

*John*  
DECEMBER 1929

# PENCIL POINTS

A JOURNAL FOR  
THE DRAFTING ROOM

35 CENTS A COPY

21,000 COPIES OF

THIS ISSUE PRINTED

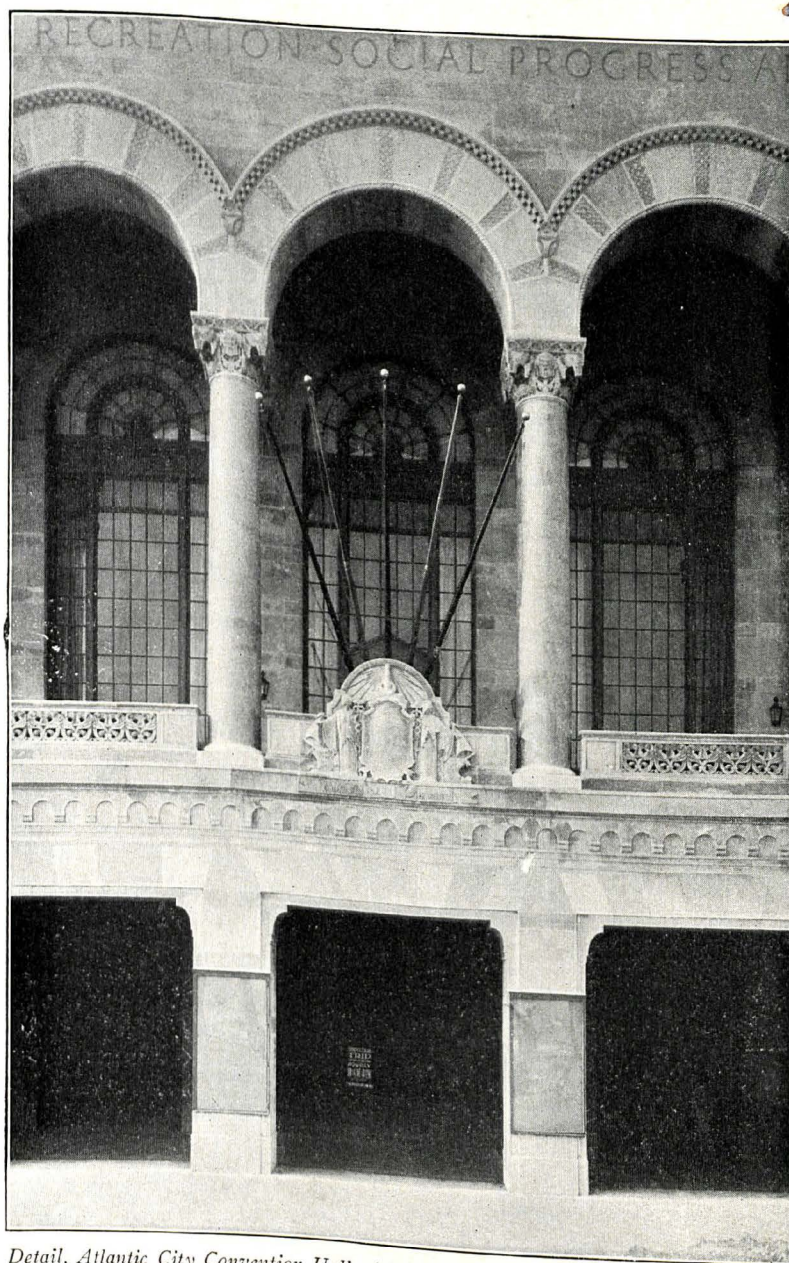


## More Proof of the Swing to Indiana Limestone

THE new Convention Hall at Atlantic City is one of the most recent proofs of the way Indiana Limestone now predominates in the newer architecture of our leading cities. In New York, in Chicago, on the Pacific Coast, in the north and south, no matter where you look, there is not a city without one or more outstanding buildings faced with this beautiful light-colored natural stone.

Talk to anyone connected with these projects and the story is the same; the public preference for the beauty of natural stone makes it advisable to use Indiana Limestone facing. This stone from southern Indiana gives a building an appeal that shows a definite dollars-and-cents return in income. The low upkeep expense and permanence of Indiana Limestone are added factors which with easier rentability make the use of this stone desirable.

Indiana Limestone is now produced in such huge volume by this company that it can be laid down anywhere at prices which compare favorably with the prices of less desirable materials. What kind of building projects are you interested in? We will gladly send you literature showing various types of buildings and containing information about our product. There is a representative in your vicinity who will gladly answer your questions. May he call? For literature or other information, please write Box 784, Service Bureau, Bedford, Indiana.



*Detail, Atlantic City Convention Hall, Atlantic City, N. J. Lockwood, Greene & Co., Architects, M. B. Markland Co., Builders. Built of Indiana Limestone.*

**INDIANA LIMESTONE COMPANY**  
General Offices: Bedford, Indiana      Executive Offices: Tribune Tower, Chicago



# Spandrels of Atlantic Terra Cotta

In appearance, in durability and in economy spandrels of Atlantic Terra Cotta meet every requirement.

Terra Cotta spandrels may be decorative or plain in accordance with the Architect's drawings.

Bronze, gold, silver, black, green, white, cream, buff, ivory, brown and, if desired, any brilliant polychrome combination may be used.

In durability Terra Cotta spandrels will outlast the building, and will never need painting or other renovation.

Atlantic Terra Cotta spandrels will cost less than spandrels of any other suitable material.



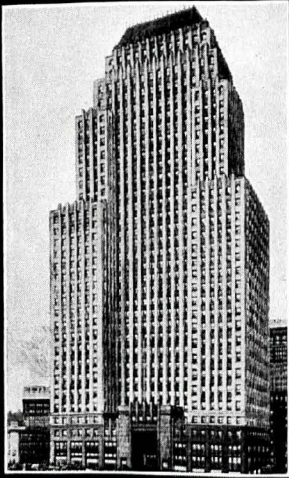
## Atlantic Terra Cotta Company

19 West 44th Street, New York

Atlanta Terra Cotta Company  
Atlanta, Georgia







Koppers Building, Pittsburgh

# GUARDING THE INVESTMENT OF MILLIONS

ATP Roofs, with or without bond, guarding the investment of millions of dollars, are on buildings like these from Maine to California and from the Great Lakes to the Gulf of Mexico.

Armored with gravel or slag against the elements, against fire and mechanical wear, leaving the pitch and tarred felt free to do nothing but keep out water, ATP Roofs are constantly the choice of more and more architects because they give longest life, lowest last cost and perfect security against water damage.

ATP Roofs are manufactured to specifications more exacting than U. S. Government Master Specifications by the only concern of its kind in the world specializing in built-up roofing. Whether bonded or not, the ATP Roof you specify will prove its right to be called "The Roof with the Long Life-Line."

## AMERICAN TAR PRODUCTS COMPANY

General Offices: Pittsburgh, Pa.

New England Division: TAR PRODUCTS CORPORATION  
Providence, R. I.

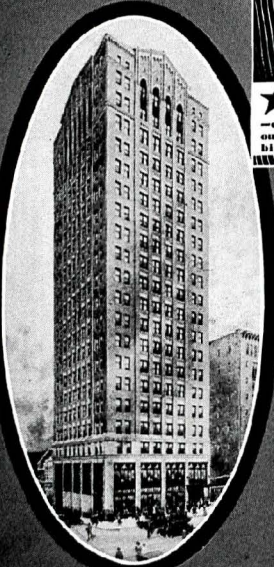
Plants at Chicago, Jersey City, St. Louis,  
Birmingham, Milwaukee, Youngstown, O., Utica, N. Y.,  
Providence, R. I., and Follansbee, W. Va.

Southwestern Bell  
Telephone Building, Dallas

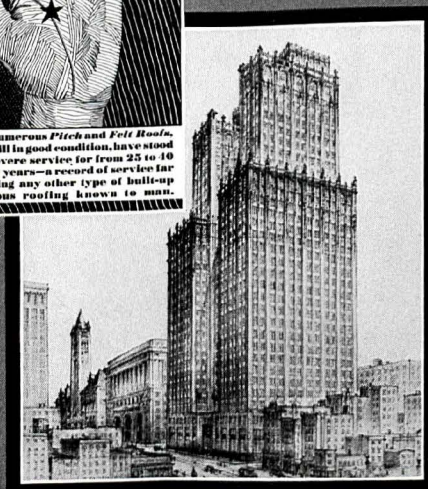
CHOOSE "ATP" THE ROOF  
WITH THE LONG LIFE-LINE



Numerous Pitch and Felt Roofs, still in good condition, have stood severe service for from 25 to 40—even 50 years—a record of service far out-classing any other type of built-up bituminous roofing known to man.



Rhodes-Haverty Building, Atlanta



Grant Building, Pittsburgh



Jackson-Franklin Building, Chicago

Above all—



# ATP ROOFS

ARMORED WITH GRAVEL OR SLAG



# PREFERRED..

an office right  
under the roof



*Comfort is assured for  
top-floor offices in this  
Kansas City skyscraper,  
and the reason is roof  
insulation.*



TOP-FLOOR offices will be preferred space in the Southwestern Bell Telephone Building, Kansas City, Mo., for the rooms are always comfortable—warm in winter and cool in summer. Year-round comfort was provided by the architects, Messrs. Hoit, Price, and Barnes, when they specified insulation adequate to reduce heat leakage, out and in. The insulation used was Armstrong's Corkboard.

Armstrong's Corkboard Insulation insures ideal top-floor living and working conditions for many other office buildings, as well as for factories, apartments, and hotels. When used in adequate thickness, it makes the roof practically heatproof. For average conditions the proper thickness is one and one-half or two inches, and with Armstrong's Corkboard, these thicknesses are laid in a single layer, one operation, one labor cost.

Complete data on roof insulation will be supplied promptly on request. Armstrong Cork & Insulation Company, 902 Concord Street, Lancaster, Pennsylvania.



## Armstrong's Corkboard Insulation

— for the Roofs of All Kinds of Buildings —



# 72 SOUTHWESTERN BELL TELEPHONE BUILDINGS

under *Barrett*

## SPECIFICATION ROOFS

SINCE October, 1922, Barrett Specification Roofs have been applied on 72 buildings of the Southwestern Bell Telephone Company. That these famous Barrett Coal-Tar Pitch and Felt and gravel roofs should be chosen for 71 repeat orders by one of America's greatest public utility companies is, naturally, not a matter of chance.

Telephone Company engineers demand roofs that do not leak, burn, crack or rot—roofs that will far outlast any ordinary roof. Trouble-free, expense-free service is their objective . . . their method of economizing.

When you specify a Barrett Specification Roof, you specify the highest quality of materials obtainable, *plus* expert application by Barrett Approved Roofers—men who have proved their ability to meet the high standards enforced by Barrett Inspection Service. You specify bonded freedom from roof annoyance for 20 years\*—though the roof will probably live, whole and hearty, decades beyond the duration of the bond.

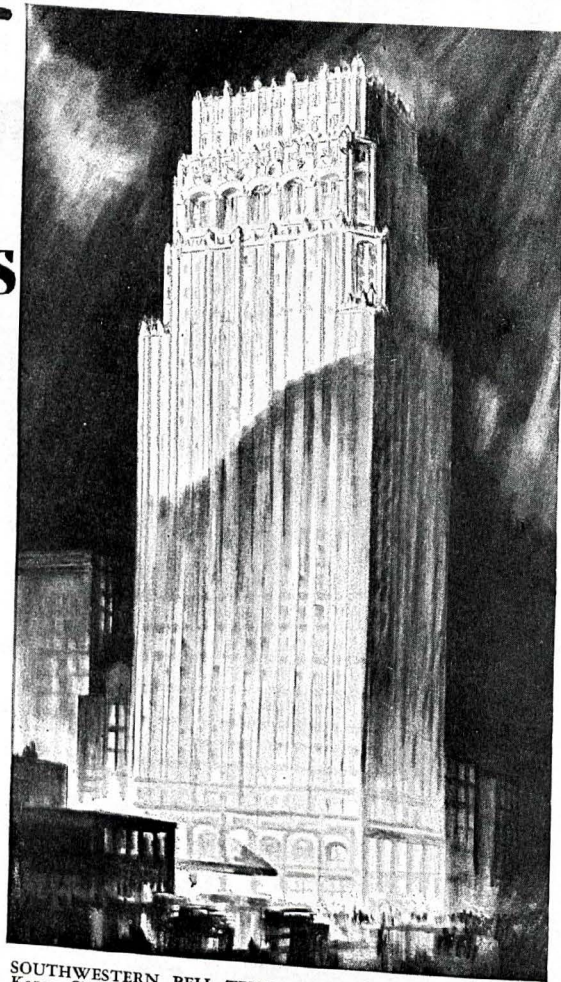
With a Barrett Specification Roof on your building, you are assured of the highest degree of water-safety and fire-safety. Barrett Specification Roofs carry the Class A—base rating—of the National Board of Fire Underwriters.

Barrett Approved Roofers, each one selected for his experience, ability and integrity, are invariably leaders in their cities. Consult with them or with us on any roofing problem.

\*The Barrett Company also offers a Specification Type "A" Roof which is bonded for 10 years. This type of roof is adaptable to a certain class of buildings. The same high-grade materials are used, the only difference being in the quantities.

### BONDED BARRETT FLASHINGS

Flashings are the most sensitive parts of any roof. Barrett Flashing Blocks and Forms are now bonded for 20 or 10 years when used with Barrett Specification Bonded Roofs. Barrett Approved Roofers will gladly tell you about this new feature of Barrett Roofing Service.



SOUTHWESTERN BELL TELEPHONE COMPANY BUILDING, Kansas City, Mo., Architects: Hoyt, Price & Barnes, Kansas City, Mo. Associate Architect: Irvin R. Timlin, St. Louis, Mo. General Contractors: Swenson Construction Co., Kansas City, Mo. Roofing Contractors: Sellers & Marquis Roofing Co., Kansas City, Mo.

*Barrett Specification Roofs*

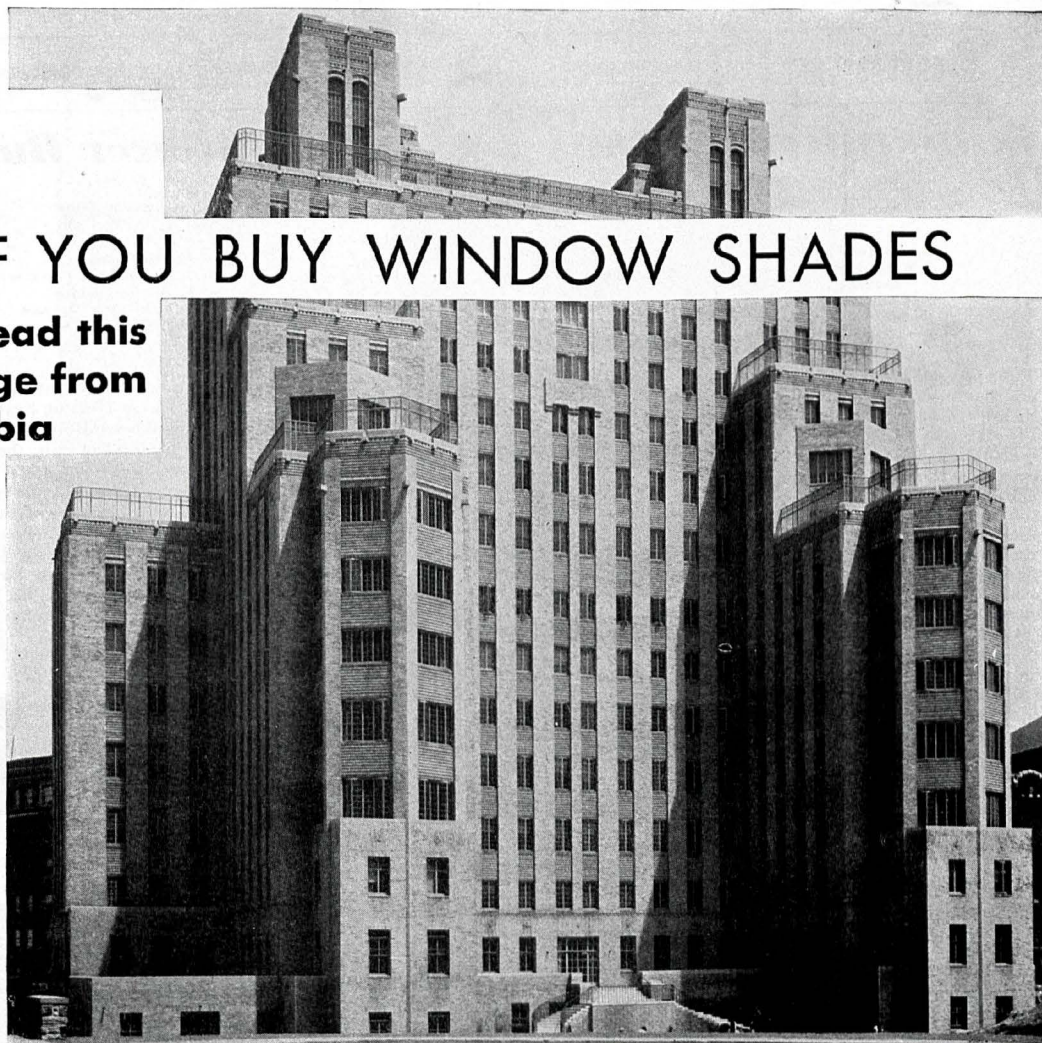
THE BARRETT COMPANY, 40 Rector St., New York / In Canada / THE BARRETT COMPANY, Ltd., 5551 St. Hubert St., Montreal, P. Q.

Inspected and  
Bonded by Barrett



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message from  
Columbia**

THE  
NEUROLOGICAL  
HOSPITAL, New  
York City, is fully  
equipped with  
Columbia Window  
Shades.  
Architect: James  
Gamble Rogers.  
Contractor: Marc  
Eidlitz & Son, Inc.,  
New York.



**G**UESSWORK should have no place in your window shade specifications. You want the finest, most economical shades your budget will permit.

This means *Columbia Window Shades*.

