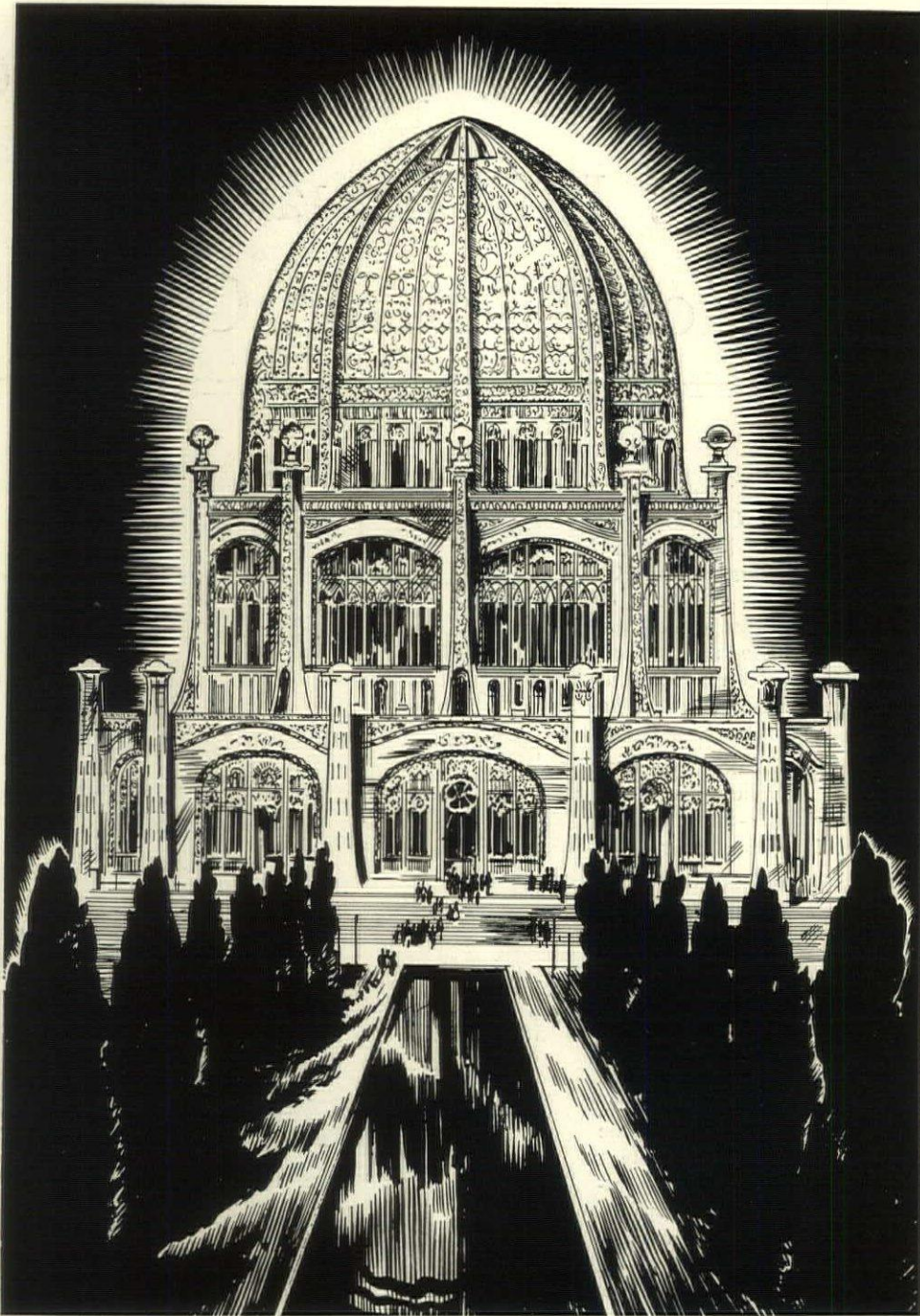
A most effective method for the proper display-window presentation of merchandise is through the use of Mobile Lighting, either white or in color

- Mobile White Lighting is used to "spot" a succession of displays, Mobile Color Lighting to form an appropriate background of changing color. Both methods are discussed in Bulletins which will be sent to you at your request.



Ward Leonard manufactures Vitrohm Dimmers for all lighting control needs; motor starters and controllers, resistors, rheostats, and a variety of other electric control devices.

WARD LEONARD ELECTRIC CO
MOUNT VERNON N Y



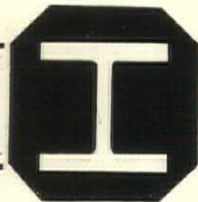
THE jewel-like design of the Baha'i Temple, national church of Mashreq'ul Adhkar at Wilmette, Illinois, presents a marked contrast to the awesome magnificence of the 85-story Empire State Building in New York City. The one calls for a fine flexibility of materials of construction—the other for massive proportions and brute strength. The use of the popular C B Sections in both of these structures demonstrates the remarkable adaptability of these modern sections to the needs of architects and designers. Louis Bourgeois was the Architect of Baha'i Temple; Benjamin Shapiro, Structural Engineer; George A. Fuller Company, General Contractor; and Worden-Allen Company, Fabricator.

Carnegie Engineers are at your service at all times.



122

CARNEGIE STEEL COMPANY
PITTSBURGH, PA.



Subsidiary of
United States Steel Corporation

Gray Indiana Limestone . . . from famous ILCO quarries . . . was used for Riverside Church



THE architects of New York City's famous Riverside Church, Messrs. Henry C. Pelton and Allen & Collens, for both the exterior and interior of this magnificent building, selected Indiana Limestone.

They chose Indiana Limestone Company's famous "Dark Hollow Gray" for the exterior, and a fine-textured buff ILCO limestone, for the interior.

The use of limestone from the tested quarries of Indiana Limestone Company for this building has precedent in the limestone used for Washington Cathedral, for the interior of the Cathedral of St. John the Divine, and for scores of other noteworthy ecclesiastical edifices.

The designers of these architectural achievements are convinced that *there is a difference* in limestones . . . that they can be sure of getting the exact color-tones, texture, and quality they want only by specifying ILCO limestone from the proven quarries of Indiana Limestone Company.

It is a fact that you can always be sure of finding limestone of the proper color-tone, texture and quality in stone from ILCO quarries. There is no better way to insure the result you want than by writing "Indiana Limestone Company" into your specifications.

Let us send you literature describing ILCO limestone. Address Box 1365, Service Bureau, Indiana Limestone Company, Bedford, Indiana. (Executive Offices: Tribune Tower, Chicago)

—♦—
Riverside Church, New York City. Architects: Henry C. Pelton and Allen & Collens. Marc Eidlitz & Son, Inc., Builders. William Bradley & Son, Inc., James Gillies & Sons, Inc., J. J. Spurr & Sons, B. A. & G. N. Williams, Cut-Stone Contractors.



INDIANA LIMESTONE COMPANY



SALUBRA

Pattern No. 30833 provides a background of soft pastel shades of cafe, orchid, and yellow in a diamond plaid effect. The screen is also covered with Salubra in a soft blue-green, with figures in contrasting colors. These are but two of hundreds of beautiful patterns designed to harmonize with every type of interior, Period or Modern.



Salubra's Special Architectural Service

SALUBRA'S Architectural Service is particularly helpful to architectural firms who do not feel justified in maintaining a special Department of Interior Decoration, but who desire to broaden and extend their service to clients to include advice on such subjects. ★ ★ The scope of this special co-operative service is as follows: *To recommend suitable color-schemes for walls, wood-work and paneling—To make a tentative selection for specific jobs, from Salubra's more than 2000 patterns—To supply samples, and estimate the cost of Salubra from floor plans supplied by the architect.* ★ ★ Remember, wherever you are specifying paint for interior walls, Salubra—"paint-by-the-roll"...washable...fadeless...non-porous...may be used to advantage—and Salubra's Decorative Service will prove invaluable. ★ ★ Write for your copy of the folder explaining this new and helpful service in detail.

FREDERIC BLANK & COMPANY, 230 Park Avenue,
New York, N. Y. or 24 North Wabash Avenue, Chicago, Ill.

Salubra

REG. U. S. PAT. OFF.

WON'T FADE WILL WASH



THE FOLDER illustrated describes a service which will prove of value to every architect who is asked—as architects so frequently are, these days—for advice on the subject of decorating interiors.

If you want . . .
BETTER BLINDS
 insist on
**BURLINGTON
 VENETIAN BLINDS**

(For Proper Light Control
 and Draftless Ventilation)

IN ANY COLOR
 or STAIN

MANUFACTURERS SINCE 1882

BURLINGTON VENETIAN BLIND CO.
 402 Pine Street Burlington, Vt.

INCINERATION SURELY! —but what kind?

With GAS
 or OIL for
 HEATING
 —what will
 you do with
 WASTE and
 RUBBISH

Before an incinerator is selected it is well to know the answers to these questions: What is the actual performance record of the incinerator over a period of years? How much and what kind of experience is represented in its design? Who accepts the responsibility of correct installation? Who assures service during the years to come and quick response to service calls? What kind of guarantee goes with the incinerator—and, far more important, *who stands back of the guarantee?* We always welcome the opportunity to discuss these questions.

KERNER INCINERATOR COMPANY
 3548 N. Richards St. MILWAUKEE

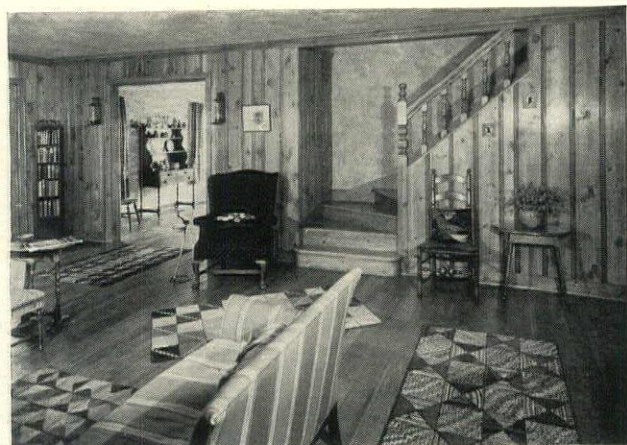
Offices in over 150 cities

KERNERATOR
 INCINERATION

FOR NEW AND EXISTING BUILDINGS

See our catalog in *Sweet's*, pgs. C-4526-33,
 or write for A. I. A. folder.

© 1930 K. I. Co.



KNOTTY PINE RISERS and paneled walls in the living room of the house of J. A. Browning. Harry L. Wagner, architect

Pine Paneling

(Continued from page 55)

pastel shades. Over-glazing the enamel with a varnish glaze coat, wiped, enriches the color scheme and accents the profiles of the mouldings. This glazing can be applied by any competent painter and costs very little.