You can verify this if you will take the time to investigate them thoroughly.

Compare their record of honest service, long life and fine appearance with any window shade you have ever considered buying.

1. Make your own tests, no matter how severe, of the *Columbia Roller* for long life and reserve power.

2. Inspect *Columbia Shade Cloth* as carefully as you wish. We are proud of the fine materials and the thorough inspection we make at every stage of manufacture. For the result is—flawless, long-wearing shade cloth.

Before specifying or purchasing window shades, read the *Columbia Window Shade Data Book* and then you'll know what to look for in window shades. It's free—use the coupon below.

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Baltimore Boston Chicago Cincinnati Cleveland Dallas  
Denver Detroit Fresno Kansas City Los Angeles Minneapolis  
New Orleans Philadelphia Pittsburgh Portland (Ore.)  
Salt Lake City San Francisco St. Louis Seattle

*Columbia*

GUARANTEED

WINDOW SHADES *and* ROLLERS

Nationally Advertised—Used Everywhere in Beautiful Homes

Send for your Copy of "Window Shades"

This interesting book tells all about window shades, window shade rollers and roller brackets, approved methods of hanging window shades and suggests the most suitable type of shade for each kind of building. It also contains the useful "Standard Specification for Window Shades." For your copy mail the coupon to The *Columbia Mills, Inc.*, 225 Fifth Avenue, New York City



Name.....

Street.....

City.....

PP 12-29



# *The* **Dunham Differential Vacuum Heating System**

**is installed in the  
Tulsa,**

**Philtower Building  
Okla.**

*Conceived and built by*  
WAITE PHILLIPS  
*Designed by*  
KEENE AND SIMPSON  
*in collaboration with*  
EDWARD BUEHLER DELK

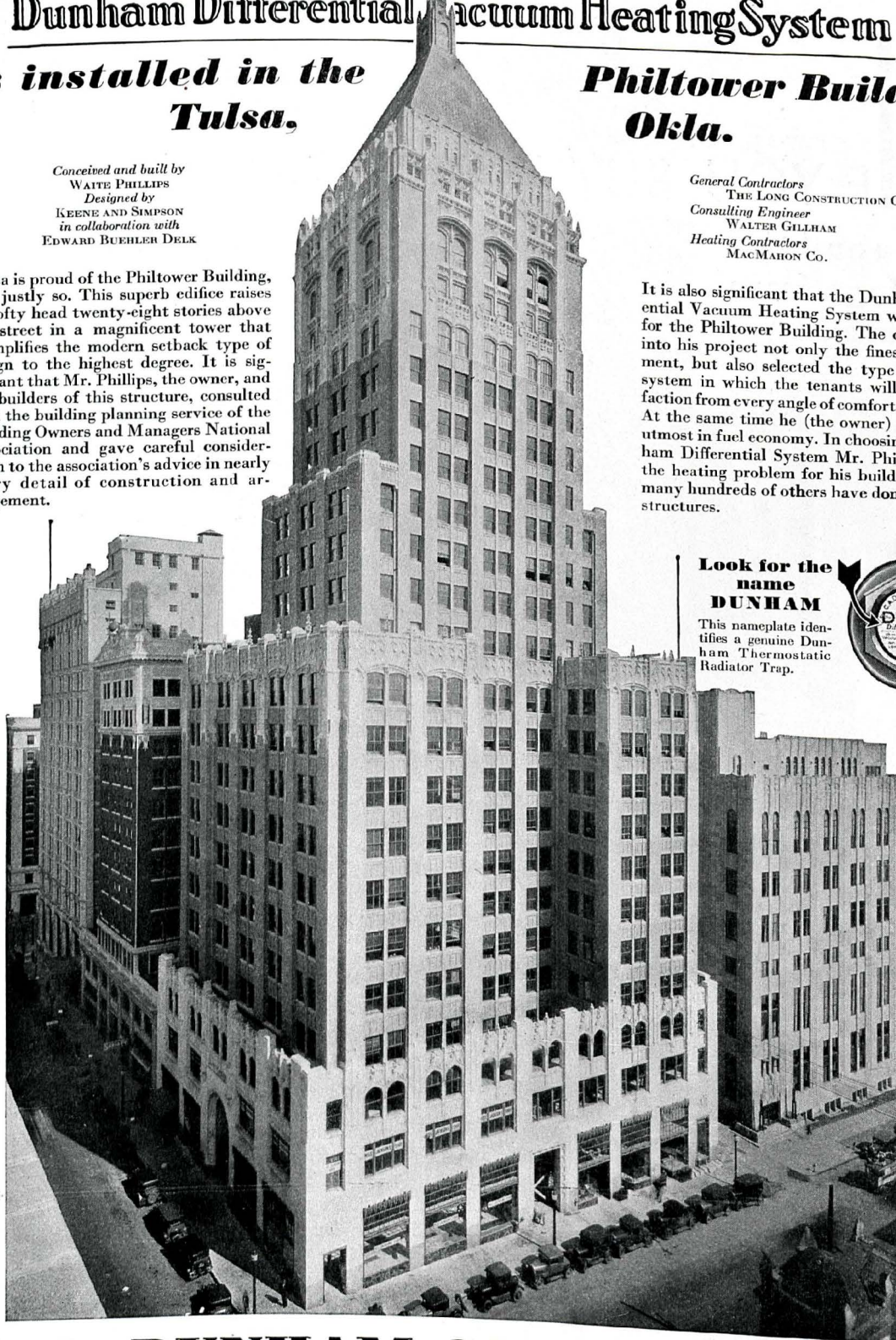
Tulsa is proud of the Philtower Building, and justly so. This superb edifice raises its lofty head twenty-eight stories above the street in a magnificent tower that exemplifies the modern setback type of design to the highest degree. It is significant that Mr. Phillips, the owner, and the builders of this structure, consulted with the building planning service of the Building Owners and Managers National Association and gave careful consideration to the association's advice in nearly every detail of construction and arrangement.

*General Contractors*  
THE LONG CONSTRUCTION COMPANY  
*Consulting Engineer*  
WALTER GILLHAM  
*Heating Contractors*  
MACMAHON CO.

It is also significant that the Dunham Differential Vacuum Heating System was selected for the Philtower Building. The owner built into his project not only the finest of equipment, but also selected the type of heating system in which the tenants will find satisfaction from every angle of comfort and health. At the same time he (the owner) secures the utmost in fuel economy. In choosing the Dunham Differential System Mr. Phillips solved the heating problem for his building, just as many hundreds of others have done in similar structures.

**Look for the  
name  
DUNHAM**

This nameplate identifies a genuine Dunham Thermostatic Radiator Trap.

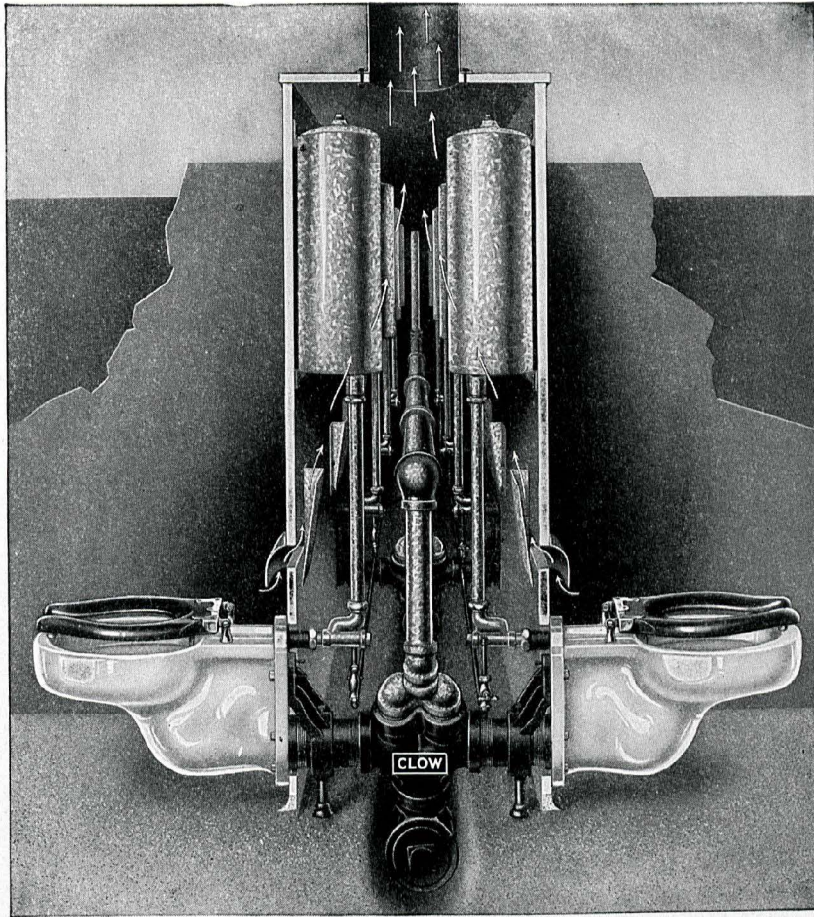


**C. A. DUNHAM CO.** **Dunham Building, 450 East Ohio Street**  
**CHICAGO, ILLINOIS**

Over eighty sales offices in the United States, Canada and the United Kingdom bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city. An engineer will counsel with you on any project.

The Dunham Differential Vacuum Heating System and individual parts of the apparatus used in that system are fully protected by United States Patents Nos. 1,644,114, 1,706,401 and 1,727,965, and Canadian Patents Nos. 282,193, 282,194 and 282,195. Additional patents in the United States, Canada and foreign countries are now pending.



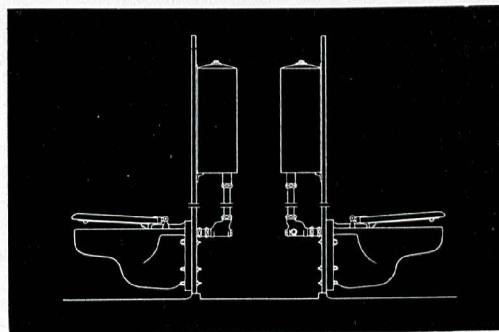


## AUTOMATICALLY FRESH AND CLEAN with Clow Madden Wallomatics . . . and Clow Patented Ventilators

Above is shown the application of the Clow Patented Closet Stall Ventilator. Through it, odors are drawn from the toilet room into the utility corridor—and carried off, at the outlet. It is so constructed that paper cannot be stuffed in to stop its action.

Automatically, closet rooms are fresh and clean.

And, independently of forgetful minds—Clow Madden Wallomatics send a powerful stream of water, cleansing the entire bowl after every use. There's nothing to touch. Nothing to remember. It's automatic.



### RECORD NO. 107

26 years ago, 15 Clow Madden Automatics were installed at the May Street School, Benton Harbor, Michigan. In the past 6 years not one cent has been spent for repairs. No record was kept for previous years.

With Clow Madden Automatics, sanitation is assured for a quarter century and more—as installation records show.

For the Clow Madden Valve has only two moving parts—has no minute by-passes to cause trouble. Tests prove it uses less than half the usual amount of water, *for a surer flush.*

With Clow Patented Ventilators and Clow Madden Wallomatics, odor-free air and taint-free closets are automatically assured for the life of the building.

(Center Illustration)

Showing how closed top tanks are concealed in utility corridor behind back wall. Clow Wallomatics are built free of the floor for cleaner toilet rooms.

JAMES B. CLOW & SONS, 201-299 NORTH TALMAN AVE., CHICAGO

# CLOW MADDEN AUTOMATIC

Forty-Eight Styles, Heights and Types to Meet Your Requirements



# THE FINEST CRAFTSMANSHIP GOES INTO LUPTON HEAVY CASEMENTS



1400 Lupton Heavy Casement Windows are used in the Cook County Court-house and Jail, Chicago, Ill. Eric Hall, County Architect. Great Lakes Construction Co., General Contractors

HEAVY casements, more than any other type of window, are subject to the skill of the individual workman. At Lupton the best workmen are put on the heavy casement jobs. These men have served a rigid apprenticeship before working on these fine windows. Their craftsmanship, combined with the finest of machine-equipment, has made Lupton

the first name in the heavy casement field.

The superior qualities of Lupton Heavy Casements have been recognized by leading architects. Whenever the finest is desired, Lupton Heavy Casements are usually specified. Complete details are available in your current edition of *Sweet's*. David Lupton's Sons Co., 2229 E. Allegheny Ave., Phila., Pa.

**LUPTON**  
WHERE STEEL IS FUSED WITH SINCERITY





## BEAUTY, DISTINCTION and SOLID CONSTRUCTION

Rich, dignified design—in harmony with the beauty of modern architecture—is one of the leading qualities distinguishing the Roddis Flush Door. Basically, however, is its completely solid 5-ply construction; which insures permanency of beauty and everlasting door service. The new Roddis catalog interestingly explains Roddis superiorities in detail: sent on request.

RODDIS LUMBER & VENEER CO., 128 Fourth St., Marshfield, Wis.  
Distributors In All Principal Cities  
Manufacturer of Flush, French, Panel & Custom Built Doors

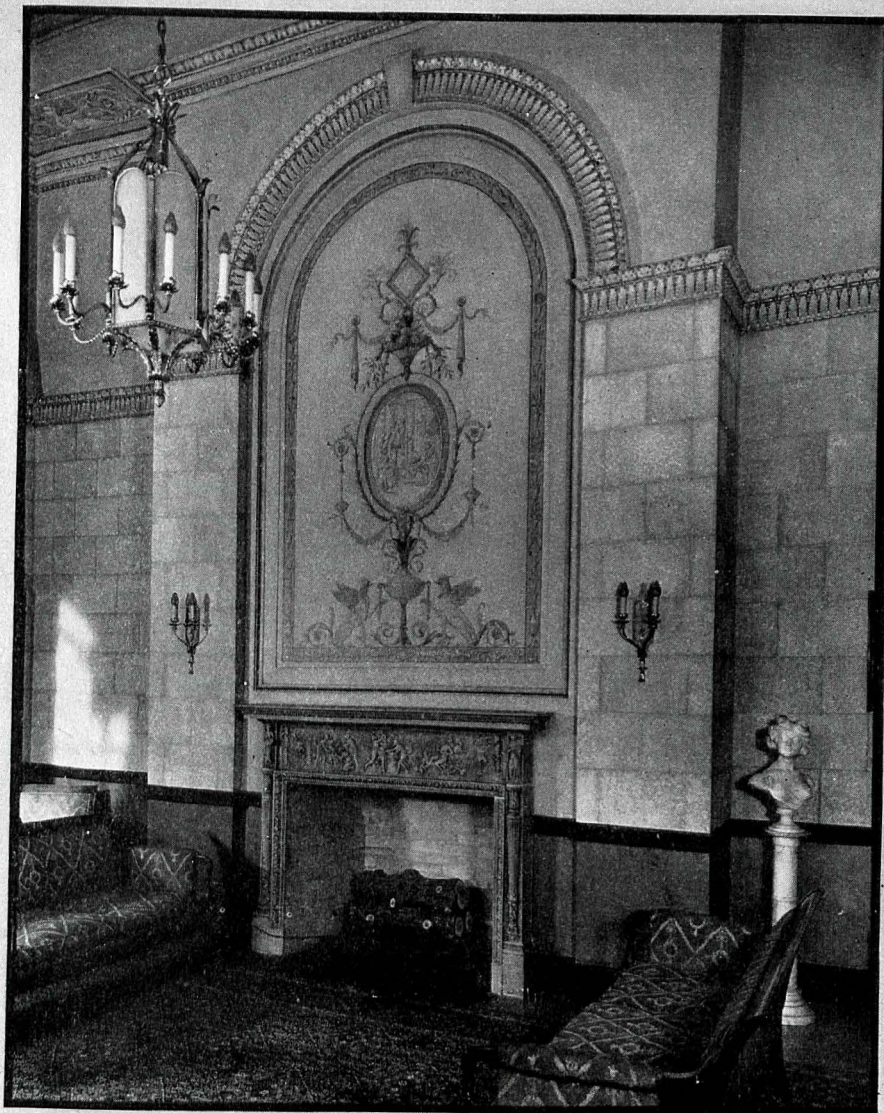
Roddis Flush Doors in Science Church,  
Stockton, Cal. . . . Allen & Young, Architects



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

# RODDIS FLUSH DOORS





*Zenitherm Wall in reception room, Stark County Tuberculosis Hospital, Louisville, Ohio.*

*Albert L. Thayer, Architect*

## *Zenitherm keyed* this Reception room

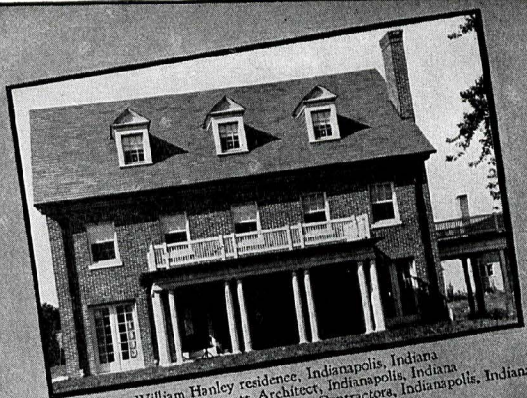
TO plan a hospital reception room without the usual austere and forbidding atmosphere was architect Thayer's aim. He keyed this cheery, rest-inviting room by using Zenitherm in warm, golden tones on the walls, with a colorful panel over the fireplace. Zenitherm was delivered to the job already cut in blocks  $\frac{5}{8}$ " thick,

and nailed to furring just like wood. Zenitherm is now made in a range of 21 colors. Glad to send you samples showing the variable texture and tri-toned effects.

ZENITHERM COMPANY, INC.,  
110 E. 42nd St., N. Y. City. Kearny, N. J.,  
Philadelphia, Boston, Chicago, San Francisco.

**ZENITHERM — for Walls and Floors**





William Hanley residence, Indianapolis, Indiana  
Robert Frost Daggett, Architect, Indianapolis, Indiana  
W. H. Johnson & Son Company, Heating Contractors, Indianapolis, Indiana



Read A. Dimmock residence, Vestal Road, Binghamton, N. Y.  
Charles H. Conrad, Architect, Binghamton, N. Y.  
Gaylord & Etzence Co., Heating Contractors, Binghamton, N. Y.



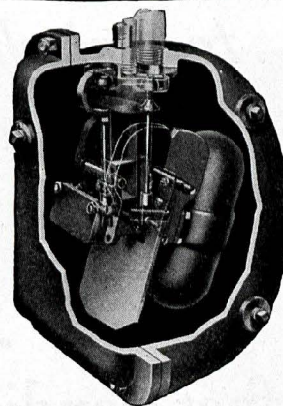
Marshall J. England residence, Ledgewood Road, Winchester, Mass.  
Allen E. Boone, Architect, Winchester, Mass.  
Ingalls & Kendrick, Inc., Heating Contractors, 14 Chardon St., Boston, Mass.

## When designing homes like these—

Webster Type "R" Systems of Steam Heating are growing in favor with leading residential architects for service in finer-type homes. The introduction of oil and gas fuel and the newer light-weight types of radiation have created new problems—particularly in the proper control and distribution of heat. The increased use of the Webster Type "R" System in residence heating has been due to the fact that it meets these new problems with complete success.

Safety is achieved through gravity operation with positive equalization of pressure. *Dependability*—an in-built characteristic of all Webster Equipment—is outstandingly evident in the type "R" System. *Flexibility* for response to changing demands is at a maximum.

Before preparing plans for *your* next fine residence, have the nearest Webster Branch Office tell you how you can have a Type "R" System burning oil or gas and controlled by a thermostat in a "key room", and nevertheless be assured of *even distribution*. This new improvement will appeal to your client.



### WEBSTER BOILER RETURN TRAP

Made in five sizes for jobs up to 16,000 sq. ft. Easily installed. Interior mechanism suspended by two cap screws on outside of casing at top. Float mechanism turns about monel metal shaft. Float has no exposed seams. Provision for silencing includes stainless steel cantilever leaf spring in smaller sizes and dash pot in larger sizes. All metal valves with loose connections prevent jamming and leakage. Dirt strainer on steam line from boiler protects the mechanism.

**-since 1888**  
**Webster**  
**Systems of**  
**Steam Heating**

**WARREN WEBSTER & COMPANY**

Pioneers of the Vacuum System of Steam Heating

**CAMDEN, NEW JERSEY**

Branches in 52 principal U. S. Cities  
In Canada—Darling Bros., Ltd., Montreal

WARREN WEBSTER & COMPANY, Camden, New Jersey.

Please mail Bulletin B-600, describing the Webster Type "R" System of Steam Heating to

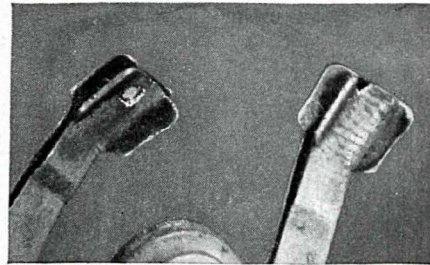
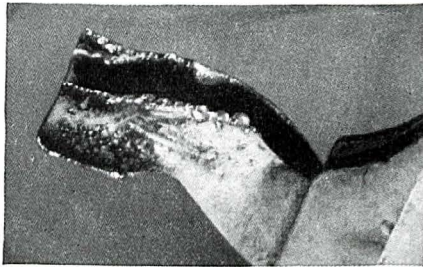
Name.....Street.....City.....

a. R9A

P.P.-12-29



# SEE what happens



*.. to switch contacts not designed  
for type "C" lamp service*

**.. SEE**  
the perfect condition of the  
new Hubbell Switch Contacts

*They have undergone the same service  
... but their design prevented ruinous  
burning at the "make". . .*

THESE PHOTOGRAPHS tell more forcibly than words the reason toggle switch contacts must be designed with type "C" lamp service in mind.

The standard type contacts shown at the top were removed from a Single Pole and a Double Pole switch after less than one year's service in circuit with type "C" lamps. They are practically destroyed. In a very short time they would break down completely under the heavy load of burning, fusing current at the instant of "make".

Now examine the new type Hubbell contacts in the switch at the right. They are in perfect condition, yet this switch has undergone exactly the same service which destroyed the "old" type of contacts. A radically different design provides for severe service. Burning of

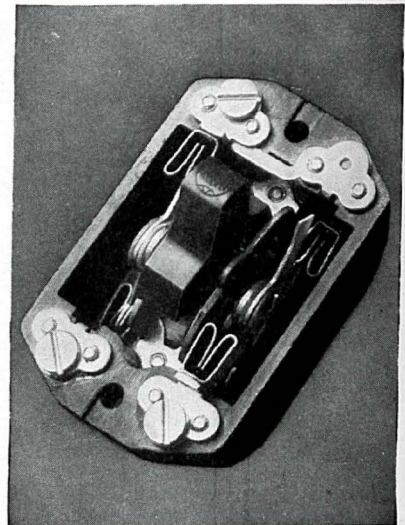
contacts at the "make", the chief cause of toggle switch trouble, is entirely overcome.

You will find much of interest in a detailed description of the complete line of new Hubbell Shallow Flush Toggle Switches. To obtain it — just clip the lower right corner of this page to your letterhead.

HARVEY HUBBELL, INCORPORATED  
BRIDGEPORT - - - CONNECTICUT  
Boston, Mass., 176 Federal St.; Atlanta, Ga., H. C.  
Biglin, 138 Marietta St.; New York, N.Y., 122 E.  
42nd St.; Chicago, Ill., 318 W. Washington St.;  
Denver, Colo., T. H. Bodfish, 1109 Broadway; Phila-  
delphia, Pa., Fifth St., Phila. Bourse, Exhibition Dept.



**HUBBELL**  
*Toggle Switches*

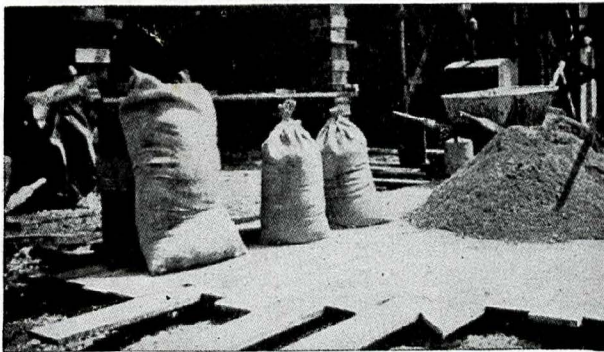


*The new Hubbell Toggle Switches incorporate a radically new form of contact spring scientifically designed so that two different rates of vibration are set up in the spring, one tending to counteract the other. Thus recoil is practically eliminated in the ends of the contact spring when the solid metal contact blade strikes between them. As a result, burning and pitting of the spring is prevented — even when in circuit with type "C" lamps.*



# NAILCRETE

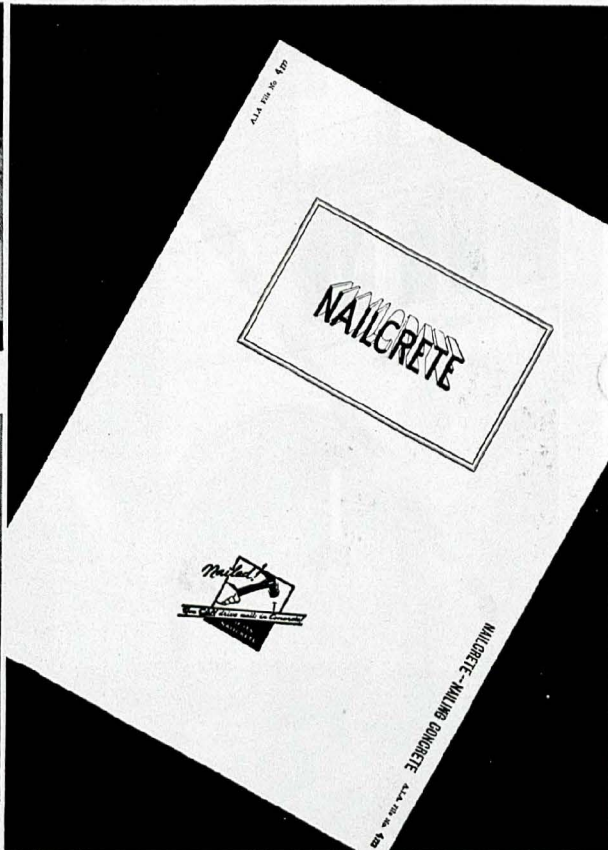
—the original NAILING CONCRETE BASE  
—for roofs and floors



MIXED BY HAND FOR SMALL AREAS



MIXED BY MACHINE FOR LARGE APPLICATIONS



**MAY BE POURED  
OR MAY BE  
PLASTICALLY  
APPLIED**

NAILCRETE CORPORATION  
105 West 40th Street, New York City

Please send us your book, "Nailcrete", containing complete information on the properties and uses of Nailcrete, with constructional detail drawings and records of official tests and approvals, for our files.

Firm Name.....

Address.....

Attention Mr.....





## American Seating Company

14 East Jackson Boulevard, Chicago, Ill.  
Branches in All Principal Cities

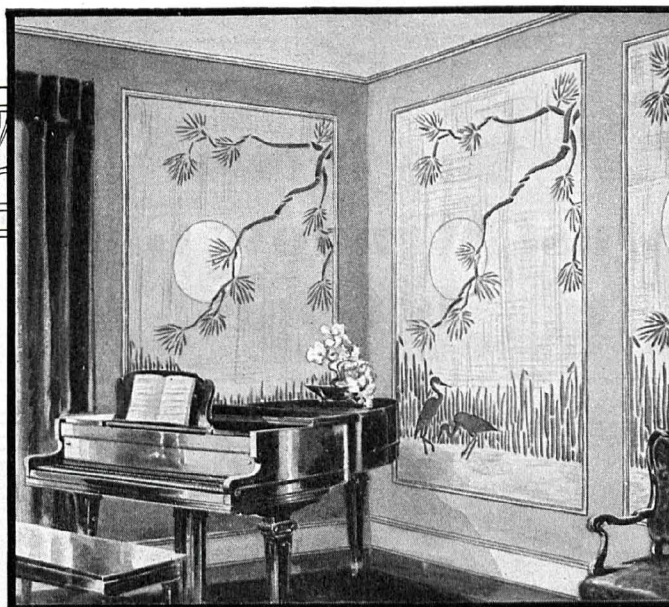
### UNIVERSITY of CHICAGO CHAPEL

Showing Choir Gallery and Pews from the Workrooms of the AMERICAN SEATING COMPANY

*Bertram Grosvenor Goodhue and Bertram Grosvenor Goodhue Associates, Architects*







## Variety of treatment in textured walls

Personality and life . . . both are mirrored in the walls of a home. Today, variety must be as much the keynote of a decorative medium as it is of life. Textone, The Plastic Paint, brings the unlimited possibilities of three dimensional ornament to modern decorative schemes.

The mobility of this distinguished medium provides a simplified method of obtaining rich texture treatments for interior walls and ceilings. Delicate tints, glazes and two-tone color effects are obtainable in as great a variety as are the textured finishes and patterns with which they combine.

Textone, The Plastic Paint, can be specified with confidence in its dependability. It is a standard material made by specialists in wall surfacing.

UNITED STATES GYPSUM COMPANY

*General Offices:*

300 W. Adams Street, Chicago, Illinois

*Sole Distributors for Canada:*

Canadian Gypsum Company, Limited  
Hillyard Street, Hamilton, Ont.

# TEXTONE

(Reg. U. S. Patent Office)

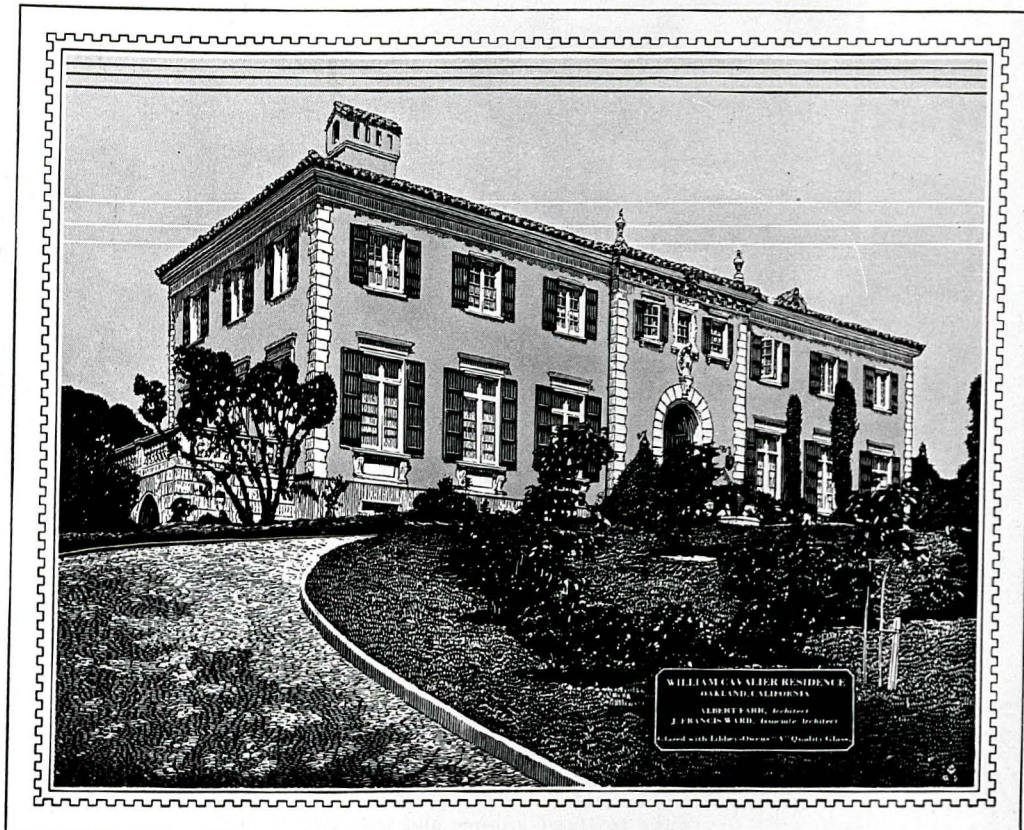
THE PLASTIC PAINT







## The Day of "Just Window Glass" Is Gone



People everywhere are awakening to a new interest in glass for windows, and to a new appreciation of quality in glass and what it means to window and room beauty. Back of this change in attitude is, of course, a marked improvement in window glass—an improvement which dates from the development of the exclusive Libbey-Owens flat-drawn process of manufacture.

Libbey-Owens "A" quality glass is a definitely superior product. It is exceptionally clear, has a sparkling lustre of unusual brilliance, and each individual light bears the familiar L/O label—a mark of identification and a symbol of unvarying high quality. Ask for Libbey-Owens glass by name, specify "A" quality, and look for the L/O label. Libbey-Owens Glass Company, Toledo, Ohio.

# LIBBEY-OWENS

## FLAT DRAWN CLEAR SHEET GLASS



# BENJAMIN-STARRETT

## *Heavy Duty Lighting Panelboards and Steel Cabinets*



Safety Front Type Heavy Duty Benjamin-Starrett Panelboard

The wide variety of circuit arrangements makes it easy to select just the right panel to meet any residence, commercial, institutional or industrial wiring requirement.

Many exclusive Benjamin-Starrett features cut installation time to the minimum.

The unit sectional construction and individualizing of parts provide the greatest accessibility and flexibility, assuring the highest type of continuous service at a minimum of maintenance expense.

### Special Features

#### Easy to Install

4-inch wiring space on all four sides; adjustable trim clamps; extra large panel mounting holes; slip-off barrier easily removed; one-piece panel back.

#### Quick Delivery

Boxes carried in stock at local distributors and district warehouses. Unit section construction insures quick assembly of panelboard.

#### All Parts Removable from Front

Should replacement of parts ever become necessary, the switches and fuse receptacles are individual units which may be removed without disturbing the trim. Replacements or changes in branch circuits made without removing panel from box.

#### Heavy Duty Switches

Branch Circuit tumbler switches on both two-fuse and one-fuse panels are heavy duty type—30 ampere, 250 volts.

#### Three Styles of Cabinets

Safety Front, Protective Front and Open Front to suit any specific requirement.

**FREE!** This 80-Page Catalog The complete listings with their practical arrangement and the clear and detailed illustrations make it easy to select the right panelboard for any job in any type of building. Send for it today.

**Benjamin Electric Mfg. Co.**

General Offices and Factory  
DES PLAINES, ILL. (Chicago Suburb)  
New York Chicago San Francisco





# Concrete Masonry Construction Makes Fine Homes Firesafe

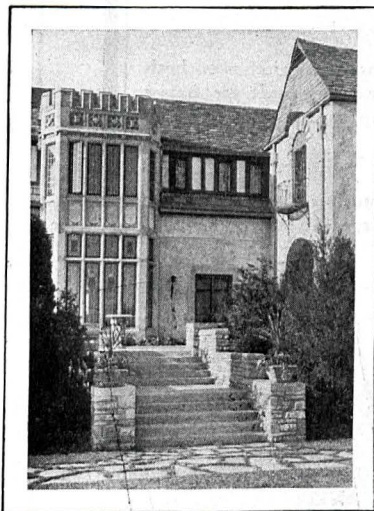
IT IS easy to understand why an ever-increasing number of fine homes are being built with concrete masonry walls and concrete floors. This type of construction not only assures utmost durability and strength, but—of even greater importance to the owner of every fine home—*Firesafety!*

Here is complete protection for your investment in the home itself, and its furnishings. Rare libraries that can never be replaced, costly rugs and tapestries, prized trophies and mementos of earlier years—for the loss of these no insurance can adequately compensate. They must be *safeguarded* from fire.

Then, too, there's the peace of mind which firesafety creates—entire freedom from anxiety. Fires that



*Residence of Col. Edwin S. George, Bloomfield Hills (Detroit), Michigan.  
Geo. D. Mason & Co., Detroit, Architects. I. J. Isgrigg, Pontiac, Michigan, Builders.*



originate in the basement—and many of them do—are completely isolated from living quarters by a concrete first floor. Loved ones are assured utmost protection.