Before applying vertical pine sheathing boards for interior walls care must be exercised in the proper placing of nailing blocks and furring strips. In wood studded walls, two-inch by four-inch members should be cut and fitted horizontally between each stud. Preferably four rows of these blocks should be placed around the room, one row at the base, one row at the cornice and two rows divided between the base and cornice. This blocking not only provides proper nailing for the vertical boards but materially stiffens the walls. When the pine boards are applied over masonry walls these walls should be stripped with four rows of two-inch furring strips fastened to the masonry in the same position as the blocking used in stud walls.

It is always advisable from the standpoint of moisture, warmth, and elimination of vermin, to brown in the walls with plaster before the installation of wall boarding.

ALTHOUGH some of the lumber companies are making stock designs of knotty pine sheathing boards for interior wall finish, it is more desirable to have the mill run the profiles and battens. In this way greater variety may be had in the design of these profiles and the selection of the boards both for width and distribution of knots. A striking example of the selection of knots may be seen in the stair risers of the Browning house. Note the perfect selection and symmetry in the pieces selected for the risers. Close examination of the mouldings and stair balusters in this room shows the use of knotty pine for these members also. Knotty pine for moulded work requires the use of very sharp knives to prevent tearing the knots. The moulding of knotty pine can only be done with boards having small, sound knots. Large knots would weaken the boards to such an extent that it would be impossible to handle them without breakage.

While uniform boards are sometimes desirable for the wall boarding, I feel that boards of random width

A New Te-pe-co Product

Integral Trap Lavatory



Plate 2081-T
Te-pe-co "Gothian"
Lavatory with combination
Supply Fittings
on Slab.

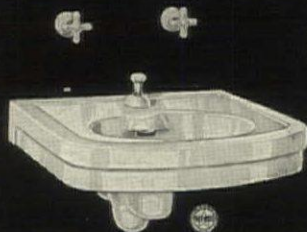
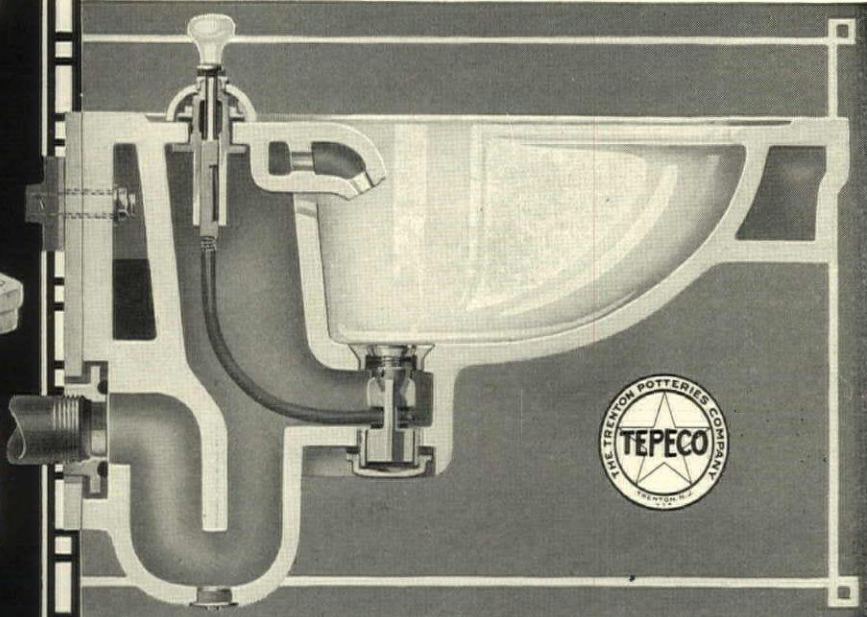


Plate 2085-T
Te-pe-co "Gothian"
Lavatory with Combination
Supply Fittings
through wall.



Plate 2083-T
Te-pe-co "Gothian"
Lavatory with All-China
Combination Supply
Fittings on Slab.



ONCE AGAIN have Te-pe-co Sanitary Engineers advanced the standards of sanitation by the design of a lavatory which eliminates entirely the customary brass trap. The advantages of this Integral Trap Lavatory are obvious. It is better looking. It can be readily kept clean. It affords a clear, unobstructed floor space. Its installation can be accomplished in shorter time.

We have named this new Lavatory the "Gothian". It is exclusively a Te-pe-co Product, covered by patents granted and pending. Unquestionably it is the most beautiful and sanitary lavatory of all time. Aside from these points, its complete elimination of exposed brass and its ease of installation make it a wonderful advance in the field of sanitary plumbing.

All credit cannot be given to our sanitary engineers for this achievement for this type of lavatory has been in the minds of plumbing men for many years. Rather should our factory and its skilled potters, who solved its intricacies of manufacture, be given the major credit for this wonderful achievement.

Detailed Circular, telling how to specify, on request

THE TRENTON POTTERIES COMPANY
Trenton, New Jersey, U. S. A.

National Showrooms
New York City—101 Park Ave.
Entrance on 41st St.

Branch Offices
Boston and
San Francisco

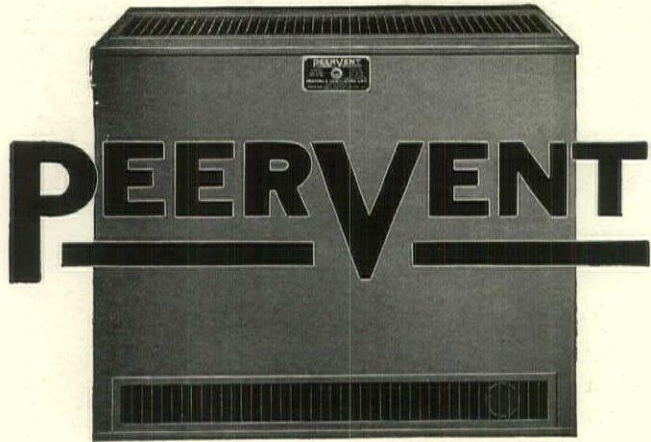
Philadelphia—Architects Building
17th and Sansom Sts.

Export Office: 115 Broad Street, New York City

Our Guarantee

We make but one grade of ware—the best that can be produced—and sell it at reasonable prices. We sell no seconds or culls. Our ware is guaranteed to be equal in quality and durability to any sanitary ware made in the world. The Te-pe-co trade-mark is found on all goods manufactured by us and is your guarantee that you have received that for which you have paid.

TE-PE-CO
ALL CLAY PLUMBING FIXTURES



Heating and Ventilating Units



YOU can specify PeerVent Units with complete confidence. They are positively silent in operation, highly efficient, and dependable. Peerless Units built *twenty years ago* are still giving perfect satisfaction. The latest PeerVent is improved throughout — better radiator, better motor, better fans, and better controls. Write for Peerless catalog.

PEERLESS UNIT VENTILATION CO., Inc.
Pioneers in Unit Ventilation
BRIDGEPORT, CONNECTICUT

Resident Engineers in Principal Cities from Coast to Coast

THE CUTLER MAIL CHUTE

Is backed by —

An experience of fifty years.

A factory equipped and operated for our own work exclusively.

A force of experienced erectors in the field.

A determination to keep our product and service up to the highest possible standard.

Correspondence invited

CUTLER MAIL CHUTE CO.
 GENERAL OFFICES AND FACTORY
 ROCHESTER, N. Y.

give more interesting results. This type is also more economical from a standpoint of waste lumber.

The various joints, beading and battening are unlimited and with this informal type of wall the designer may vary them as he sees fit. Often delightful rooms are designed with one or more walls of pine and the balance of hand palmed plaster or quaint provincial pattern wall-papers. Particularly is this true of a fireplace wall-end of a room or wall having recessed bookcases, or open shelves.

WHEN the wall boards extend from the base board to the cornice there are several ways to solve the problem of jointing. The most common and perhaps the most successful means consist of either using a fillet at the base and also at the cornice or by the use of either a furred base and frieze or a base and frieze somewhat thicker than the wall boards. Practically all of the pine boards used for vertical sheathing of interior walls are three-quarters of an inch in thickness and in order to eliminate a flush joint the above methods are used. The fillet is desirable on inexpensive work as it permits the use of stock base and frieze members of the same thickness as the wall boards.

J. Kendall Masten, A.I.A., has established an office for the practice of architecture at 6809 Neptune Place, La Jolla, Cal. and would like to receive manufacturers' catalogs and literature.



Fine ornamental tracery in a canopy over a sedalia

Frank R. Watson
 Edkins & Thompson
 Architects

For such work, the cutting tool must be guided by more than the hand.

The architect will find in DeLong Craftsmen an intelligent interpretation of his aims and the skill to further them.

DE LONG FURNITURE CO.

Wood-Carving Division
 1505 Race St., Philadelphia
 329 Fourth Ave., New York City
 Write to Department AA

WOOD CARVING

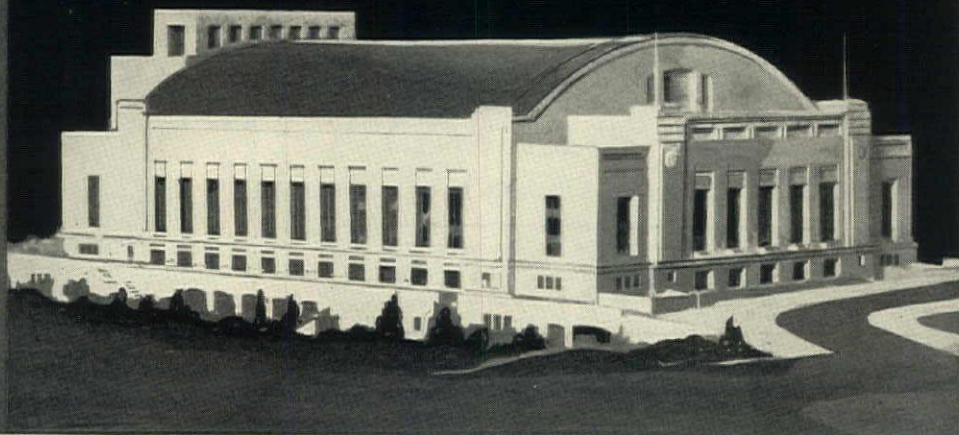


by **DE LONG**



BUILT WITH BERLOY

METAL LATH



THE PHILADELPHIA CONVENTION HALL
 Philip H. Johnson Architect McCloskey & Co., Inc., General Contractors
 Friel and McLeister Co., Inc., Plastering Contractors
 BERLOY Metal Lath Used

METAL LATH

- ... Diamond Mesh
- ... Triplex Flat Rib
- ... 3/8-inch Ribplex
- ... 1/2-inch Ribplex

- BASE SCREEDS
- CORNER BEADS
- CHANNELS
- STEEL JOISTS
- FLOOR CORES
- STEEL CEILINGS

THE most intricate architectural designs, involving interior plaster and exterior stucco, are being executed with BERLOY Metal Lath . . . made by the Berger Manufacturing Co., a division of the *Republic Steel Corporation*, at Canton, Ohio, with branches and dealers in principal cities. » » » »

DIRECTORY

<p>A</p> <p>ALYNG, CHARLES F. 705 ASHLAND GENERAL HOSPITAL 311</p>	<p>J</p> <p>JONES, VAUGHN T. 905-7</p>	<p>R</p> <p>RESOLUTE POTTERY CO. 730</p>
<p>B</p> <p>BAER, I. BLOND BUSTON WIRING</p>	<p>K</p>	<p>S</p>


*Universal
Preference*

There must be good reasons why 80% of America's most important buildings demand T & T Directory Tablets and Service.