Another feature of this modern

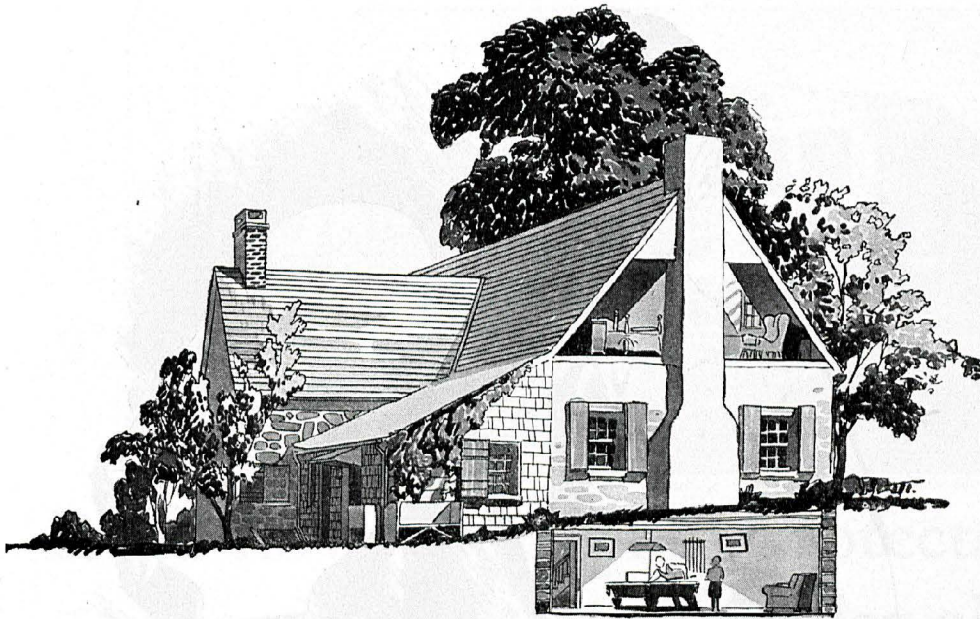
*Another view of the Col. George home. Walls are largely of concrete masonry. Exterior is of portland cement stucco, brick, and stone trim. With reinforced concrete floors throughout, this residence is as nearly firesafe as it can be built. It replaces one destroyed by fire.*

construction is its resistance to extremes of heat and cold. A concrete masonry wall (built of *hollow* concrete units) is virtually *two* walls, with insulating air space between outer and inner surfaces. Homes thus protected may be kept delightfully cool on summer's hottest days. With a smaller expenditure for fuel than is customary, they may be kept comfortably cozy in the zero cold of winter.

## P O R T L A N D C E M E N T

C O N C R E T E F O R P E R M A N E N C E





## *☞ ☞ Add extra rooms without enlarging the house !*

**W**ITH building materials and land values at their present high prices, complete utilization of all available space becomes an economic necessity—in the house just being built or in one several years old. By using MAFTEX it is a simple and economical job to erect an extra room or two in available space in attic or basement.

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MAFTEX Insulation makes the whole house more liveable and hence more valuable—for either sale or rental purposes. Send for complete information.

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# MAFTEX

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that has Structural Strength*

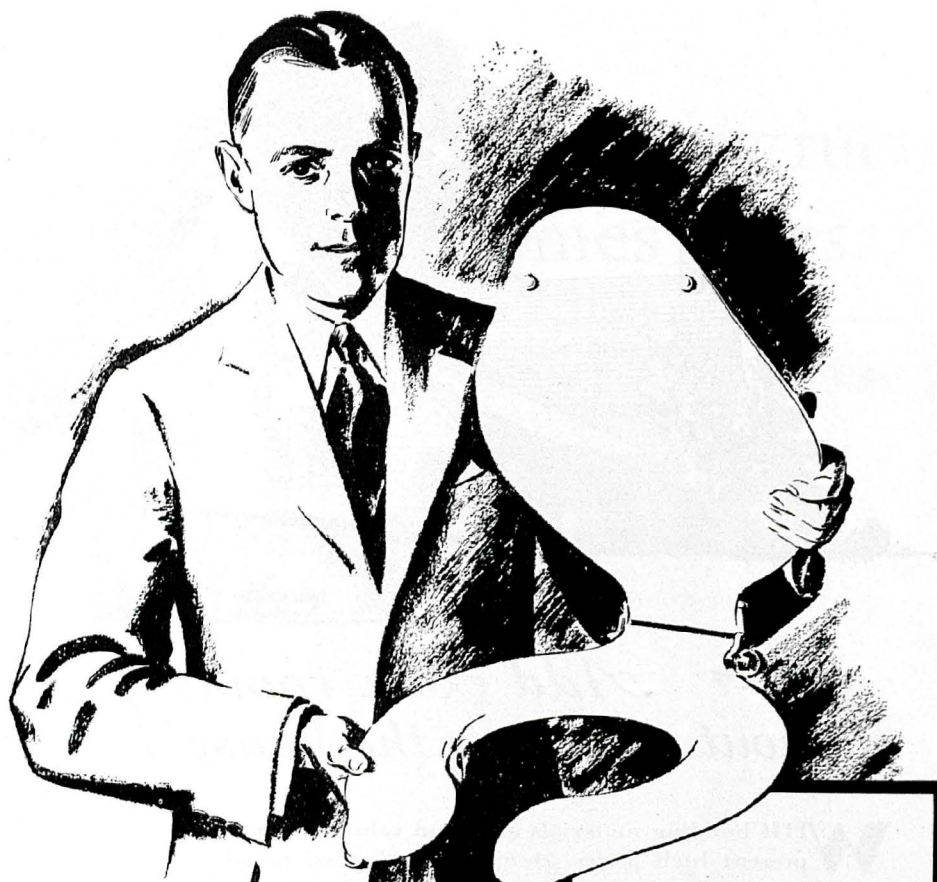
*Unusual  
Structural  
Strength of*

## MAFTEX

Turn-buckle test proves resistance to distortion as compared with wood. 8" panels of MAFTEX and ordinary  $\frac{7}{8}$ " wood sheathing were subjected to equal pulls by 84 turns of turn-buckle. Wood panel was pulled  $12\frac{1}{2}$ " from perpendicular but MAFTEX yielded only  $2\frac{5}{16}$ ". When load was removed, wood panel recovered only 17% while MAFTEX recovered 54%.

*Write for samples and make  
your own test.*





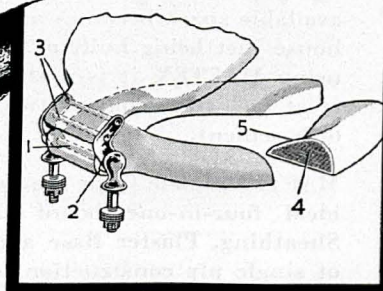
*is is the*  
**of K Hygienic" Seat**  
*ide by Kohler of Kohler*

is the latest addition to the Kohler line. A very important addition—“K of K Hygienic” closet seats. A complete line—all models open and closed front, with and without covers, in Sea Pearl finish, harmonizing with all Kohler colors, also in white, black, ebony, and golden oak.

With many new features to recommend it, perhaps the outstanding feature of this new line is Kohler Quality. “K of K Hygienic” seats made by Kohler at Kohler, insuring the same quality standard, centralized control, fine workmanship, and rigid inspection that have the reputation of Kohler Enameled Iron fixtures, Vitreous China, Brass.

You may now specify Kohler closets complete with Kohler seats, and together—thus centralizing responsibility for quality and delivery while simplifying specification-writing, ordering, and handling the job.”

Kohler Co., Founded 1873, Kohler, Wis. • Shipping Point, Sheboygan, Wis. • Branches in Principal Cities



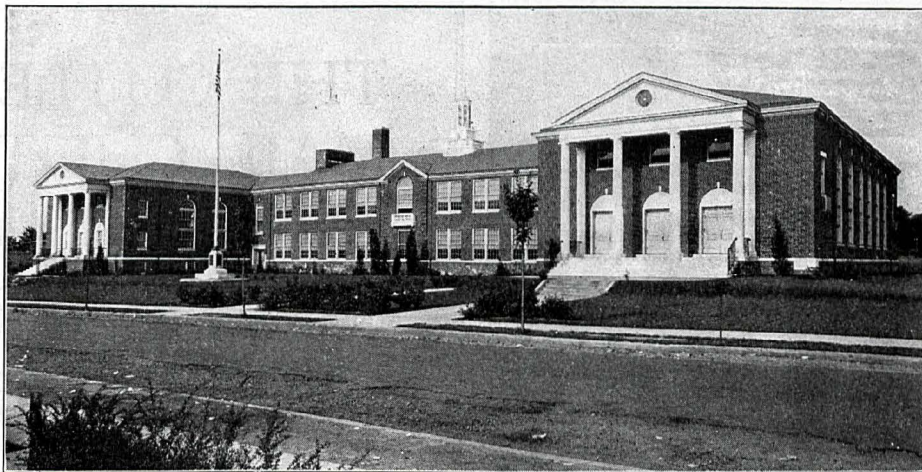
*Improved Design—New Features*  
**Kohler Quality**

1. Cover and seat swing from one concealed bar hinge.
2. Flange on hinge checks seat and cover in upright position.
3. Two metal bars keep cover securely in place.
4. Solid hardwood core, reinforced with cross-grain dowels.
5. Durable, sanitary sheet covering.

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**PLUMBING FIXTURES**

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A. F. THORNTON, Principal of the Spring Valley, N. Y., School, says:

*"There was a considerable quantity of plaster, sand and other dirt carried into every room. Now that the floors have been cleaned, they do not show any sign of this abuse."*

The wood floors were treated with Lignophol, and had to resist for 12 weeks the wear and tear of traffic during repairs.

Not only does Lignophol protect the surface against grinding wear, but it also prevents warping, cracking, shrinking, splintering, dry or wet-rot.

Lignophol penetrates into the wood cells and fibres, filling them with the essential

oils and gums that insure long life.

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Made in four standard colors: Natural, Light Brown, Medium Brown, and Dark Brown. Easily and quickly applied by any workman at minimum cost. One application means no more material or labor cost for years to come. Be sure to specify Lignophol—a Sonneborn Product.

The Sonneborn Policy is that the architect must always be satisfied. Sonneborn always makes good.

# LIGNOPHOL

## A Penetrating Preservative For Wood Floors

### Some other Sonneborn Products

**LAPIDOLITH** — a chemical liquid hardener for hardening and dust-proofing concrete floors.

**HYDROCID COLORLESS** — for waterproofing exposed exterior walls.

**CEMCOAT**—a paint that stays white after others turn yellow. Can be washed over endlessly. Adheres to brick and cement as easily as to wood.

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Buick Motor Company, Detroit  
J. A. Utley Company, Detroit  
Hegeman Harris Company, New York  
Indiana Flooring Company, New York  
Real Silk Hosiery Mills, Indianapolis

**L. SONNEBORN SONS, Inc.**

114 FIFTH AVENUE, NEW YORK

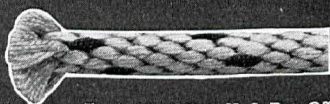
**COUPON**  
L. SONNEBORN SONS, Inc., 114 Fifth Ave., New York  
Please send me, without obligation, demonstration samples and literature on:—Lapidolith, Lignophol, Hydrocid Colorless, CEMCOAT—(Check products that interest you.)  
Name.....  
Address.....  
Company.....  
Position.....  
P P-12





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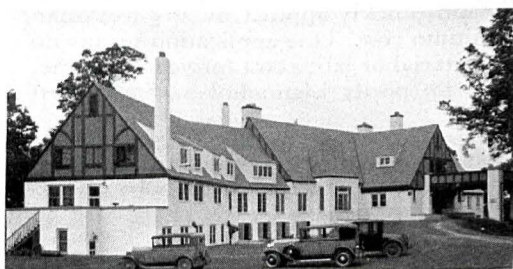
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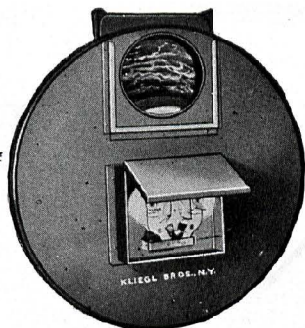
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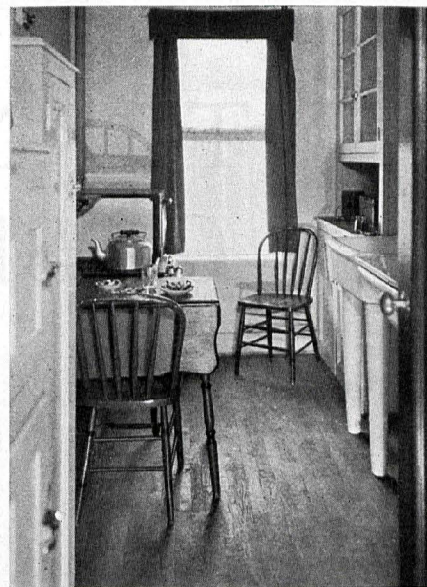
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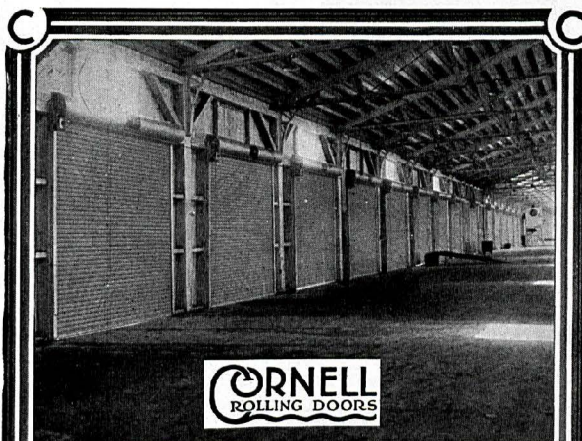
It is such a common architectural practice to specify floors of oak in a home that frequently the basic values of oak are forgotten. But when oak is weighed against other woods or manufactured flooring substitutes, architects are impressed anew with all the outstanding points of superiority offered by Oak Flooring. Such was the case at the Paul Laurence Dunbar Apartments.

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in the Embossed Armstrong's  
Linoleum Floor

**P**LAIN walls with ceilings structurally simple characterize the English cottage. Interesting, the effect, but lacking in vitality if based upon a plain floor—lacking in what this color-conscious day calls zest, pep, verve! First visualize the appearance of the room on this page with a plain monotone floor. Then compare with that picture, this other. Put a modern floor of colorful Armstrong's Linoleum in this room and notice the effect. No loss of the essential air of quaint countryside quiet—rather the emphasis of contrast.

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"The English cottage type of interior can meet the present American demand for color by the use of modern materials."