We render a complete service not obtainable elsewhere -- Equipment-Strip - Maintenance.

A specially prepared detail file folder for Architects awaits your request.

The **TABLET & TICKET CO**

SINCE  1870

15 E. 23rd St. New York	1021 W. Adams St. Chicago	407 Sansome St. San Francisco
----------------------------	------------------------------	----------------------------------



"RED METAL" (Solid Bronze)
"GIANT METAL" (Phosphor Bronze)
AND STEEL (Cold Rolled)

SASH CHAINS

**For Economy
and
Satisfaction Use
SASH CHAINS**

Manufactured by

THE SMITH & EGGE MFG. CO.
Bridgeport, Conn.

ORIGINATORS OF SASH CHAIN

See page C-2928 Sweet's Catalog and Page No. 147
American Architect Specification Manual

C o l o r
v i t a l i t y
s t r e n g t h
c h a r a c t e r
d i g n i t y
d i s t i n c t i o n
b e a u t y

All synonymous with

ORIGINAL MINNESOTA PINK

"The Constructive Granite"

North Star Granite Corporation
St. Cloud, Minnesota



INTER-COMM-PHONE SYSTEM

The Stromberg-Carlson Inter-Comm-Phone System is satisfying the service demands of offices, factories, and large residences where simultaneous conversations are necessary, but where the volume of traffic is not large enough for a switchboard system and a paid operator.

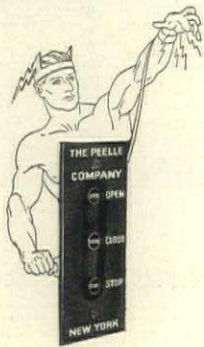
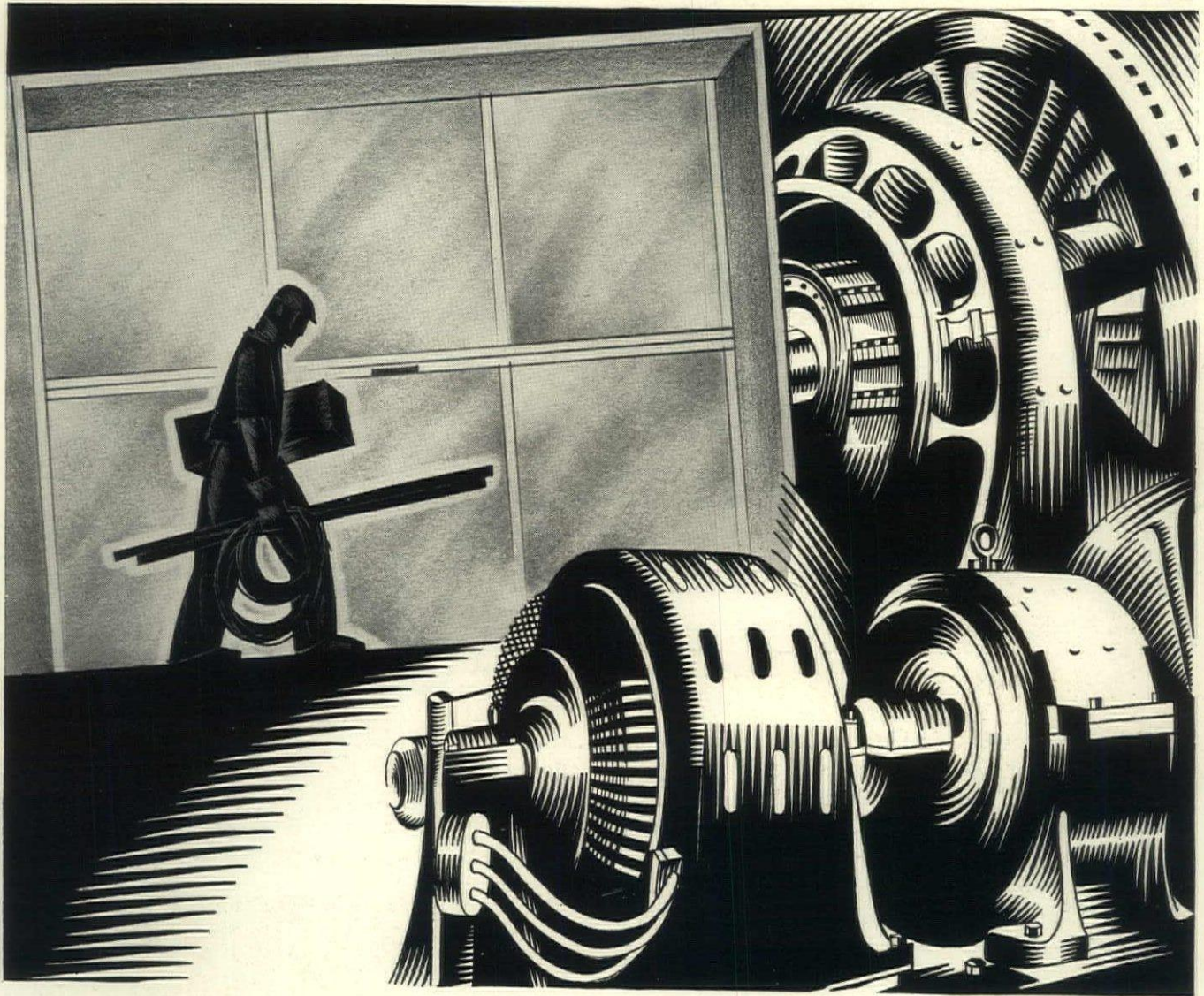
Easy to operate, cuts down useless running around, speeds production and increases efficiency. Made by a firm with more than thirty-five years' experience.

Write for literature describing Stromberg-Carlson Telephone and Radio apparatus and trade discounts.

Stromberg-Carlson Telephone Manufacturing Co.,
Rochester, N. Y.

Stromberg-Carlson

THE DOORWAY OF AMERICA'S FREIGHT ELEVATOR TRAFFIC

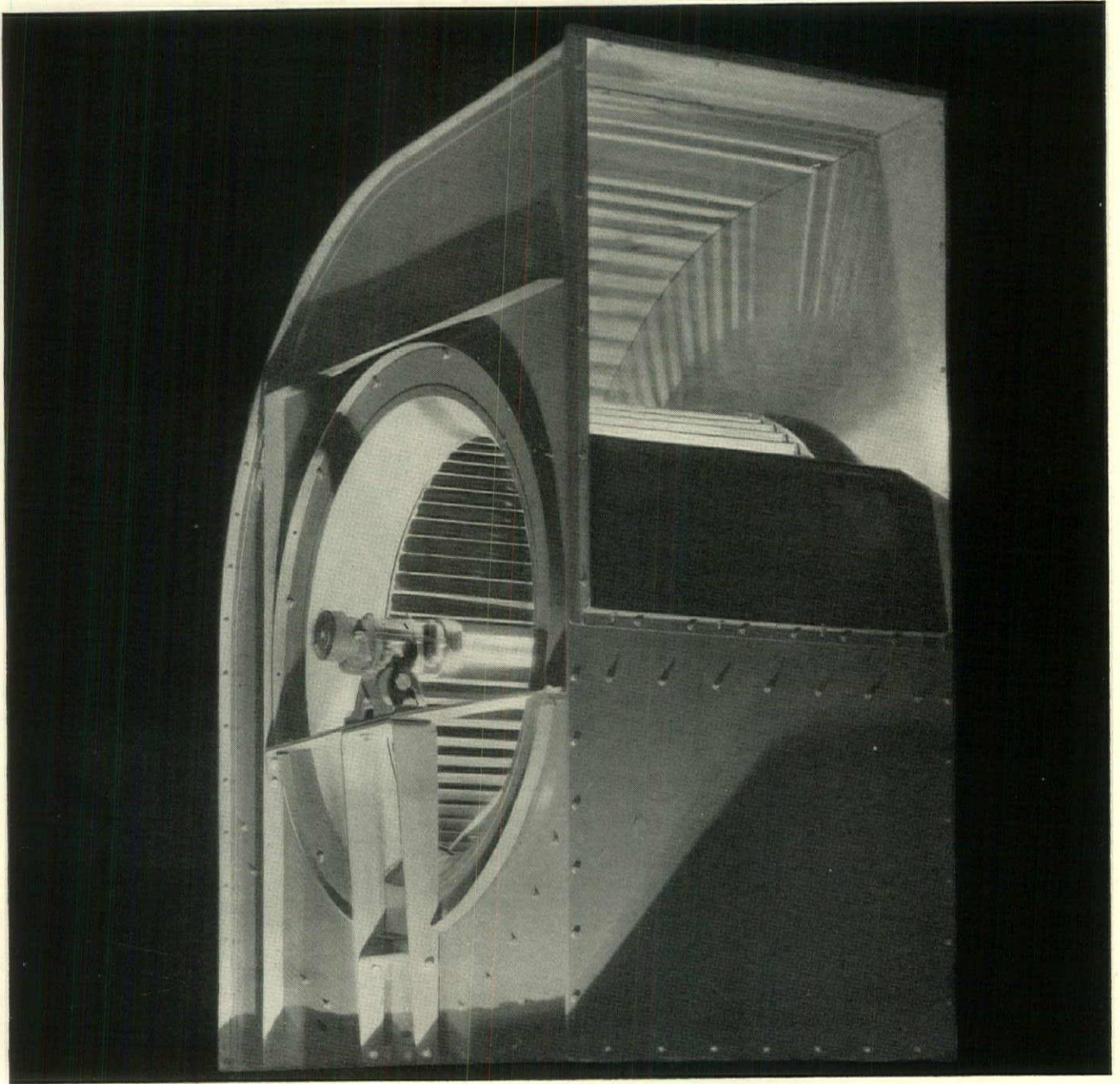


PEELLE MOTORIZED FREIGHT ELEVATOR DOORS

dynamo ... modern descendant of primitive tread mills ... impetus that animates into being the products of industry. But these products must move—from machine to machine—floor to floor—from maker to buyer. Peelle Doors accelerate the flow of products that power produces, help quicken their vertical voyage throughout the plant. Motorized ... they afford automatic entrance and exit at the touch of an electric button ... level vertical shaftways into horizontal highways ... clear the right-of-way for interior traffic. Peelle Doors guard men and freight against accident, save time and labor—function with speed so that production energy may not waste itself in slow motion. In these things Peelle Doors justify a slightly higher first-cost, which low-upkeep and trouble-free service makes negligible through the years. A Peelle catalog will be gladly sent upon request, or consult our engineers.