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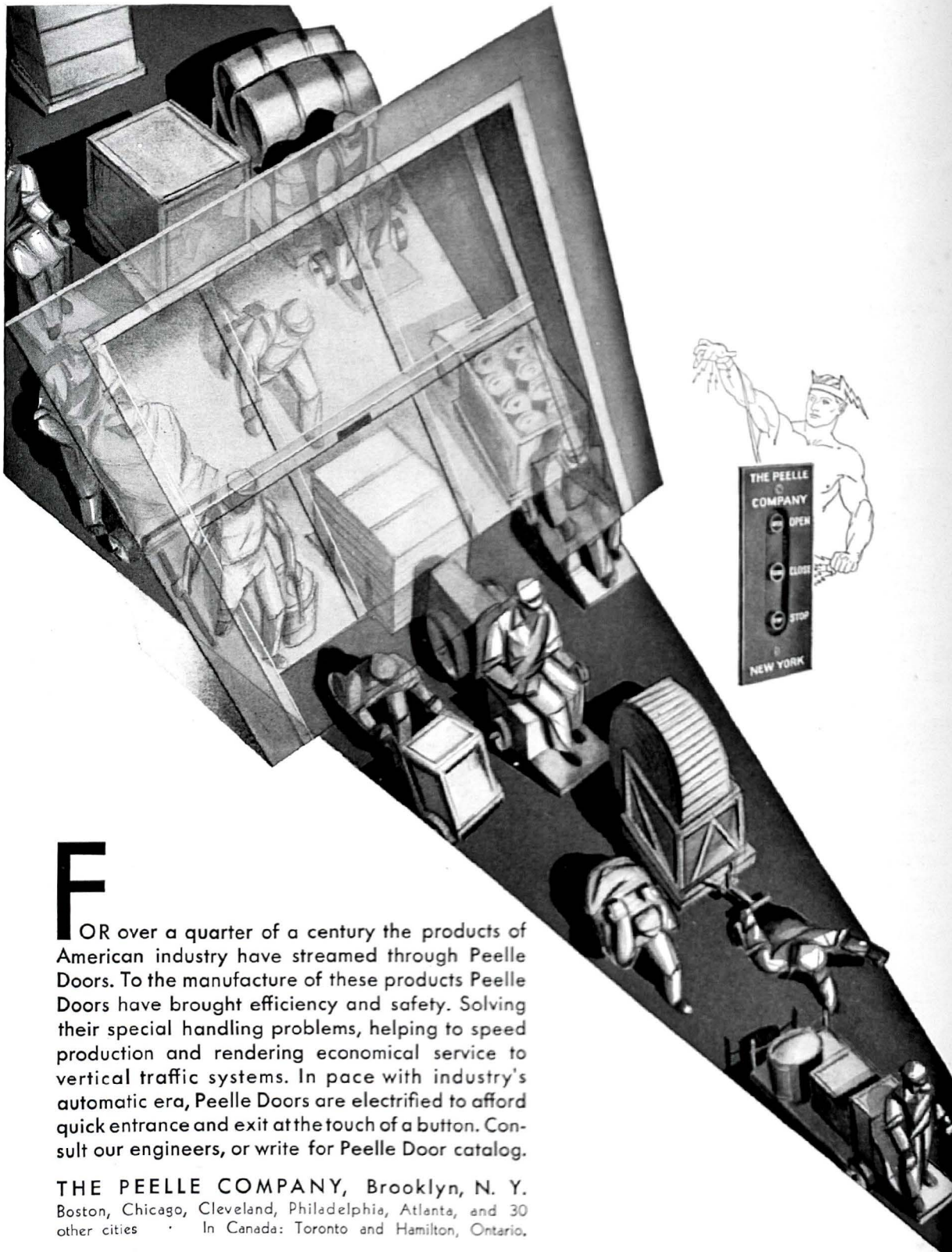
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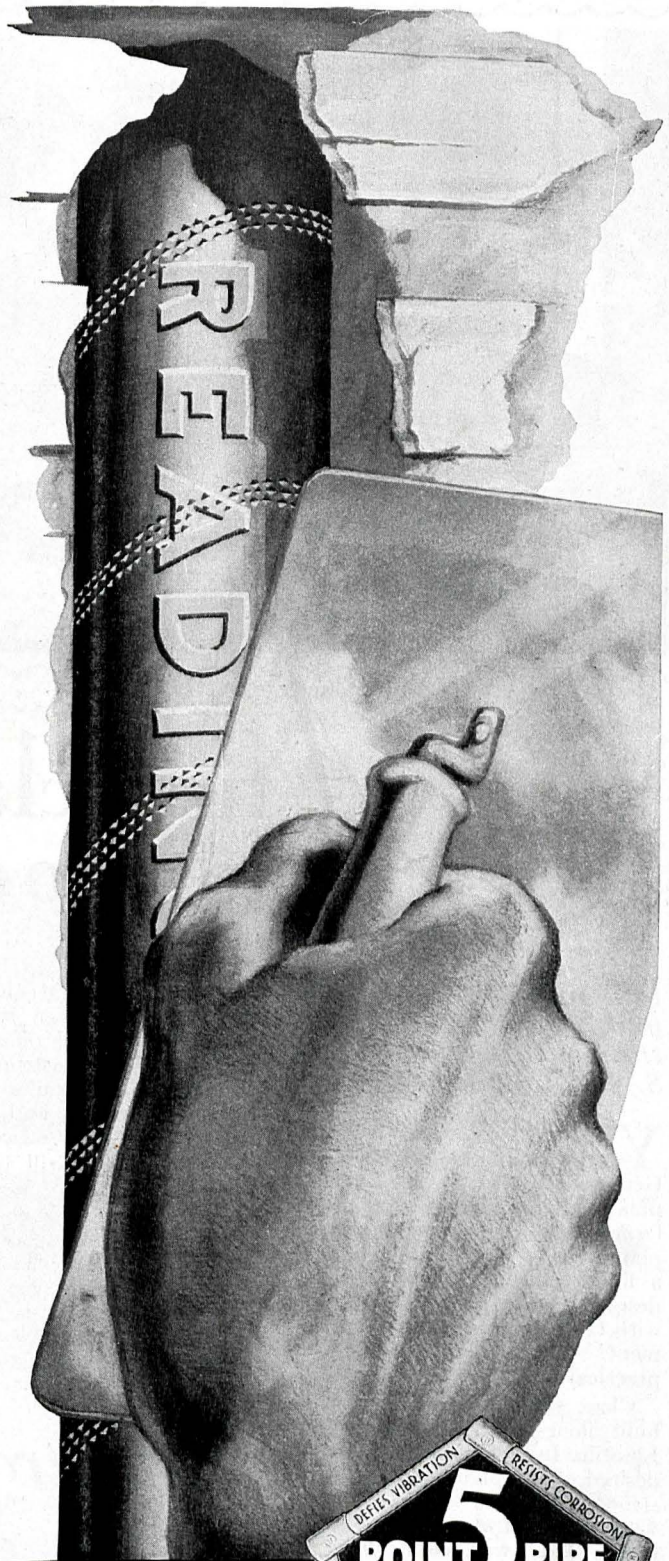
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**T**HERE will be no "hurry up" calls from dissatisfied owners or tenants on the pipe installation shown here. Pipe failures from rust, breakage or leaky joints will be eliminated for years upon years, for this pipe is tough, time-defying Reading 5-Point Pipe, made of Genuine *Puddled* Wrought Iron.

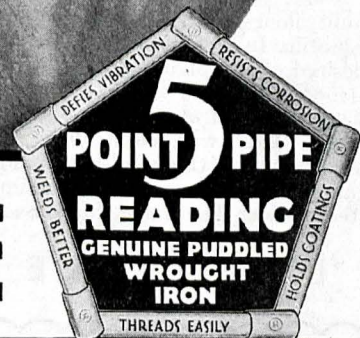
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1st Class  
To Custom-Built...

Modernistic Linotile effect in the North German Lloyd S. S. Co. office, Philadelphia, Pa.

## A first-class ticket to good floors . . . .

*It's marked "custom-built" on the itinerary of the North German Lloyd S. S. Co., Philadelphia.*

**Y**ES, it happened at maritime headquarters of the North German Lloyd S. S. Co., Philadelphia, Pa. Walls, ceiling, counters, furniture, and furnishings were planned in the new mode. But, first, a floor—unusual and different in design—was needed to make friends with the whole decorative arrangement. Of course it had to be practical.

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ble designs and solid colors. Pattern? There are eighteen standard tile sizes, square and oblong. Reason enough why Armstrong's Linotile is increasingly popular in office and home, in public and semi-public buildings!

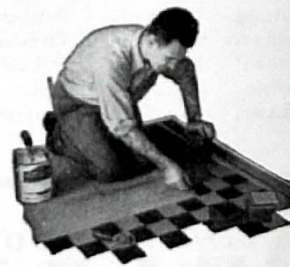
More reason still in the practical advantages. Why is Armstrong's Linotile welcomed in banks, libraries, hospitals, and schools? Principally because it guarantees floor-quietness. In hotels, restaurants, and tea rooms? Because it is easy to clean. In smart shops, showrooms, and theatres? Because it is warm, resilient, non-

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We'd like to send you "Custom-Built Floors of Cork." This book gives you all these interesting facts in detail. Shows you the various colorings. Illustrates some of the finer designs. Tells you, also, about Armstrong's Cork Tile, another custom-built floor. Sent free on request. Write to the Armstrong Cork Company, Custom Floors Department, Lancaster, Pennsylvania.

*Local floor craftsmen can install this hand-laid floor, and assure you a perfectly satisfactory decorative and structural job.*

# Armstrong's CUSTOM FLOORS



LINOTILE

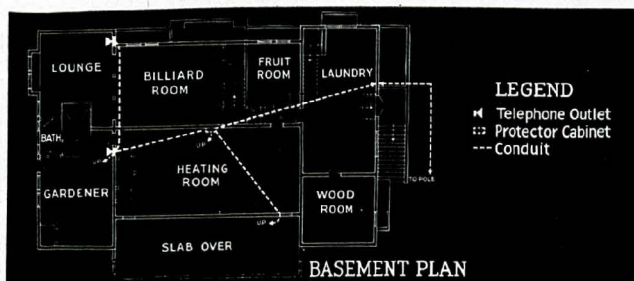
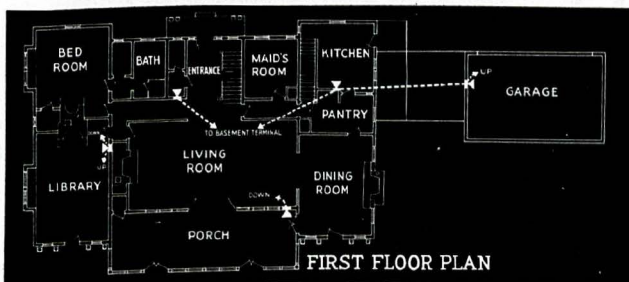
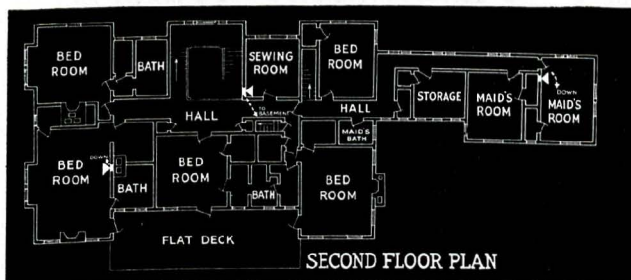
CORK TILE



# Communication *within* the Residence : . . over the Regular Bell Telephones



Ten telephone outlets, including one in the garage and two in the basement, provide complete telephone convenience in the residence of Mr. A. W. Treadwell, 579 San Elijo Ave., San Diego, Calif.  
HAYWARD PIERCE, Architect, San Diego.



LEGEND  
 ◻ Telephone Outlet  
 ▤ Protector Cabinet  
 --- Conduit

IN DESIGNING a residence, it is often desirable to provide for communication within the house . . . bedroom to kitchen, for instance, or library to garage . . . as well as to the outside. Home owners find this especially convenient for conducting household business, receiving incoming calls or talking to people in other parts of the house. Bell System equipment makes it possible to have this intercommunication over certain of the house telephones, without interfering with outside calls.

This is but one of the many features of modern telephone convenience. The basic thought is to have the telephones sufficient in number, and so located, as to bring the greatest possible ease and comfort in the use of the service.

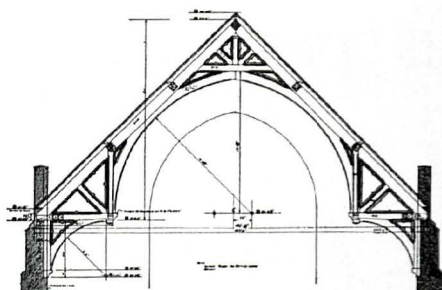
Conduit for the telephone wiring is specified throughout the house, making outlets available in every important room. Telephones can then be had just where the occupants want them. And they can enjoy the improved appearance which comes from concealed wiring.

The telephone company is constantly studying ways to improve its service. It will gladly co-operate with architects in helping to plan the best telephone arrangements for particular building projects. When intercommunicating service is involved, this consultation is particularly important. There is no charge. Just call the Business Office.

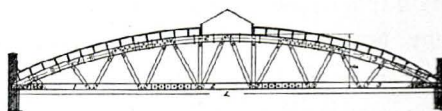




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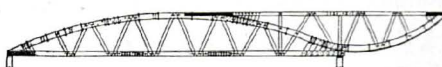
Hammer Beam Trusses with Gothic Arch



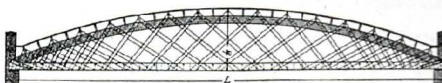
Bowstring Trusses



Crescent Trusses



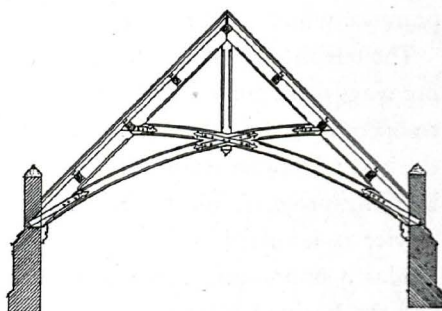
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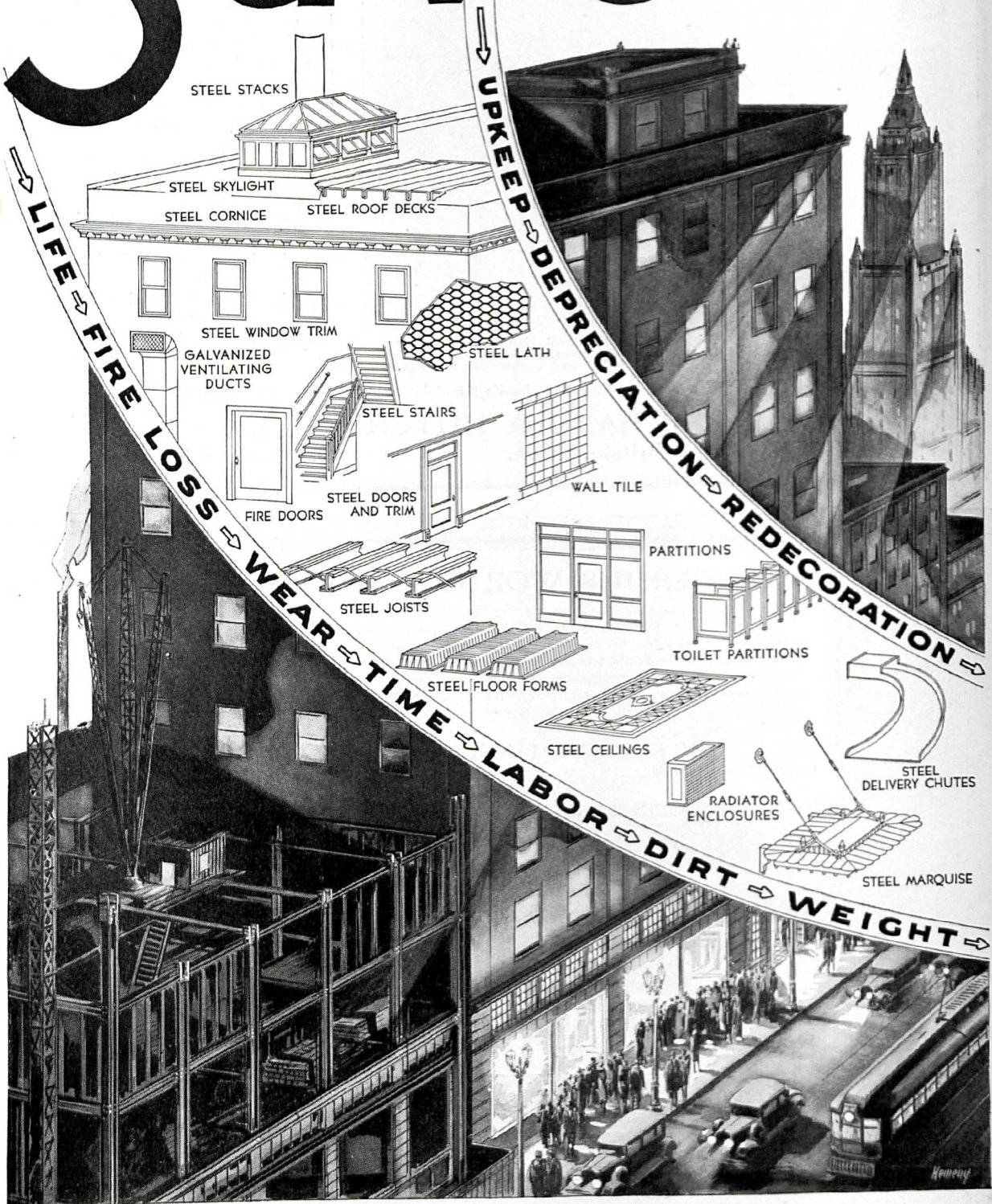
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This same destroyer day after day snuffs out twenty-seven lives—nine being children under ten years of age.

Appalling!—And yet a few years ago, conditions were even more disastrous. Due to greater care and the growing use of steel building materials by architects and builders, there has been a decline in the fire loss. *Steel products never start a fire or feed the flames!*

Steel partitions, doors and trim, steel stairways, steel lath and other steel building products are saving lives and property every day—many of them having definite ratings from the Under-

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Substantial savings in construction costs and additional fire safety are being obtained with such products as steel shower stalls and bathroom tiles, steel joists and floor forms, steel ceilings, cornices, canopies and stacks.

When weight saving is desirable, steel roof decks, galvanized roofing and siding and similar articles, make possible safe reduction in the weight and cost of supporting members.

Adaptable to factory, commercial building or home—advancing in artistic design and utility each year—The wider use of steel products will bring about great savings from fire loss, savings of life and money, savings in space, weight, wear, time, labor and dirt.

Complete information concerning these products may be obtained by writing the Trade Research Division, National Association of Flat Rolled Steel Manufacturers, Terminal Tower Building, Cleveland, Ohio.

## Save with Steel



Life



Fire Loss



Weight



Labor



Time



Wear



Space



Money



Steel Building Products



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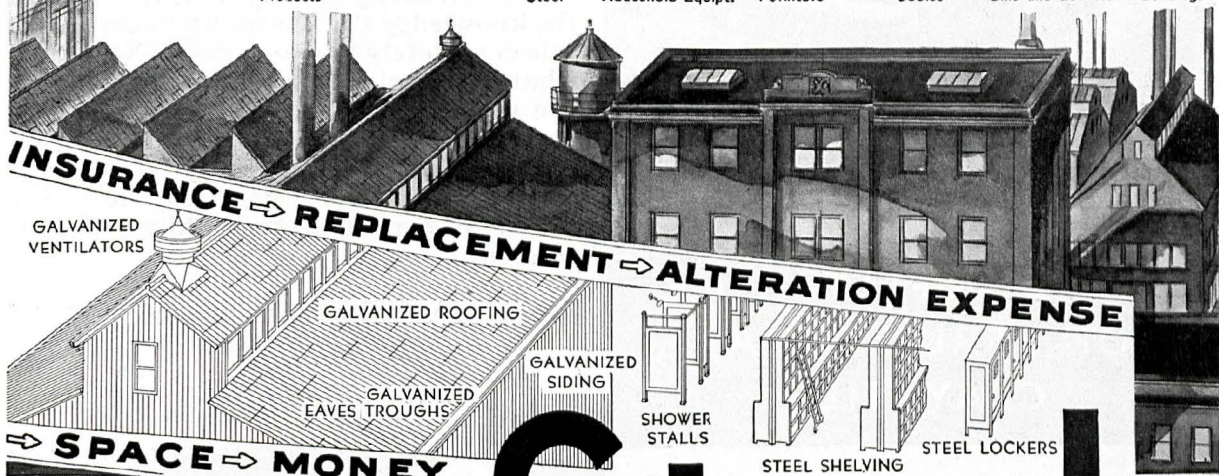
All Steel Bodies



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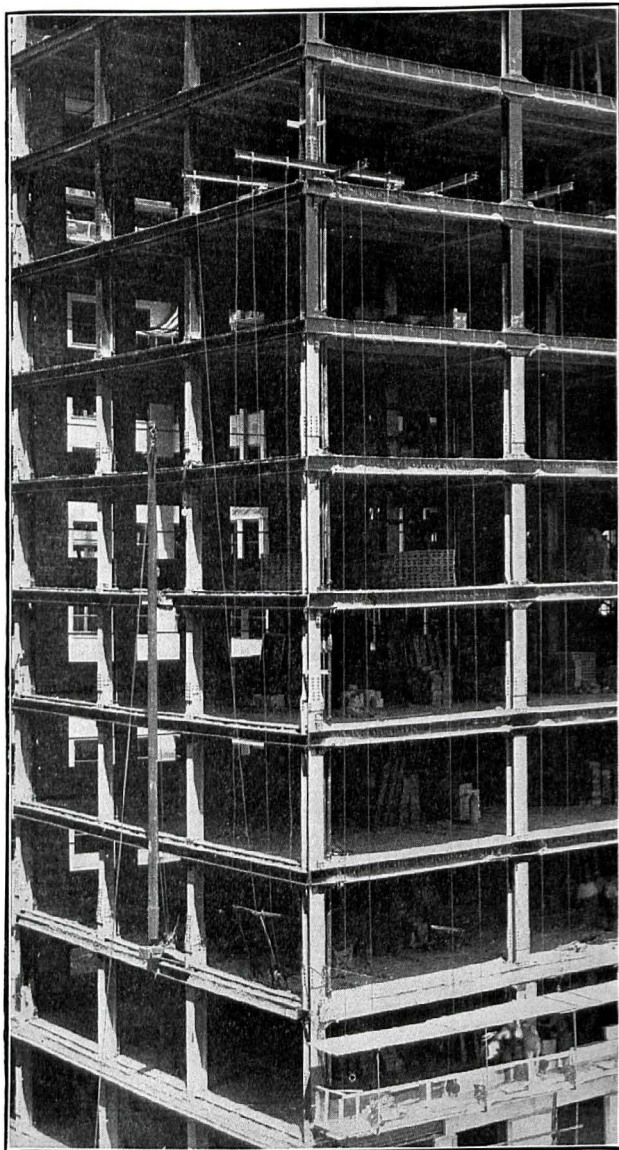


Steel Buildings



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Address







## NUMBER 11

*of a series of historic structures, illustrating the varied ways in which American marble has contributed to the development of our national architecture. The pictures on this page, both of the Old Post Office and President Van Buren, are reminiscent of the styles of other days.*

## The President Who Counted the Second Cost

IN 1839 when the Old Post Office was built in Washington there was much discussion in Congress as to what building material should predominate in the new Capital. Even then the followers of L'Enfant were arguing for the city beautiful. In the case of the Post Office the choice of material was left to President Van Buren. He decreed that marble should be used, not because of its beauty and dignity, but because with marble there would be no painting, no cost of upkeep. He looked at it purely from the standpoint of economy.