THE PELLE COMPANY, BROOKLYN, NEW YORK
Boston, Chicago, Cleveland, Philadelphia, Atlanta and 30 other cities
In Canada: Toronto and Hamilton, Ontario

SIROCCO . . . THE STANDARD OF THE WORLD



The new "Series 30" Sirocco Fan is quiet in operation because for a given capacity it operates at a lower speed than any other fan of the same size . . . slow speed means long life, high efficiency, quiet operation, and freedom from vibration. Write for new illustrated catalog. (1111)

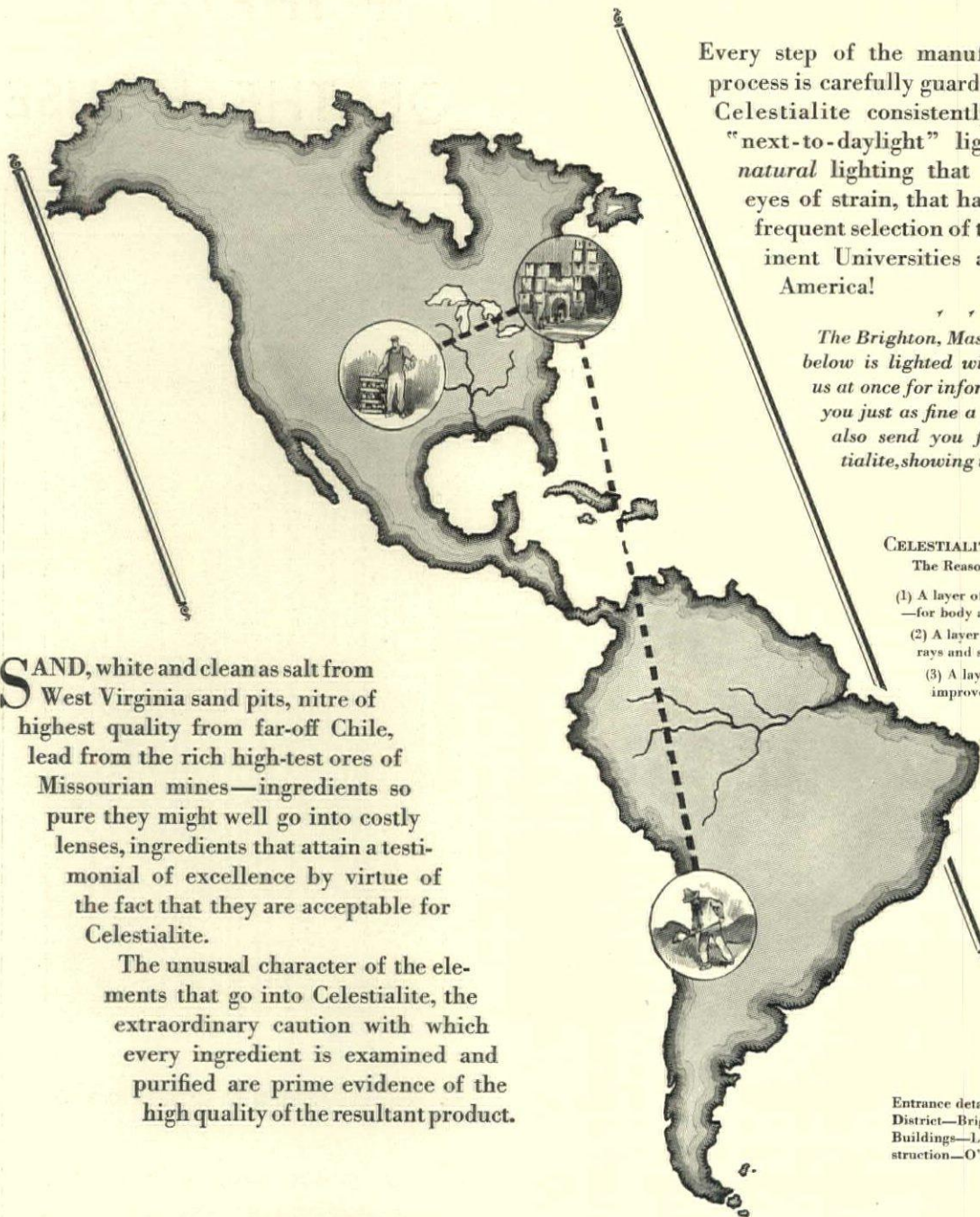


AMERICAN BLOWER CORPORATION, DETROIT, MICH.
CANADIAN SIROCCO CO., LIMITED, WINDSOR, ONT.
BRANCH OFFICES IN ALL PRINCIPAL CITIES

American Blower
VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT
MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1881

INGREDIENTS

*the finest from home and abroad
to light this Massachusetts School*

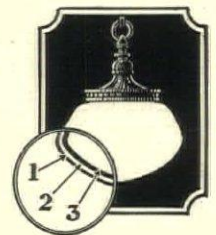


Every step of the manufacturing process is carefully guarded, so that Celestialite consistently supplies "next-to-daylight" lighting—the natural lighting that relieves the eyes of strain, that has become the frequent selection of the most prominent Universities and schools in America!

The Brighton, Mass. High School shown below is lighted with Celestialite. Write us at once for information that will secure you just as fine a lighting system. We will also send you free, a section of Celestialite, showing its three-layer construction.

CELESTIALITE'S three layers:
The Reason for Its Superiority

- (1) A layer of crystal clear transparency—for body and strength.
- (2) A layer of white glass—to diffuse the rays and soften the light.
- (3) A layer of blue glass—to whiten and improve the quality of the light.



Entrance detail of High School—Bennett District—Brighton, Mass.—Dept. School Buildings—Louis K. Rourke, Supt. Construction—O'Connell & Shaw, Architects.

SAND, white and clean as salt from West Virginia sand pits, nitre of highest quality from far-off Chile, lead from the rich high-test ores of Missouriian mines—ingredients so pure they might well go into costly lenses, ingredients that attain a testimonial of excellence by virtue of the fact that they are acceptable for Celestialite.

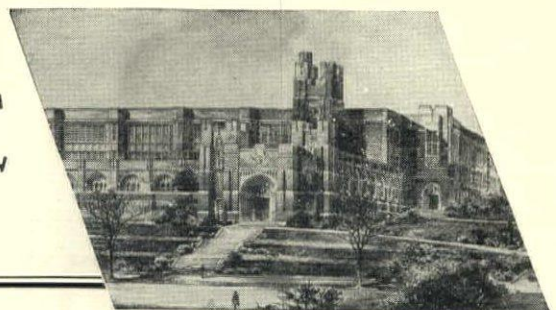
The unusual character of the elements that go into Celestialite, the extraordinary caution with which every ingredient is examined and purified are prime evidence of the high quality of the resultant product.

Gleason-Tiebout Glass Company
200 Fifth Ave., New York

CELESTIALITE

(Registered and Patented)

"NEXT TO DAYLIGHT"



COLORS «

MUST BE QUIET IF THEY'RE TO
SPEAK WELL OF THE HOUSE

THESE are good times to be sure you're right before going ahead. Especially in the matter of color. Gaudy, heavy plumbing fixtures, seldom in the best of taste, are definitely slipping. Style authorities say that soft greens, blues, lavenders, tuscans, and other pastel shades will be 1931's most popular tones.

All of which confirms Kohler's position. Kohler colors have always been pastel shades—delicate tints that blend perfectly into a background of correctness, and carry on the charm of other rooms.

The new Park Plaza Hotel, St. Louis, follows the trend and sticks to the right track by using Kohler pastels. One of the largest and most beautifully appointed apartment hotels in the West, the Park Plaza has 431 Kohler colored vitreous china lavatories, with Octachrome fittings . . . 429 Kohler colored Vice-roy tubs, with Octachrome fittings . . . 321 Kohler colored acid-resisting sinks . . . and 406 Kohler colored Hygienic closet seats. More than two hundred Kohler fixtures in white assist in winning the favor of desirable tenants.

On the job, on the dot

This good-sized order again proves Kohler's ability to deliver any quantity of fixtures and fittings as specified and when scheduled. Kohler centralized organization means that the shipments arrive on the dot, saving time, money, and check-ups. Kohler branches in leading cities mean that Kohler keeps in constant touch with each new job, to the satisfaction of all concerned.

Kohler Co. *Founded* 1873. Kohler, Wis.—*Shipping Point*, Sheboygan, Wis.—*Branches in principal cities*. . . Look for the Kohler trade-mark on each fixture and fitting.



The Park Plaza Hotel, St. Louis, Mo. *Architects*, Laurence O. Schopp and Edwin J. Bauman. *Jobber*, N. O. Nelson Mfg. Co. *Plumbing Contractor*, J. A. McBride Mechanical Equipment Co. *Owner*, Koplak Construction Co.

KOHLER OF KOHLER

A GREAT FORWARD STRIDE IN THE PERFECTION OF MORTAR CEMENT

A FAR-REACHING ANNOUNCEMENT

COMES FROM THE MAKERS
OF CARNEY CEMENT

concerning the development of a
distinctly superior masonry product



TWO years ago the chemical laboratories of the Carney Cement Company set out to master two of the greatest bug-bears confronting the field of masonry—the control of efflorescence and the defeat of water absorption through the mortar joints. Innumerable experiments were conducted and countless chemical and physical tests carried out. Nothing was left to hope—every conclusion, every deduction was arrived at through the inflexible findings of scientific data.

TODAY the Carney Cement Company presents to the building fraternity a masonry material that definitely eliminates efflorescence through the joints in the wall—a material that is completely free from soluble salts. When the mortar is once set and hard, there is no capillary attraction in the joint because of the water repellent quality of the mortar. Consequently, salts in solution cannot be absorbed by the joints to later cause efflorescence. This characteristic is also valuable in resisting the spread of efflorescence caused by soluble salts in the ground or other materials with which the walls are in contact.

WET walls, resulting from water penetration at the mortar joints, can now be completely eliminated. Water repellency in Carney Cement has been gained through the admixture of a Calcium Stearate waterproofing compound to the extremely fine and dense cement. The effectiveness of this material as a water repellent has long been known to technical and chemical authorities. It is now an integral part of Carney Cement—scientifically measured and thoroughly ground by modern machinery into the

material. In our forty-eight years of manufacturing experience probably no other major advancement has been received so enthusiastically by architects and contractors—because it tolls the knell of irritating nuisances.

In addition to the foregoing improvements, Carney Cement mortar can now be used the instant it is mixed. Its plastic, smooth working qualities are even superior to the old material. Consequently still greater economies in mixing and application are made possible. As has always been the case, the strength of Carney Cement far exceeds the requirements of every building code, forming a joint harder than the bricks themselves.

EACH Carney representative is equipped with a small demonstrating kit and can illustrate these remarkable characteristics right in your office. Call or write our nearest representative.

SPECIFICATIONS

All mortar shall be composed of one part CARNEY CEMENT, manufactured by the Carney Cement Company, Mankato, Minnesota, and three parts clean sharp sand, mixed and measured by volume. The CARNEY CEMENT and sand, if mixed by hand, shall be mixed thoroughly in a dry state. For machine mix put water and sand in machine first, then add CARNEY CEMENT, after which water shall be added in such quantities as to produce a mortar of the desired workability under the trowel. When color is added, an approved brand of good double strength color shall be used in accordance with the directions of the manufacturer of the particular color used. In warm weather common brick shall be wetted; in cold weather the sand and water shall be heated, and the wall units kept dry and free from frost before being placed in the wall. For parapet walls, chimneys and all masonry above the roof line, as well as other places requiring maximum strength, durability and load-bearing capacity the mixture shall be one part CARNEY CEMENT and two parts sand, as above.

THE CARNEY CEMENT COMPANY

District Sales Offices: CINCINNATI, CHICAGO, DETROIT, ST. LOUIS, MINNEAPOLIS Mills: MANKATO AND CARNEY, MINNESOTA

Cement Makers since 1883

CARNEY CEMENT
for Brick and Tile Mortar

THE
ARCHITECTS
OF AMERICA
ARE
INVITED

TO ATTEND THE ARCHITECTURAL AND
ALLIED ARTS EXPOSITION COMMEMORAT-
ING THE FIFTIETH ANNIVERSARY OF THE
ARCHITECTURAL LEAGUE OF NEW YORK
featuring ARCHITECTURE, BUILDING
MATERIALS, UTILITIES AND EQUIPMENT

APRIL 18TH—25TH
1931

AT GRAND CENTRAL PALACE
NEW YORK

Under the Auspices of
THE AMERICAN INSTITUTE OF ARCHITECTS
THE ARCHITECTURAL LEAGUE OF NEW YORK

With the endorsement of
THE SOCIETY OF BEAUX-ARTS ARCHITECTS
NEW YORK BUILDING CONGRESS.

UNIFORMITY

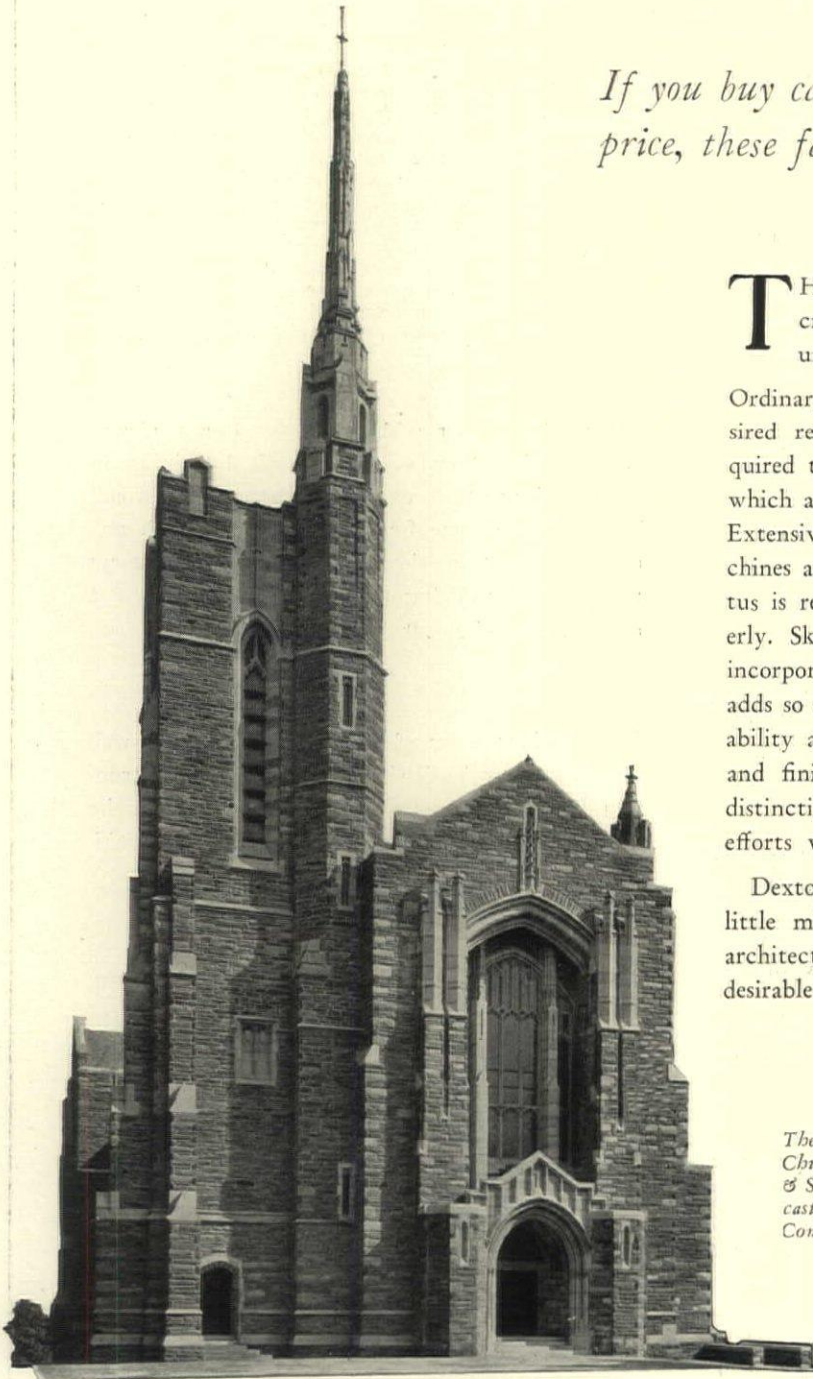
If you buy cast stone on appearance or price, these facts will be of interest . . .

THE strength of cast stone is greatly increased when proper aggregates are selected, uniformly screened, and graded.

Ordinary materials will not accomplish the desired result. Many years of research were required to find and perfect the marble aggregate which adds so much to the strength of Dextone. Extensive equipment, such as triple grinding machines and electrically vibrated screening apparatus is required to prepare these aggregates properly. Skillful craftsmen mold and finish Dextone, incorporating in it the strength and beauty that adds so much to its value. Its increased dependability and uniformity, its wide choice of colors and finishes, and its unexcelled adaptability to distinctive building projects, make these extra efforts well worth while.

Dextone's unseen qualities cost more—but so little more that rapidly increasing numbers of architects and builders are finding them most desirable.

The illustration shows the First Presbyterian Church of Bryn Mawr, Pennsylvania; Karcber & Smith, Architects. All interior and exterior cast stone trim furnished by The Dextone Company.



DEXTONE

The DEXTONE COMPANY, New Haven, Connecticut

A combination of The Economy Concrete Co. and The Decorative Stone Co.

New York Office: 101 PARK AVENUE

"I want..."

A department conducted without charge as a service for readers of *The American Architect*

ARCHITECTURAL SUPERINTENDENT. University graduate in architecture. Superintendent of proven ability. Twenty-eight years of experience, the last eighteen years on large high-grade work—very fine residences, high schools, hotels, office buildings and court houses. Well recommended by architects and owners. Moderate salary. Available on short notice. *American Architect Want No. 99.*

FREE LANCE WORK—Modern and period designer, vivid interpreter of client. *American Architect Want No. 100.*

ARCHITECTURAL DESIGNER, a man of wide experience and culture, who has traveled extensively, wishes contact with outstanding industrial firm or architect. *American Architect Want No. 101.*

PHOTOGRAPHER would like the opportunity to photograph during the coming summer, houses, old or new, of interest on account of their architectural design or their historic associations. Regular vocation is teaching. Photography, especially of historic buildings, is a hobby. Can furnish camera, finished prints, accompanying legends, descriptions, and an automobile. *American Architect Want No. 102.*

PARTNERSHIP DESIRED with reputable established architect by architect with 20 years' architectural experience, also social and business training and some money to invest. *American Architect Want No. 103.*

TRANSLATION from German and French, computations, specifications, clerical, etc., by structural engineer of long experience in building and manufacturing, specifically steel construction. Services are offered full or part time. *American Architect Want No. 104.*

WANTED: Executive representative with intimate acquaintance among sub-contractors. Very lucrative connection for those who qualify. *American Architect Want No. 105.*

The American Architect receives many requests for information, covering everything from men who seek positions and architects who require men or want back copies of a magazine. To make this service as useful as possible, such requests will be published without charge. Address your reply to The American Architect Want No. . . . () and enclose in a separate envelope. It will be readdressed and forwarded.

Types of subjects eligible for listing are: Architects seeking designers, draftsmen, engineers, specification writers or other assistants—men seeking positions—partner wanted—practice for sale—architects draftsmen and students who have books for sale or exchange, or who want back issues of a magazine—firms seeking a man with architectural training—architects who wish commercial connections, etc.