Robert Mills who designed this old Post Office was the architect also of the Treasury Building, the Patent Office and the stately Washington Monument. He was the first native-born American architect to be regularly trained for the profession.

VERMONT MARBLE COMPANY—PROCTOR, VERMONT  
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See Sweet's Catalog for Specifications and Other Data

# VERMONT MARBLE

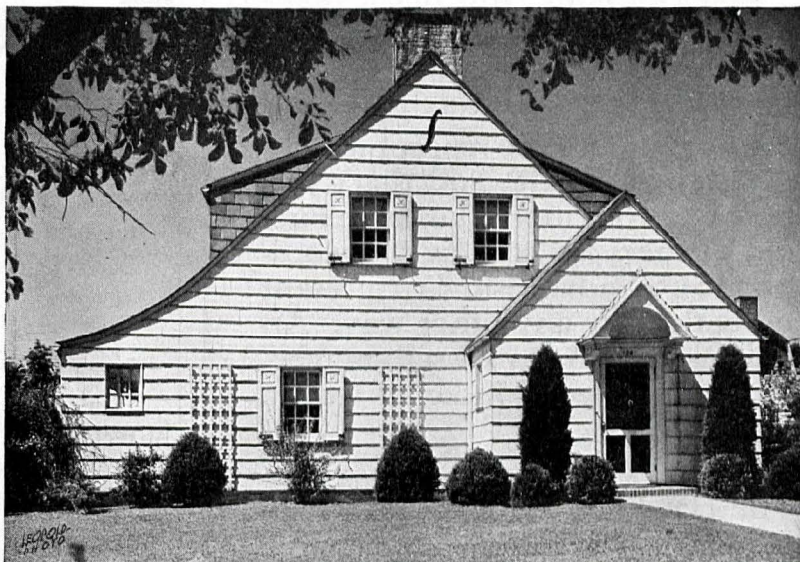


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expresses lumbermen's  
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that these homes cost less to build, less to maintain, less to heat. The Lumber Industry owes architects a debt of gratitude.

Now the National Lumber Manu-

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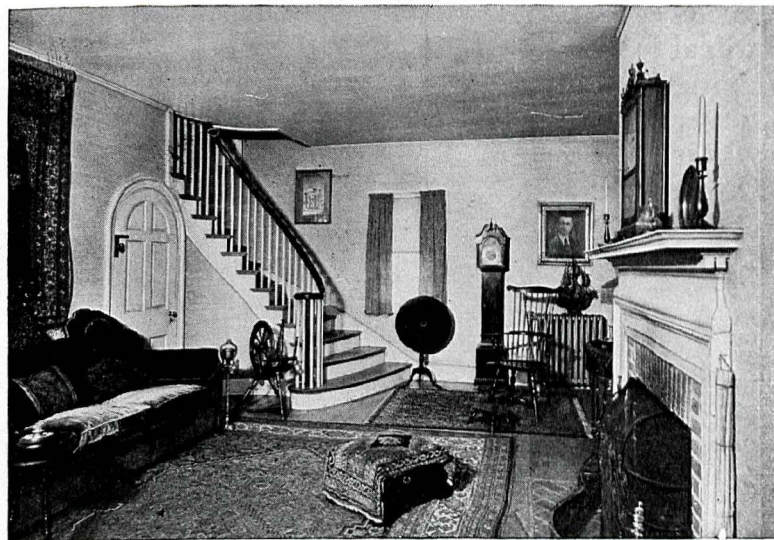
The National Lumber Manufacturers Association guarantees to the lumber dealer that the lumber bearing its symbol, the "Tree-Mark," is of the quality indicated thereon by the official marks of the expert grader . . . that it is carefully manufactured "American Standard Lumber from America's Best Mills."

Two valuable new booklets in the lumber library are yours for the asking. They are "Modern Home Interiors" (full of ideas for artistic interior application of lumber), and "Taking the Mystery Out of Lumber Buying" (tells all about lumber grading and selection). The coupon brings them—FREE.

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On this page are two views of an architect's own home—lumber built. The beautiful residence of Henry Powell Hopkins, at Roland Park, Md.

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—that's his fault. But twice, that's my fault"—the fair name of architect or owner who buys *one* oil burner is no recommendation for the burner. It's the *repeat* business that tells the tale, and that's just how we grow; more Hardinge Fuel Oil Burners are sold by the word-of-mouth advertising of present users than by any other way. An old-fashioned way to sell, maybe, but a pretty good index of worth.

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Unsightly transom lifters no longer spoil door contours

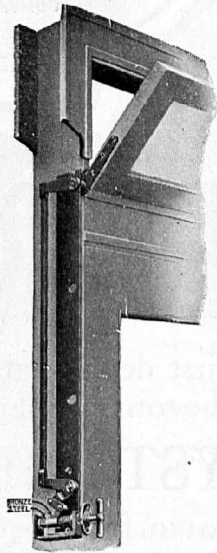
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## Rixson Concealed Transom Operator

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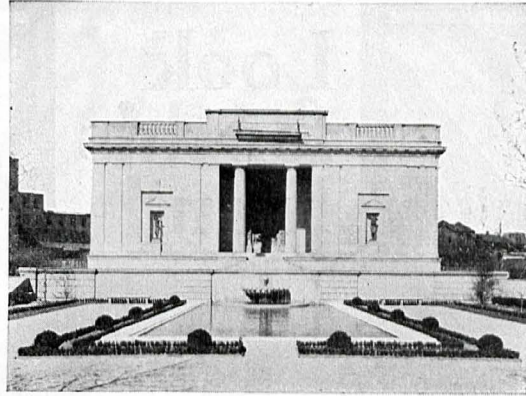
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Rodin Museum\*, Philadelphia, Pa.  
Paul Philippe Cret, Architect

## TRIBUTE

THE reverent spirit that is embodied in the Rodin Museum is admirable. Intended to preserve beautiful art, it must of course be beautiful. It very appropriately duplicates the facade of the Rodin Memorial Musee at Meudon, a suburb of Paris, which was formerly the villa and studio of the famous sculptor and which he himself built. Several imperfections resulting from his lack of architectural training were retained in the Philadelphia replica which was built of stone quarried and cut in France. The gates and other details are also faithful reproductions.

Itself a thing of beauty, the Rodin Museum was worthy of preservation from the elements. Window and door frames, cross joints, capstones, and copings were calked with non-staining Pecora Calking Compound. This gift of the late Jules E. Mastbaum to the City of Philadelphia, gracing the Parkway, is a permanent tribute to genius.

\*Calked with Pecora Calking Compound by the Ev-Air-Tight Calking Company, Philadelphia, using their pneumatic process.



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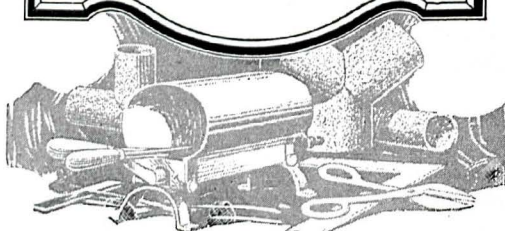
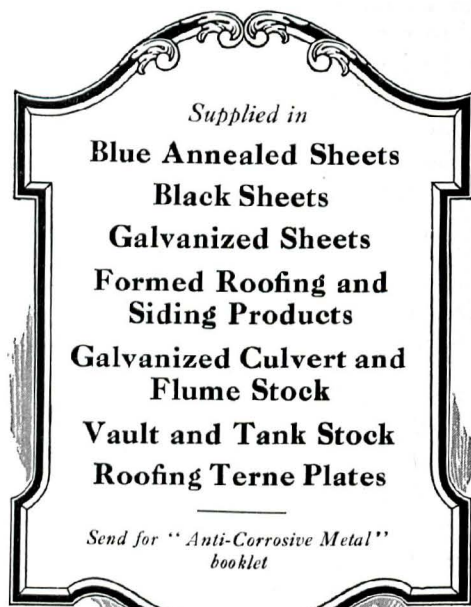
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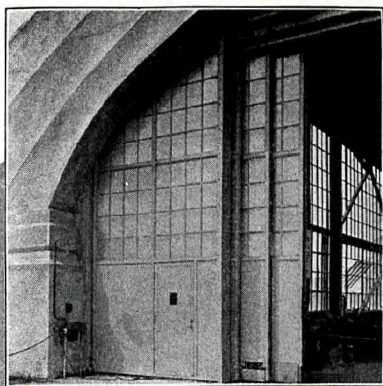
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*because of longer experience*

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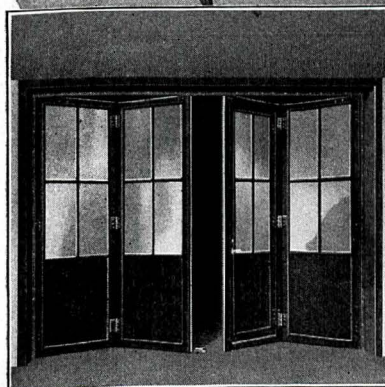
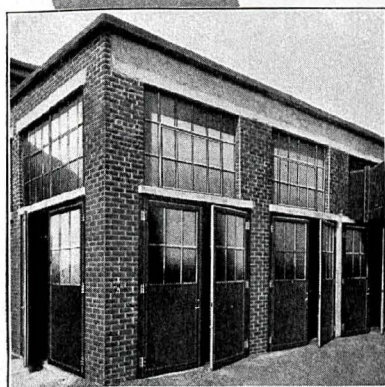
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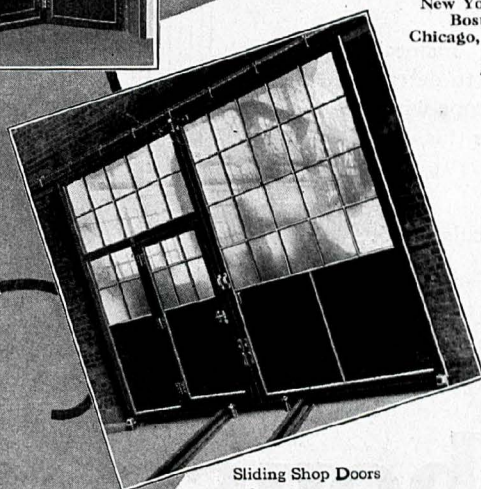
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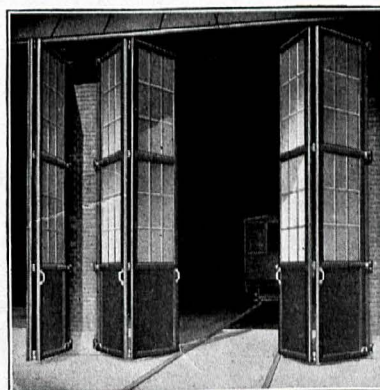
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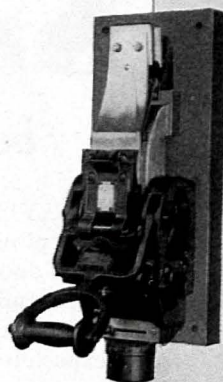
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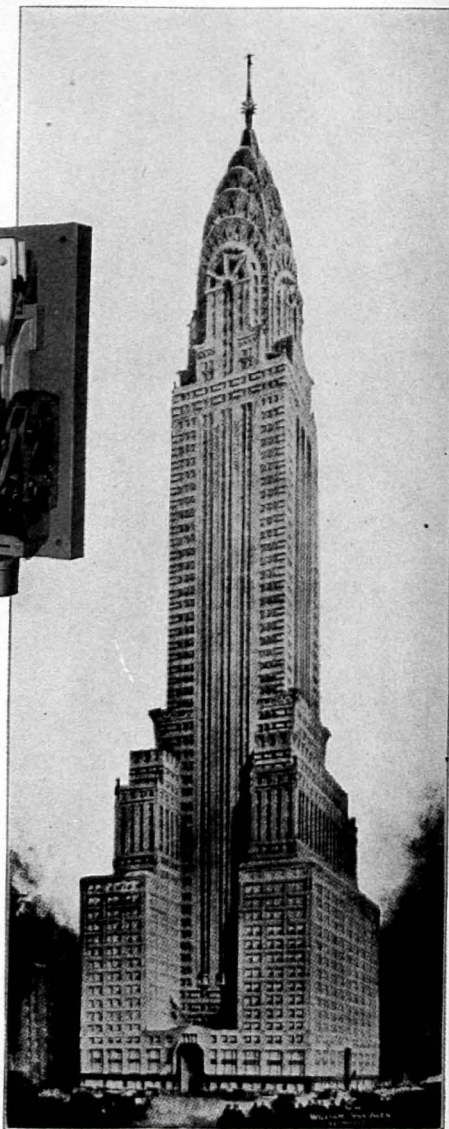
**I**N the past few years, CL carbon circuit-breakers have been chosen for many imposing buildings. The Atlantic City Auditorium, the Chicago Civic Opera Building and the Chrysler Building, to be the tallest in the world, head the impressive list.

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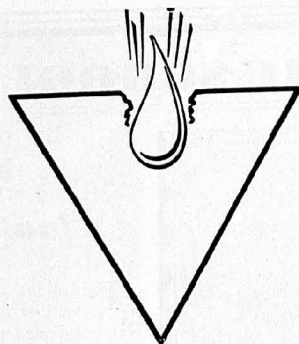
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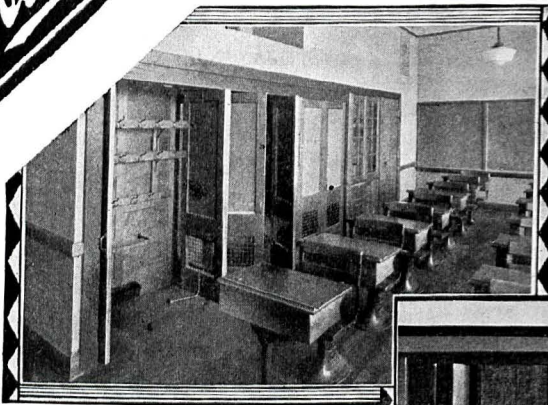
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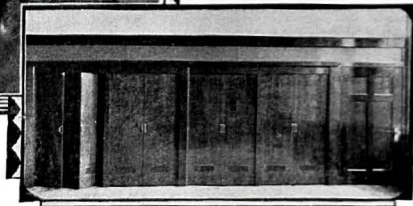


*Wilson***HYGIENIC SCHOOL WARDROBES**

Showing installation in class room of Belmont, Mass. High School. Note how doors do not block aisle when wardrobe is open.

Wilson Hygienic Wardrobes are constantly under the teacher's eye, promoting discipline. Ventilated, they are hygienic. Doors on certain types may be fitted with continuous or nearly continuous blackboards. They are products of over 50 years of Wilson experience and development, installed under Wilson supervision and guaranteed for one year.