YOUNG ARCHITECT with strong modern tendency in design based on a sound classical training in Paris and practical experience here and abroad. Will welcome some form of association with another architect in view of extending his present practice and utilizing more fully his ability as a creator. *American Architect Want No. 106.*

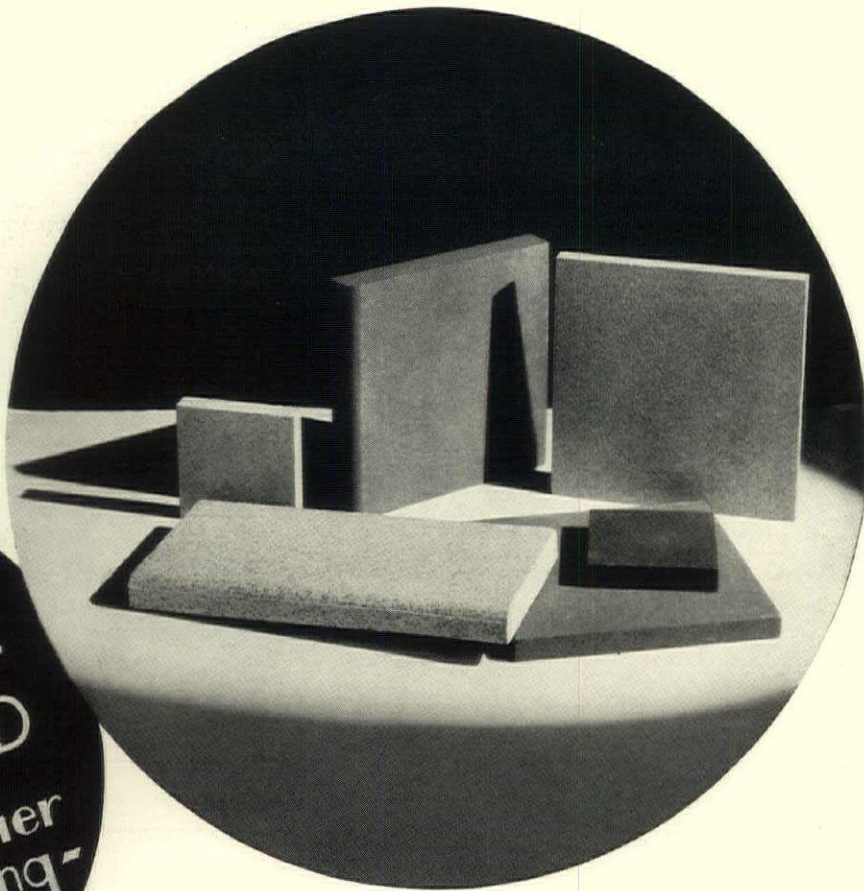
PROJECT MANAGER: Architect of experience, well known in New York City, will supervise construction for local or out-of-town architect, or handle complete project in his own office. *American Architect Want No. 107.*

ARCHITECTURAL DRAFTSMAN—graduate Columbia, 5 years thorough experience; designing to carrying job to completion; working knowledge of steel; last job as chief draftsman; desires situation with good architect's office or first-class builder or construction company. *American Architect Want No. 108.*

POSITION WANTED by architectural draftsman having 20 years practical drafting room experience. Competent also on specification writing. Location immaterial if position offers a future. *American Architect Want No. 109.*

DESIGNER DRAFTSMAN—long, thorough experience in architects' offices and store front contractors; carry job to completion; supervision, etc., desires connection with firm doing high-class stores and store-fronts or architectural metal work. *American Architect Want No. 110.*

**NOW
SURFACE
TREATED**
for easier
cleaning-



Alundum Stair and Floor Tile (Semi-Vitreous)

ALL units of Alundum Stair and Floor Tile 3" and larger (except white granite) are now treated or coated on their top surface with a special preparation that effectively seals the pores, reducing to a minimum the penetration of cement grout and dirt, but not affecting the tile's non-slip properties.

Tile contractors will find the treated product much easier to clean upon completion of a job and janitors will find it easier to keep clean.

As the new preparation is applied only to the top surface the tile's bonding ability is not lessened.



NORTON COMPANY ♦ **WORCESTER, MASS.**
NEW YORK CHICAGO DETROIT PHILADELPHIA
PITTSBURGH CLEVELAND HAMILTON, ONT. LONDON, ENGLAND

T-281

NORTON PRODUCTS • Grinding Machines; Lapping Machines • Grinding Wheels; Abrasives for Polishing; India Oil Stones • Laboratory Ware, Refractories; Porous Plates • Norton Floors-Alundum Tiles & Aggregates



A brickhouse of Georgian Type, R. H. Bullard, A. I. A., architect, described in March Good Housekeeping

Tomorrow's clients are won today

No magazine of large circulation is doing more than Good Housekeeping to promote the cause of good domestic architecture. Good Housekeeping Studio of Architecture and Furnishings, a major editorial department of this publication, presents every month, not one or two, but ten or a dozen pages devoted to the design, construction, equipment and furnishing of houses. A board of distinguished architects collaborates with Good Housekeeping Studio in planning a program wide in scope and thoroughly useful to the prospective home builder.

Few magazines are better able than Good Housekeeping to stimulate a greater understanding of the need and value of the architect's services. The 1,750,000 homes it reaches from coast to coast represent by far the major portion of the market for new residential building. By standards of living, ideals, aspirations, and incomes, they are the very type of family the architect looks to for his clients.

The effect of this is, perhaps, lightly felt today. But the tomorrows, the not too far future that promises an upward building swing, will come all the sooner for it.

GOOD HOUSEKEEPING

Everywoman's Magazine

A friendly gleam to guide aright, the wingèd travelers of the night

The Lindbergh Beacon is protected with Alcoa Aluminum

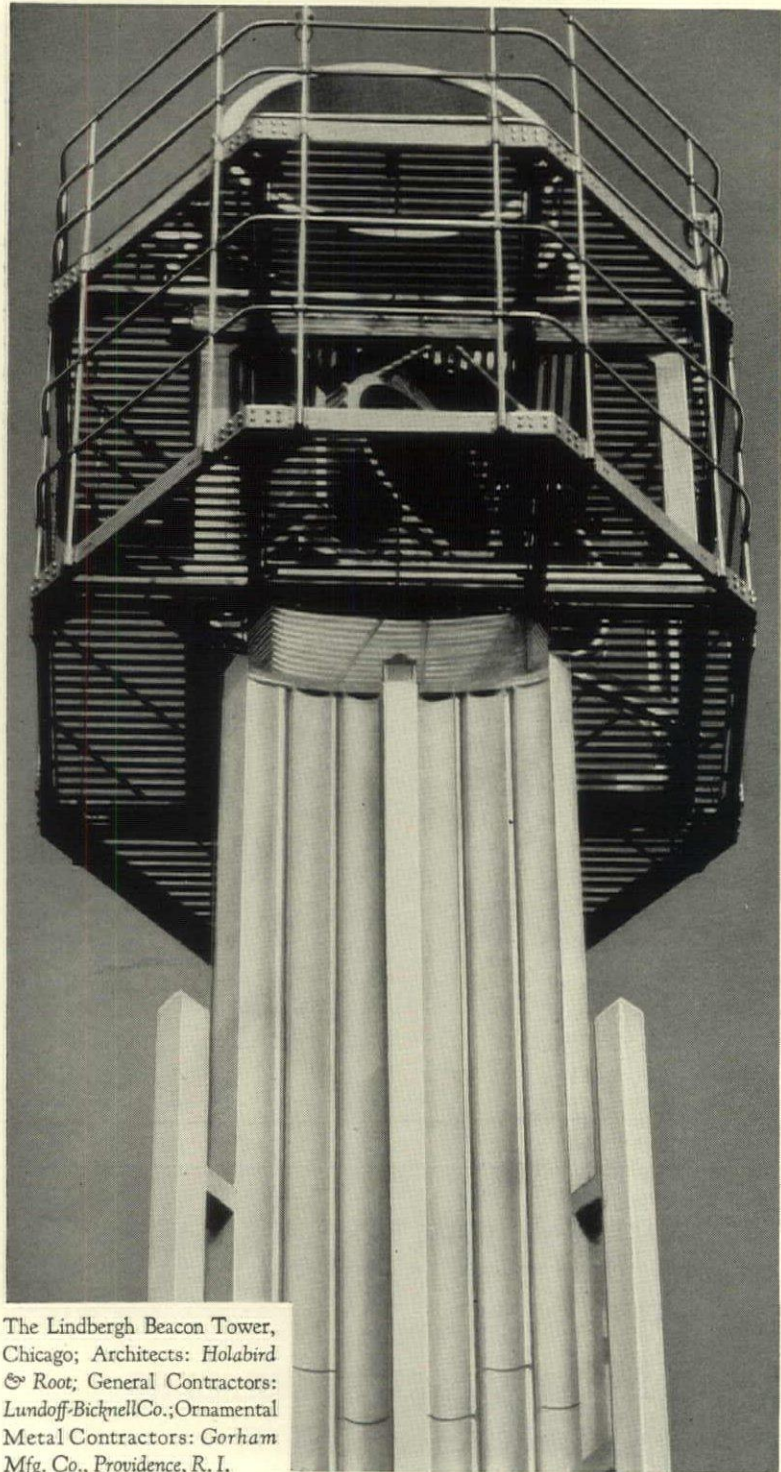
With a roar and a rush, the "Midnight Mail" takes off for the Chicago airport. The pilot, engulfed in blackest night, strains for the first sight of a guiding gleam. There it is—just over the cowling—the rays of the Lindbergh Beacon, a two billion candle-power light effective for 300 miles North, East, South and West.

Night flyers heading to Chicago from Cleveland, Cincinnati, St. Louis and many other cities follow the Lindbergh Beacon's silvery path of light nearly the entire distance. The beacon, the largest and the most powerful aerial light ever constructed, is the gift of the late Elmer A. Sperry. In its construction, Alcoa Aluminum alloys are used extensively.

The projector housing is cast Alcoa Aluminum. The platform work is fabricated of wrought aluminum. The steel work in the tower is encased in Alcoa Aluminum Extruded Shapes. Altogether, more than five tons of Alcoa Aluminum are used. Light, strong, resisting corrosion, and not even requiring paint, Alcoa Aluminum alloys provide a medium with a beautifully toned and textured surface in which artistic and architectural effects can be executed.

SPECIFICATIONS

Alcoa No. 43 Aluminum alloy is recommended for most architectural uses. To meet the numerous demands for structural stability, Alcoa Aluminum alloys are available in various tensile strengths. In each of our offices we have competent representatives with a wealth of experience as to the decorative and structural uses of the special Alcoa Aluminum alloys. The services of these representatives are available to the designer and the specification writer. May we urge you to accept this cooperation without obligation in designing and writing specifications for buildings in which Alcoa Aluminum alloys will form a part? ALUMINUM COMPANY of AMERICA; 2440 Oliver Building, PITTSBURGH, PENNSYLVANIA.



The Lindbergh Beacon Tower, Chicago; Architects: Holabird & Root; General Contractors: Lundoff-Bicknell Co.; Ornamental Metal Contractors: Gorham Mfg. Co., Providence, R. I.



ALCOA ALUMINUM

INDEX TO ADVERTISERS

<p>Alberene Stone Co.....83, 84 Aluminum Co. of America.....3, 143 American Blower Corp.....134 American District Telegraph Co..... 71 American Institute of Steel Construction, Inc..... 69 American Radiator Co..... 114 American Steel & Wire Co..... 20 American Tel. & Tel. Co..... 81 Architectural & Allied Arts Exposition.138 Architectural Decorating Co.....123 Armstrong Cork Co., Floor Division..... 17 Armstrong Cork & Insulation Co.....119</p> <p>Berger Mfg. Co., The..... 131 Blank & Co., Frederic.....127 Bostwick-Goodell Co., The..... 86 Buckeye Blower Co., The.....122 Burlington Venetian Blind Co.....128</p> <p>Carey Co., The Philip.....111 Carter Bloxonend Flooring Co.....104 Carnegie Steel Co.....125 Carney Cement Co., The.....137 Cheney Co., The..... 92 Chicago Faucet Co., The..... 75 Classified Ads.....140 Covert Co., The H. W.....105 Crane Co.113 Cutler Mail Chute Co.....130</p> <p>Delong Furniture Co..... 130 Detroit Show Case Co.....117 Devoe & Reynolds Co., Inc.....108 Dextone Co., The.....139 Dunham Co., C. A..... 13</p> <p>Fiske Iron Works, J. W..... 6 Fitzgibbons Boiler Co., Inc..... 16 Flax-Li-Num Insulating Co..... 15</p>	<p>Frick Co.....124 Fulton Syphon Co.....116</p> <p>Georgia Marble Co., The..... 87 Gleason-Tiebout Glass Co.....135 Good Housekeeping.....142 Graybar Electric Co.....118</p> <p>Halback & Co., C. E.....112 Hauserman Co., The E. F..... 88 Herman Nelson Corp., The..... 9</p> <p>Illinois Steel Co.....102 Indiana Limestone Co.....126 Insulite Co., The.....109 International Casement Co., Inc..... 89 "I Want" Page.....140</p> <p>Kawneer Co., The.....106 Kerner Incinerator Co.....128 Kimball Bros., Co..... 90 Kohler Co.....136</p> <p>Lord & Burnham Co. (Greenhouse) Back Cover Lord & Burnham Co. (Sash Operating).120 Louisville Cement Co., Inc..... 14 Ludowici-Celadon Company..... 67</p> <p>Marble Chair Co., The B. L..... 98 Midland Terra Cotta Co..... 7 Milcor Steel Co.....146 Mueller Co..... 11</p> <p>National Electric Light Association....103 National Tube Co..... 73 North Star Granite Corp.....132 Norton Co.....141</p> <p>Pecora Paint Co..... 54 Peelle Co., The.....133 Peerless Unit Ventilation Co., Inc.....130</p>	<p>Pittsburgh Plate Glass Co..... 85 Portland Cement Association..... 95</p> <p>Rail Steel Bar Association..... 10 Rambusch Decorating Co.....145 Richards-Wilcox Mfg. Co..... 1 Ric-Wil Co., The..... 82 Rising & Nelson Slate Co..... 5 Ruberoid Co., The..... 77</p> <p>Sedgwick Machine Works..... 79 Sloane, W. & J..... 99 Smith & Egge Mfg. Co., The.....132 Smith & Wesson..... 2 Smyser-Royer Co..... 8 Sonneborn Sons, Inc., L..... 12 Standard Tank & Seat Co. 91 Stanley Works, The.....121 Stedman Rubber Flooring Co.....115 Stromberg-Carlson Telephone Mfg. Co.132</p> <p>Tablet & Ticket Co., The.....132 Thorp Fireproof Door Co.....Second Cover Trenton Potteries Co., The.....129 Truscon Steel Co.....107 Tuttle & Bailey Mfg. Co., Inc..... 96</p> <p>Universal Atlas Cement Co..... 18 U. S. Mineral Wool Co.....100 U. S. Ozone Co. of America.....144</p> <p>Vermont Marble Co..... 97 Vitrolite Co., The.....101</p> <p>Ward Leonard Electric Co.....124 Warren Webster & Co. 4 Western Electric Co.....118 Westinghouse Electric Elevator Co., Third Cover Westinghouse Lamp Co.....103</p> <p>Yale & Towne Mfg. Co., The.....110 Youngstown Sheet & Tube Co., The.... 93</p>
--	--	---

Trade Mark



Reg. U. S.
Pat. Office

UNITED STATES OZONE COMPANY of AMERICA

SCOTTTDALE, PA.

OZONE AND ELECTROLYTIC WATER STERILIZERS

OZONE AIR CONDITIONING EQUIPMENT

INDUSTRIAL OZONIZERS

We shall be glad to send
you Complete Information
and Engineering Data.

(Business Established 1910)

This Company Controls Exclusively
United States Ozone Company
Pennsylvania Charter
1920

Painted Decoration

BANKS
CHURCHES
CLUBS
SYNAGOGUES
HOTELS
RESTAURANTS
THEATRES
PUBLIC BUILDINGS

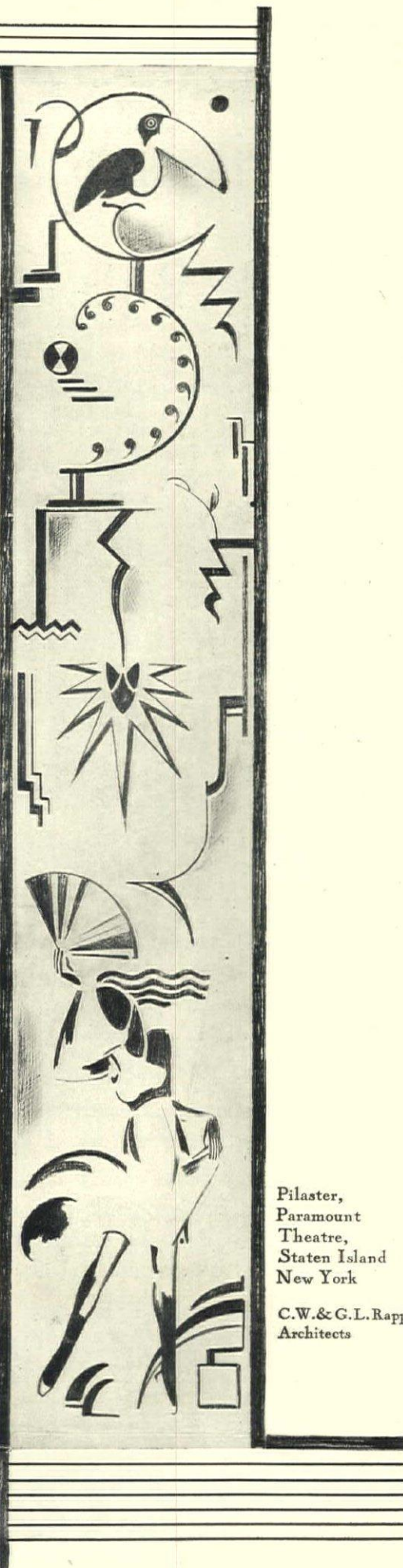
Under the direction of the Architects, we have executed decoration in the following buildings:

- Empire State Building New York City
SHREVE, LAMB AND HARMON, ARCHITECTS
- National Title Guaranty Co. Bank . . Brooklyn, N. Y.
CORBETT, HARRISON AND MacMURRAY, ARCHITECTS
- Club Boca Raton Boca Raton, Florida
SCHULTZE AND WEAVER, ARCHITECTS
- 120 Wall Street, Lobby New York City
FIRM OF ELY JACQUES KAHN, ARCHITECTS
- City Bank Farmers Loan and Trust Co. . New York City
CROSS AND CROSS, ARCHITECTS
- Horn and Hardart Restaurants New York City
F. P. PLATT AND BRO., ARCHITECTS
- 19 Rector Street, Lobby New York City
LAFAYETTE A. GOLDSTONE, ARCHITECT
- Roxy Theatre New York City
WALTER W. AHLSCHLAGER, ARCHITECT
- Paramount Theatre Stapleton, Staten Island
C. W. AND GEO. L. RAPP, ARCHITECTS
- Warner Bros. Madison Theatre . . Albany, New York
THOMAS W. LAMB, ARCHITECT
- St. James' Cathedral Chicago, Illinois
MAYERS, MURRAY AND PHILLIP, ARCHITECTS
- St. Catherine of Sienna's Church . . New York City
WILFRID E. ANTHONY, ARCHITECT
- St. Thomas' Chapel (timbered ceiling) . New York City
TALBOT F. HAMLIN, ARCHITECT
- St. Gabriel's Church Washington, D. C.
MAGINNIS AND WALSH, ARCHITECTS
- Temple Beth Elohim Brooklyn, New York
MORTIMER J. FREEHOF, ARCHITECT

RAMBUSCH

Painting, Decorating and Murals

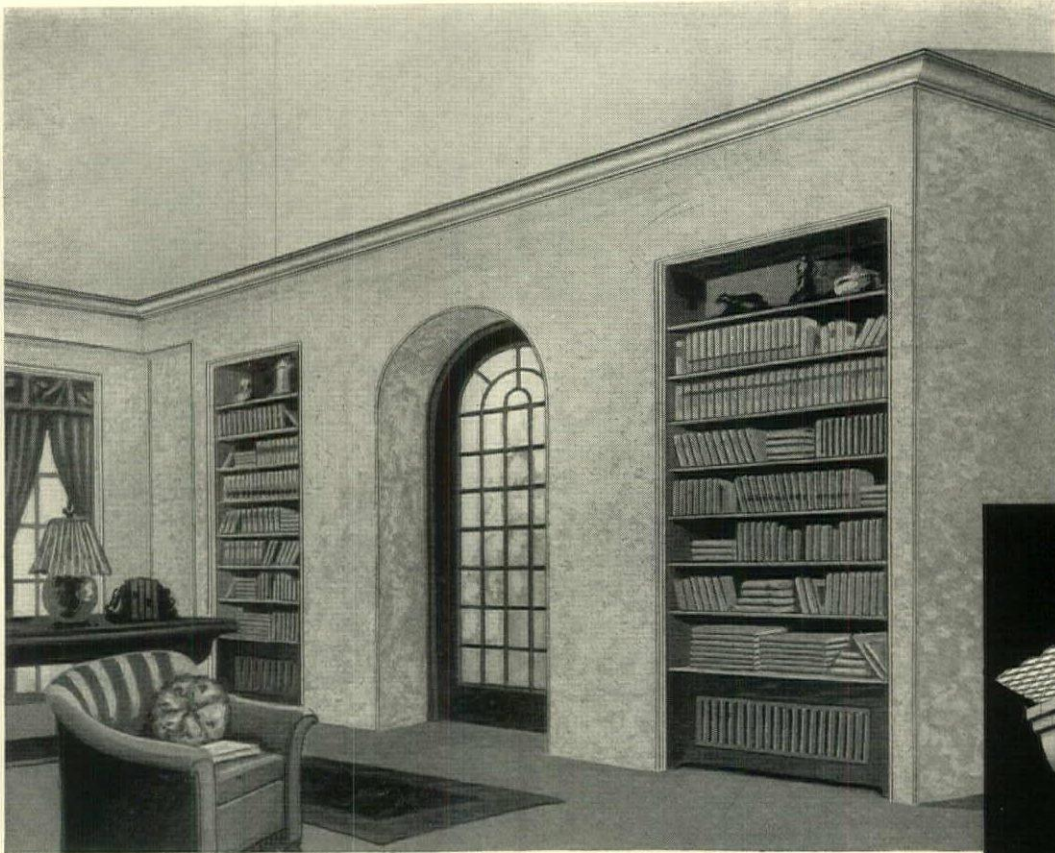
2 West 45th St. ~ New York City



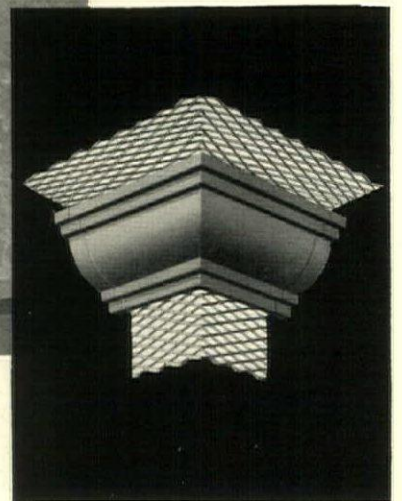
Pilaster,
Paramount
Theatre,
Staten Island
New York

C.W.&G.L.Rapp
Architects

this MILCOR expansion cornice lath is crack-proof — permanent



the expansion
metal wings
key the plas-
ter right up
to the cornice



The Milcor mitre
joint is formed at the
factory and saves
time on the job.