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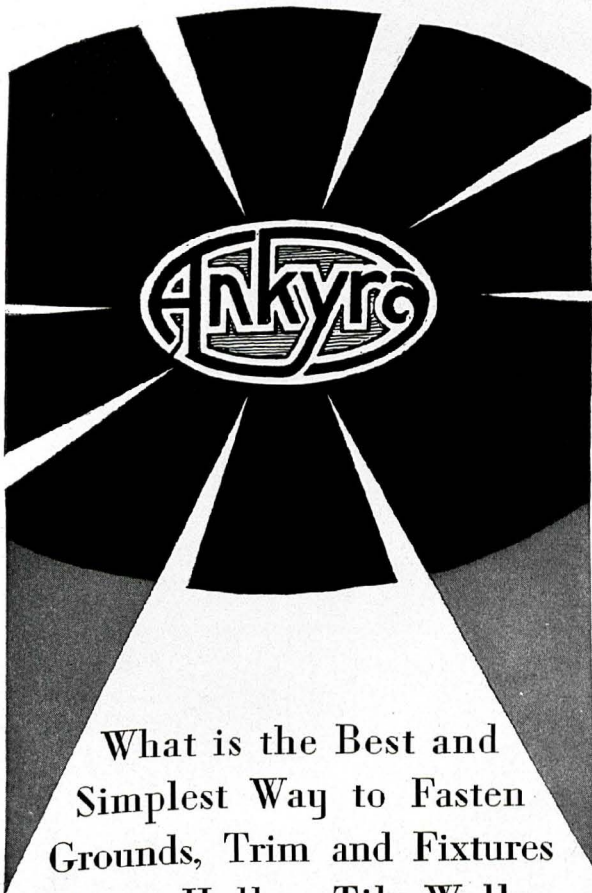
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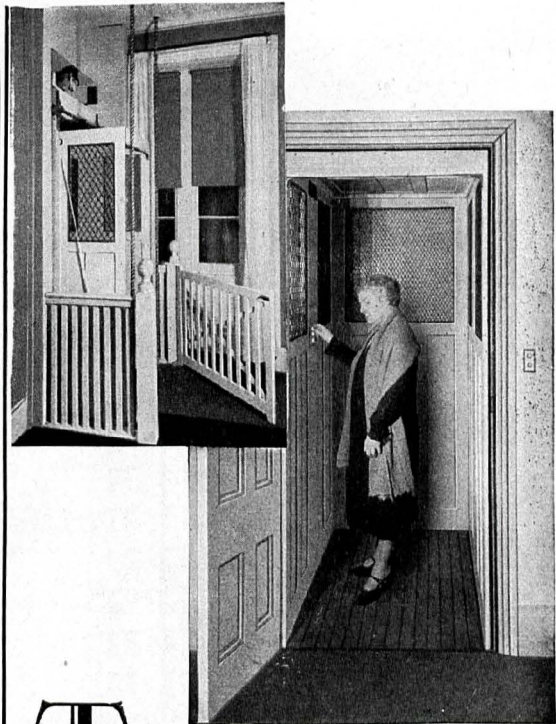
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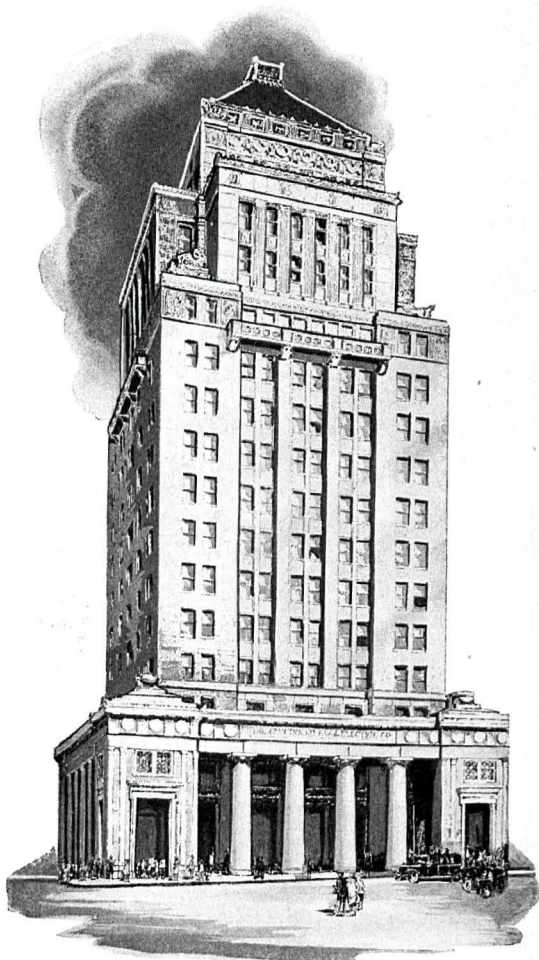


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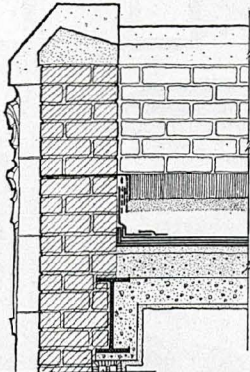
*Westinghouse Elevators  
are the logical highways  
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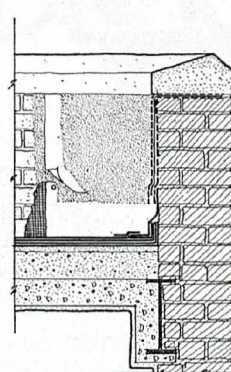
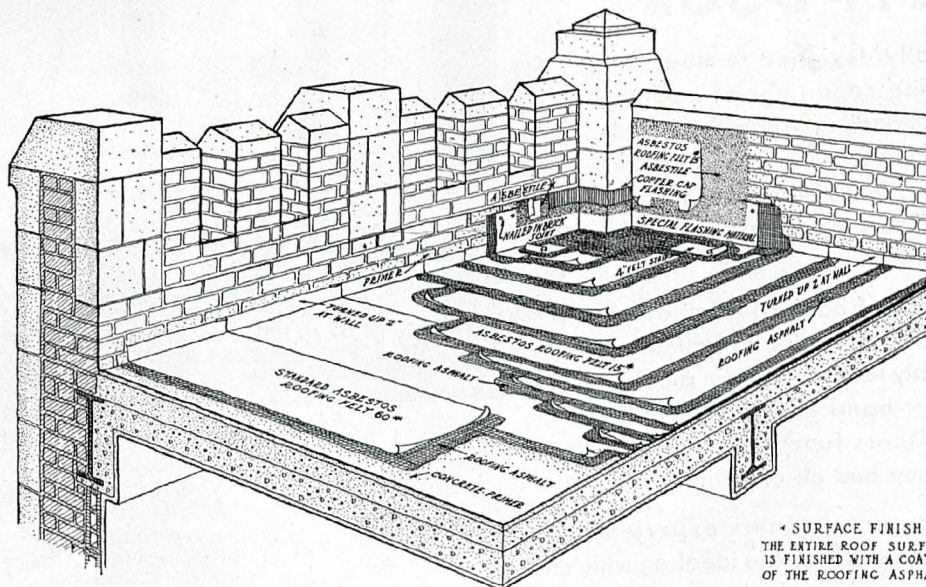




## • TYPICAL DETAILS •

SECTION THRU PARAPET WALL SHOWING  
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## • TYPICAL DETAILS •

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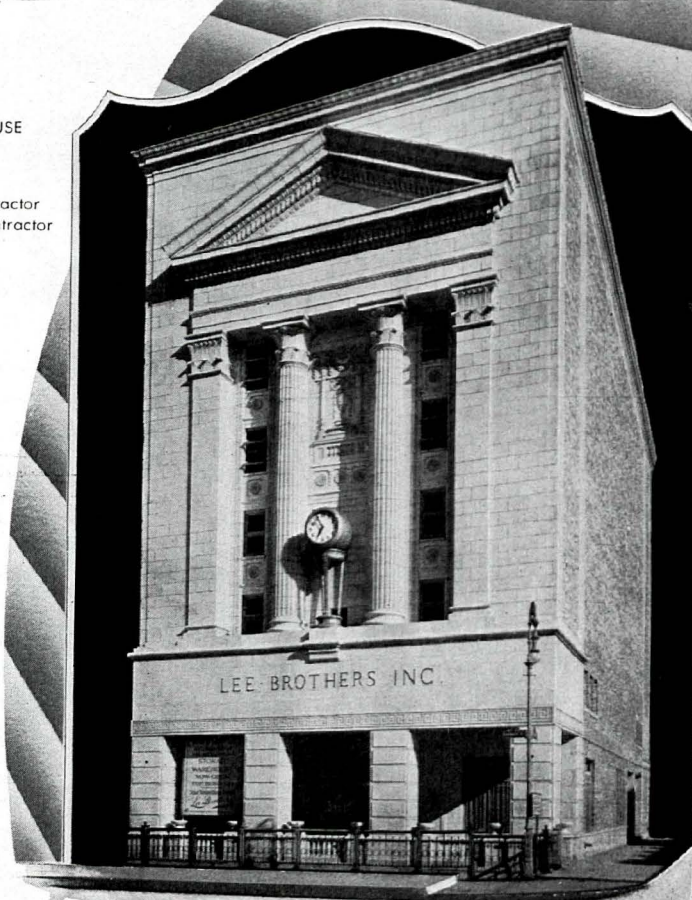
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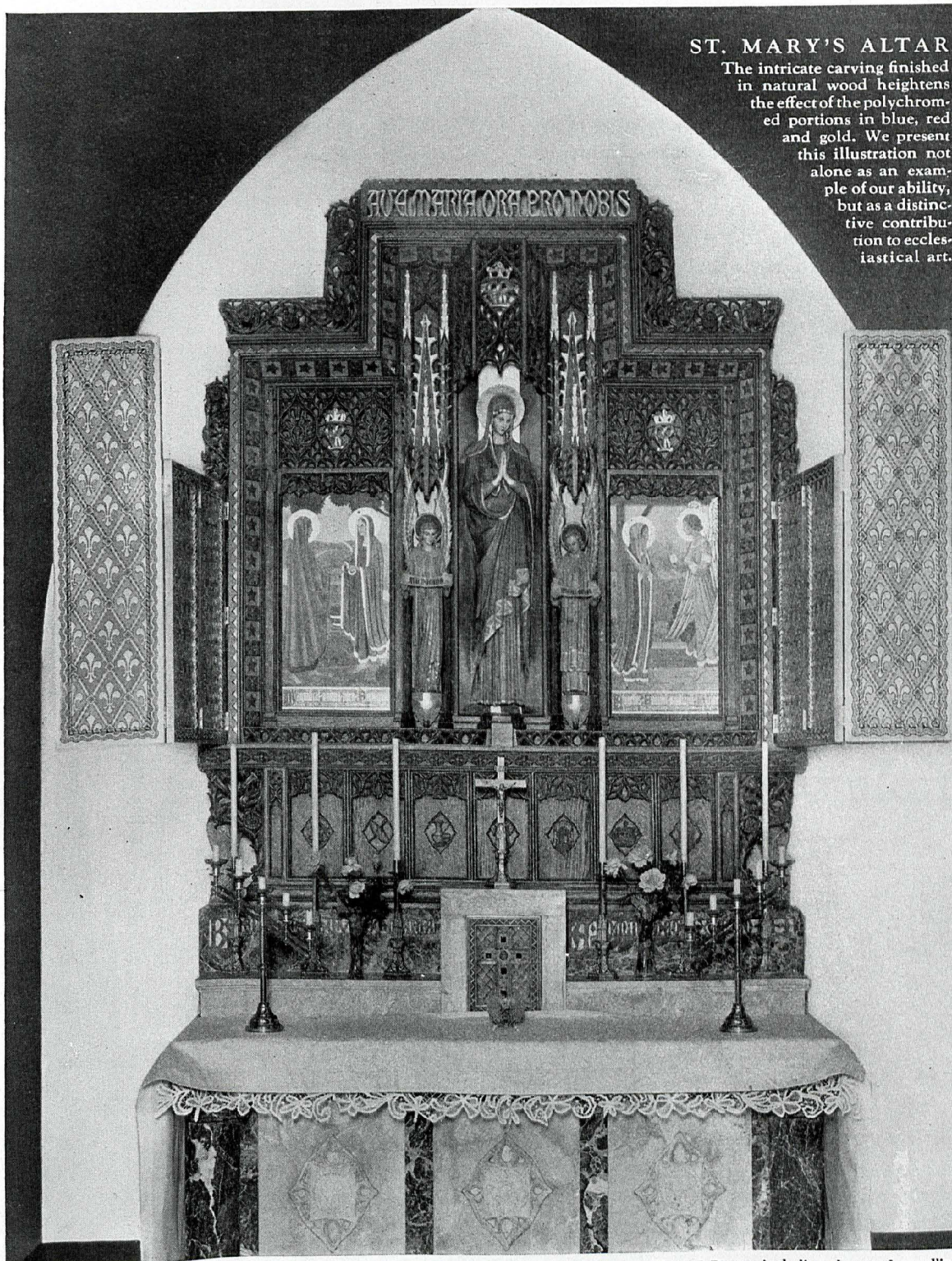
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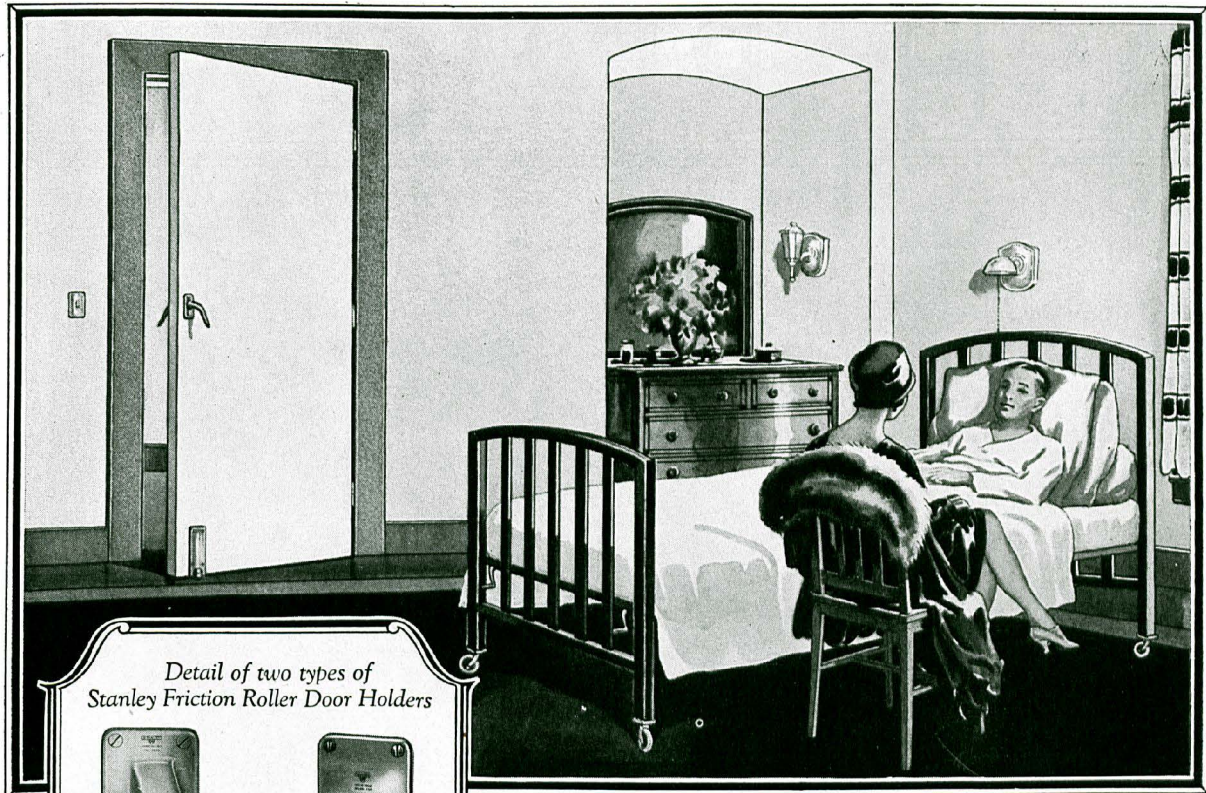
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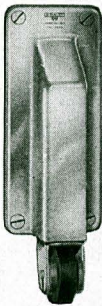
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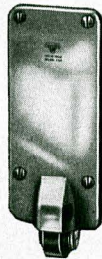