HERE is an expansion cornice lath, with wings that key the plaster on ceiling and wall, making a permanently beautiful job. Another *Milcor* triumph!

Never will the plaster pull away from this *Milcor* cornice. Being entirely of metal, the cornice itself won't crack.

Ease of installation is achieved with the *Milcor* mitre joint. It is formed at the factory. A perfect fit is assured.

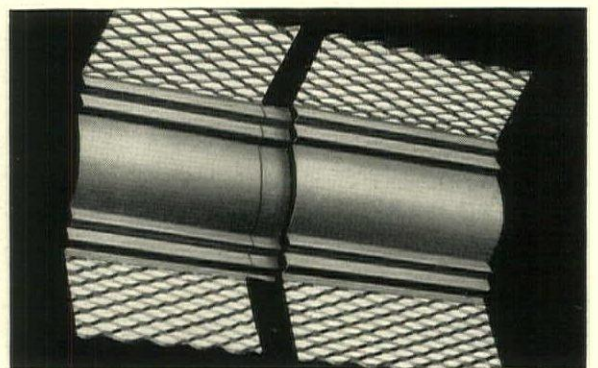
Copper alloy lead terne coated sheets are used. They will receive and hold a paint job to harmonize with walls and ceilings . . . Send for full details of this newest *Milcor* achievement. Would you like a sample section?

MILCOR STEEL COMPANY

MILWAUKEE, WIS., 4101 W. Burnham St.
Chicago, Ill. Kansas City, Mo.

CANTON, OHIO
LaCrosse, Wis.

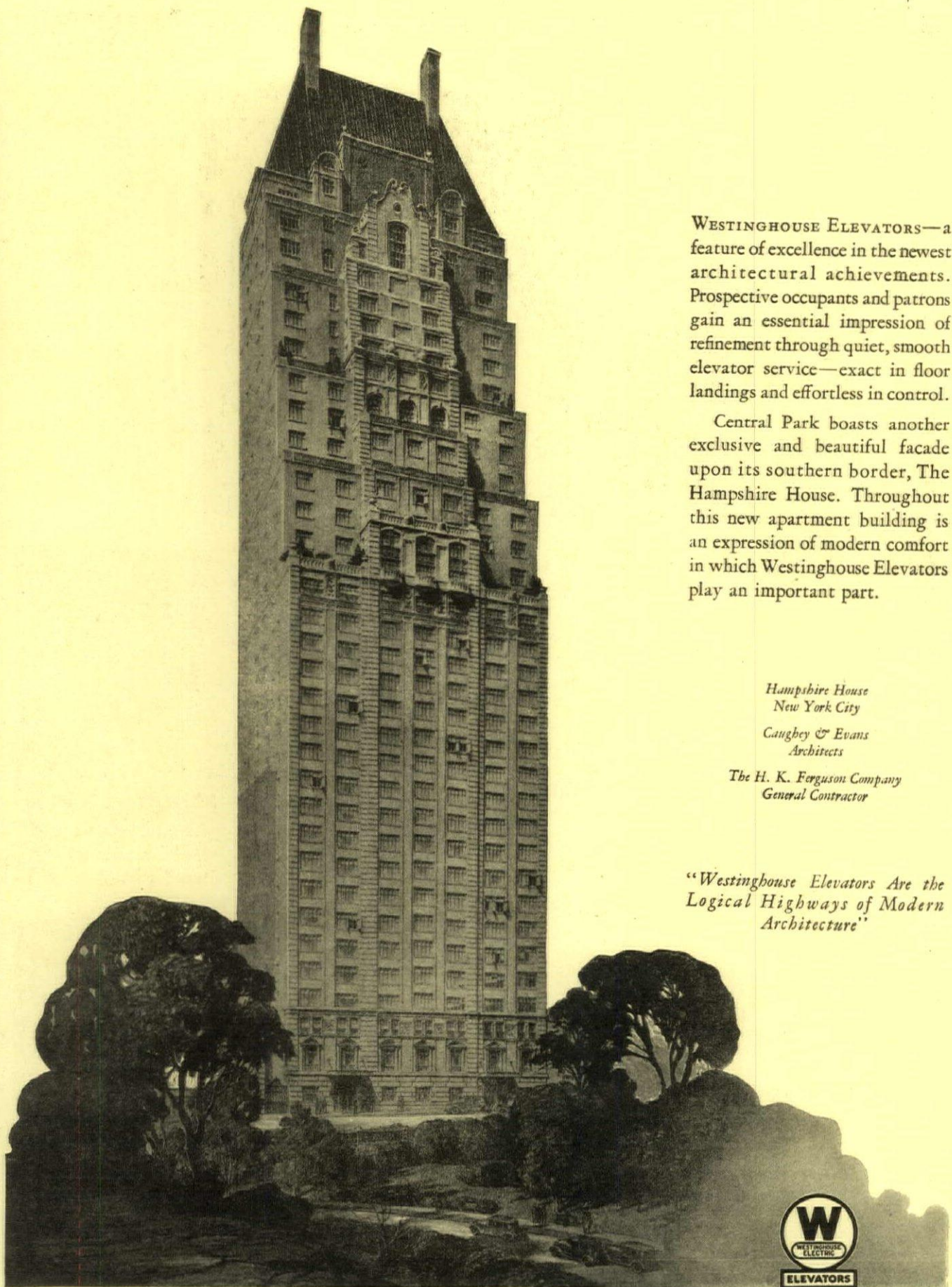
Sales Offices: New York, 418 Pershing Square Building; Boston, Mass., 726 Little Building; Atlanta, Ga., 207 Bona Allen Building; Minneapolis, Minn., 642 Builders Exchange Building; Little Rock, Ark., 104 W. Markham Street



An invisible joint has been perfected . . . and *Milcor* precision in manufacture assures a perfect fit.

MILCOR Copper Alloy Steel **PRODUCTS**

 Save with Steel



WESTINGHOUSE ELEVATORS—a feature of excellence in the newest architectural achievements. Prospective occupants and patrons gain an essential impression of refinement through quiet, smooth elevator service—exact in floor landings and effortless in control.

Central Park boasts another exclusive and beautiful facade upon its southern border, The Hampshire House. Throughout this new apartment building is an expression of modern comfort in which Westinghouse Elevators play an important part.

*Hampshire House
New York City*

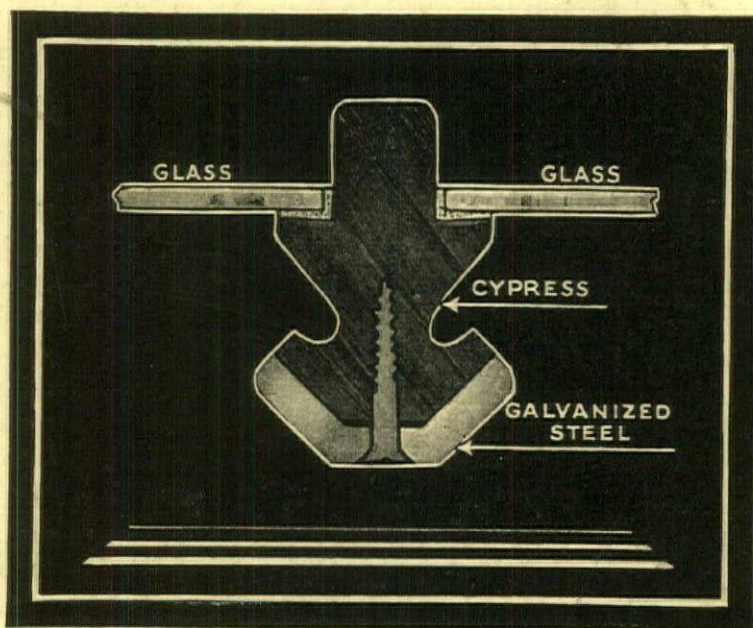
*Caughy & Evans
Architects*

*The H. K. Ferguson Company
General Contractor*

*“Westinghouse Elevators Are the
Logical Highways of Modern
Architecture”*



Westinghouse Electric Elevator Company



For full particulars of the distinct advantages of this Improved Master-V-Bar as used in our new greenhouse and conservatory construction, send for special circular.

ANNOUNCING THE WINNER of the 250 Dollar Prize

for Improved Greenhouse Construction Name

HENRY CALDER THORNE, of Ithaca, N. Y., is the winning architect. The name he suggested was The Improved Master-V-Bar. Considering the fact that the major features of the improved construction are based directly on the improvement of the V-Bar itself what more logical, wouldn't you say, than to link the two? Therefore we have done the obvious thing that Mr. Thorne suggested, and by adding the word Improved, tied it up with the former name of Master V-Bar.

So that you may the better know the outstanding advantages and refinements that this Improved Master-V-Bar make possible, let us send you a special piece of printing on the subject.

And now allow us to express our sincere appreciation for the many of you who so courteously sent contesting names. The hundreds that we received from all parts of the country certainly made it an especially difficult task for us to make a choice.

Lord & Burnham Co.

IRVINGTON, N. Y.

New York
Denver
Buffalo

Philadelphia
Detroit
Montreal

Chicago
St. Louis
Toronto

Boston Cleveland
Greensboro, N. C.
St. Catharines

FOR FOUR GENERATIONS BUILDERS OF GREENHOUSES