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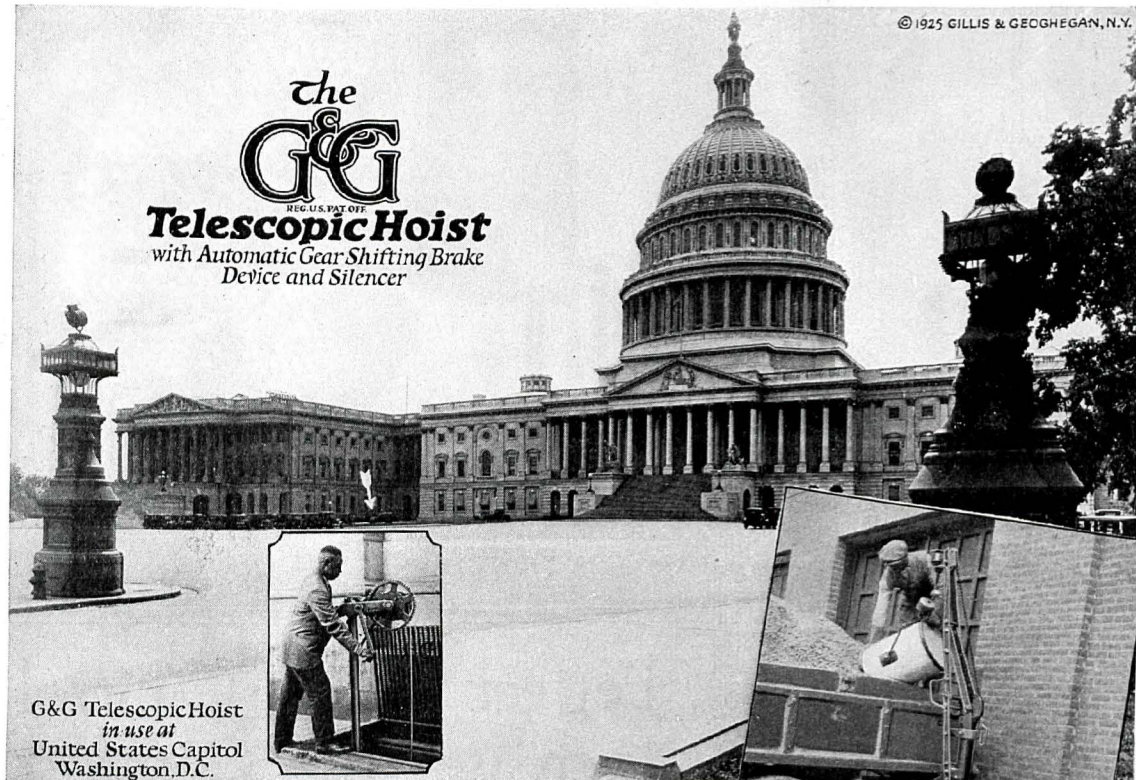
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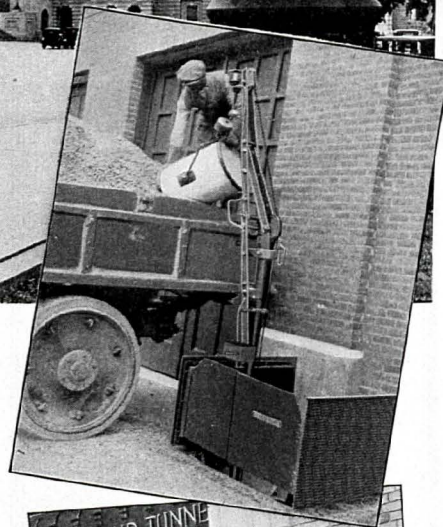
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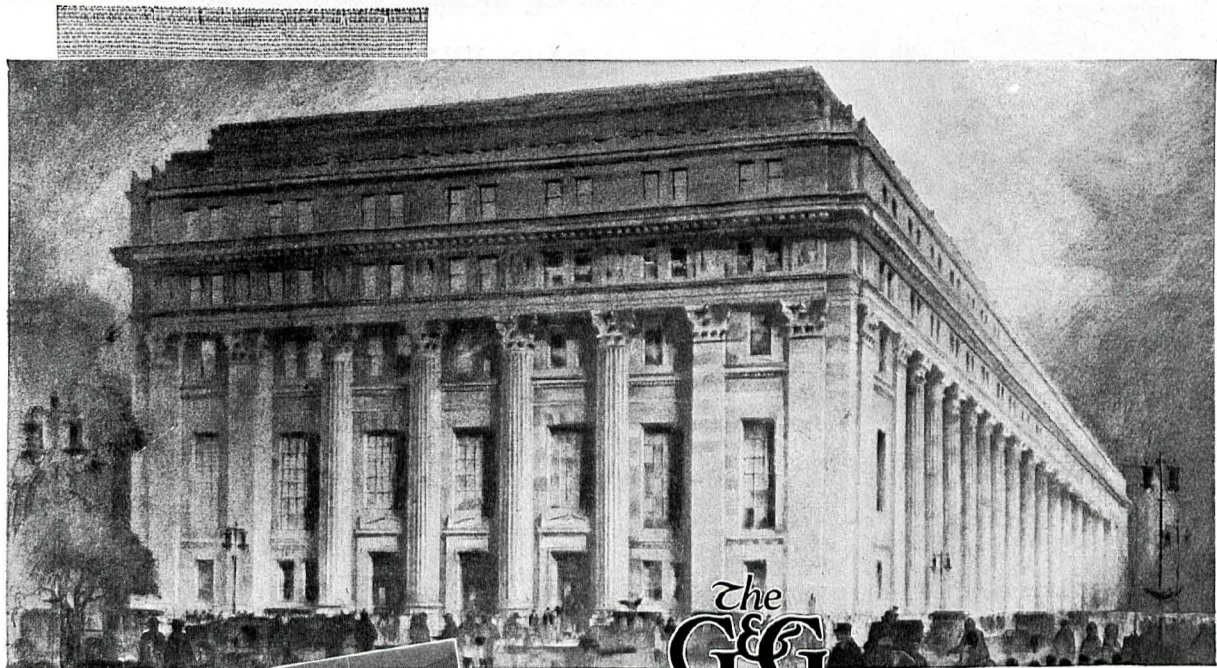
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Catalog in Sweet's Arch't. Cat., 23rd Ed., pp. D3729-37  
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Catalog in Sweet's Arch't. Cat., 24th Ed., pp. D5113-15  
Catalog in Specification Data, 1929 Ed., pp. 228-229

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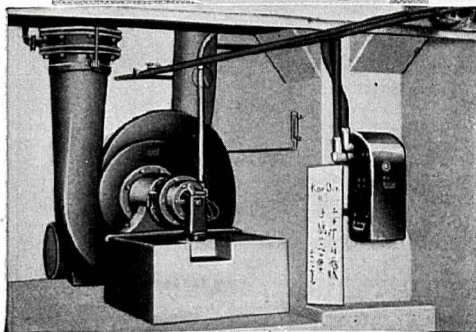
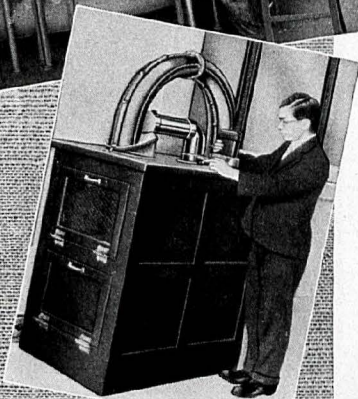
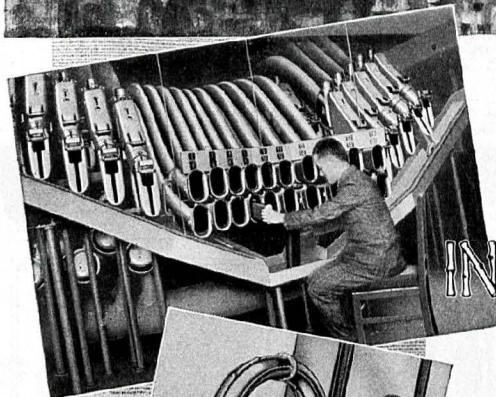
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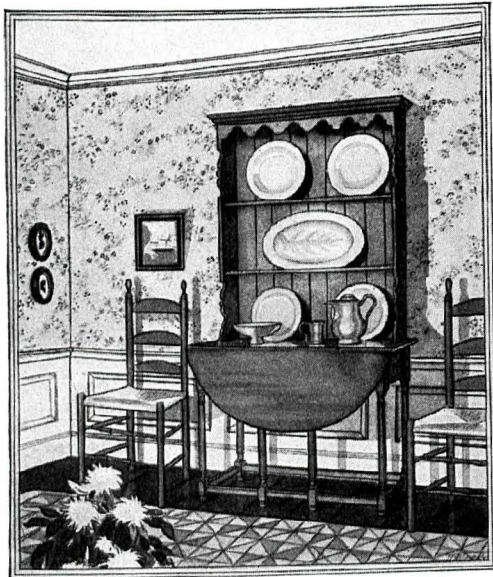
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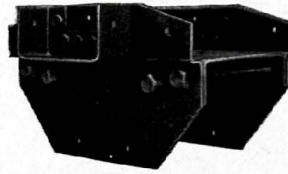
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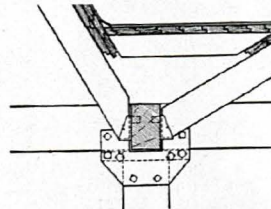
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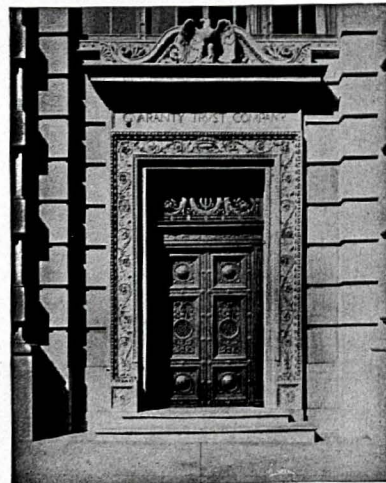
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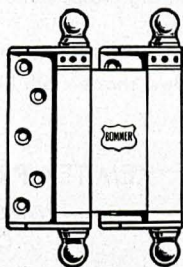
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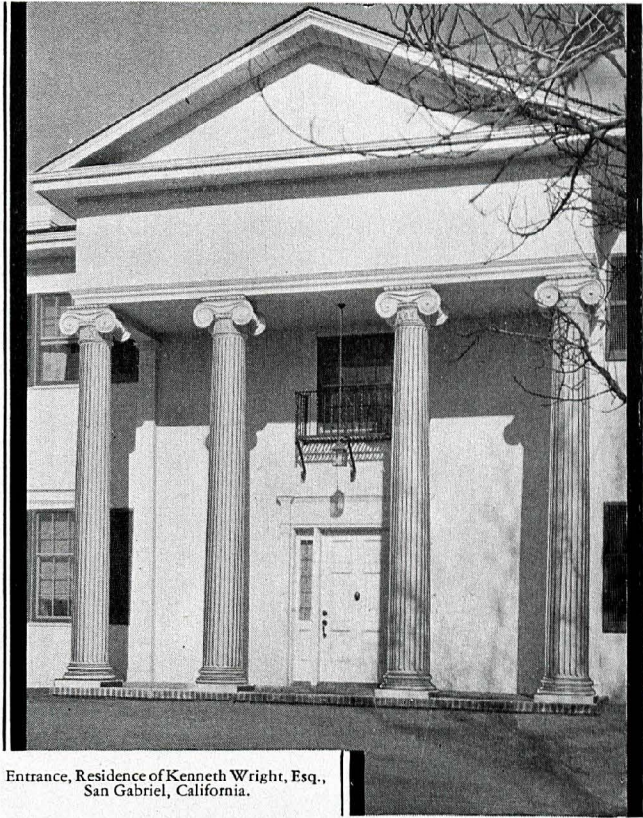
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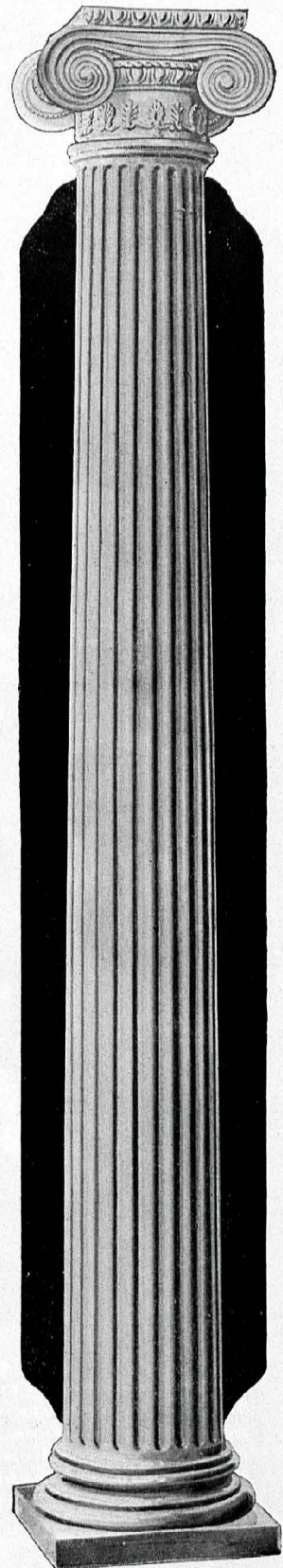
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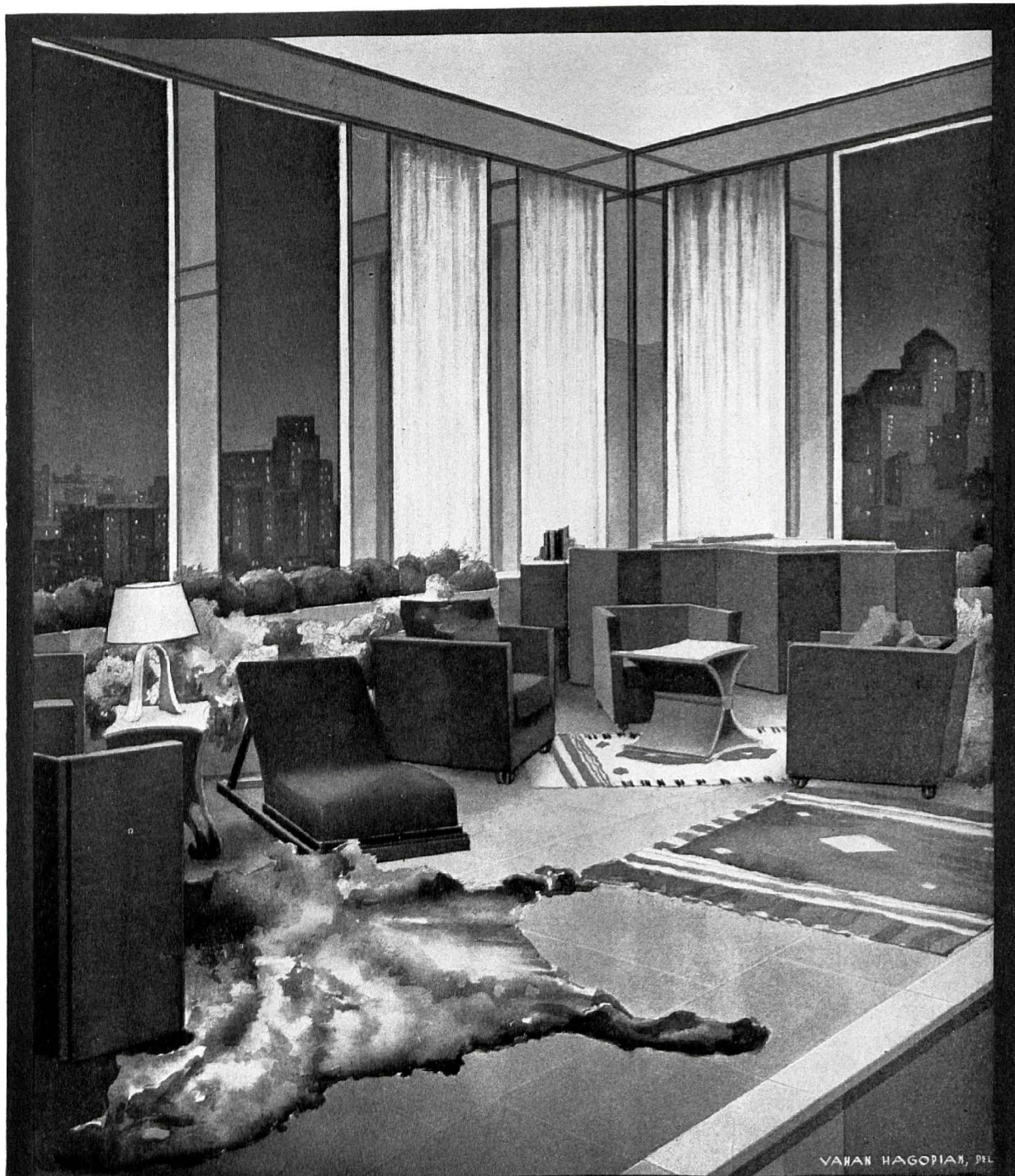
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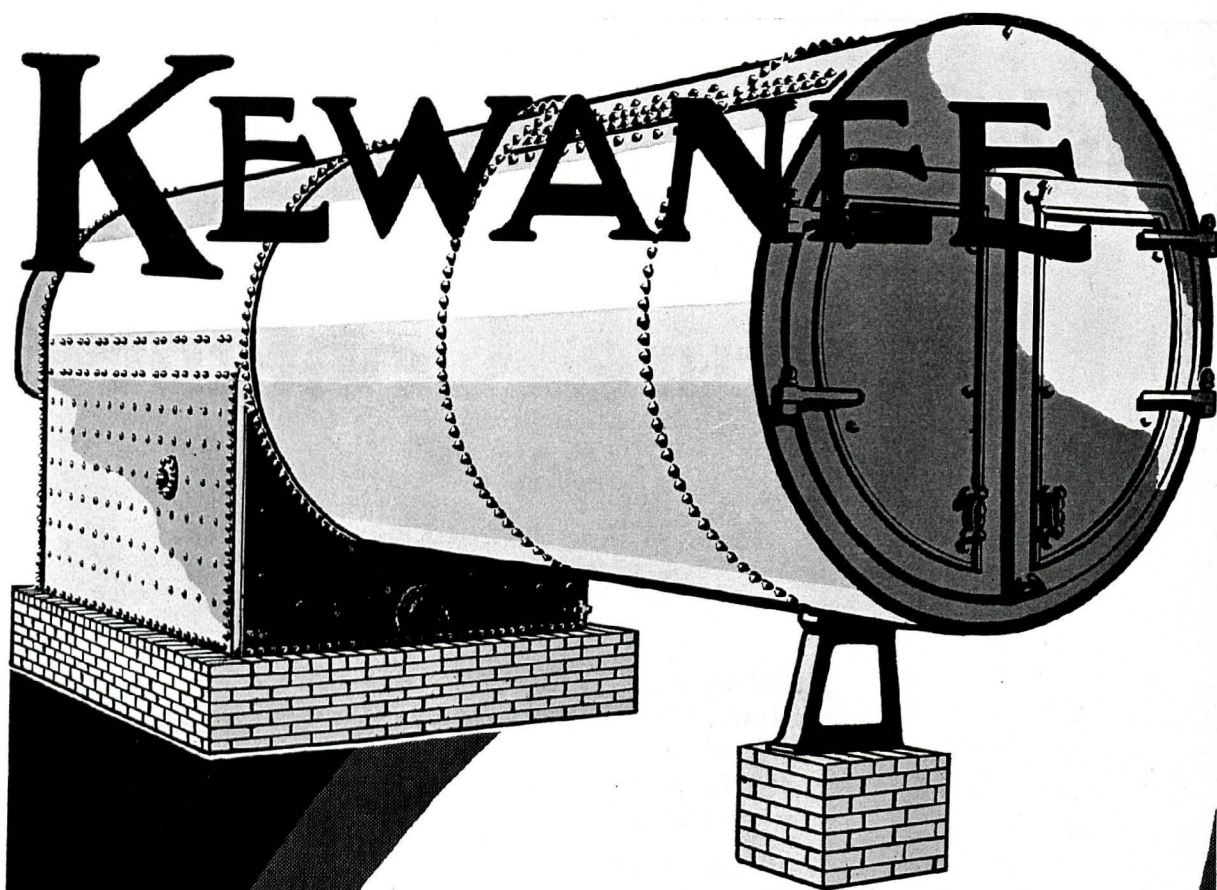
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An Illustrated Monthly JOURNAL for the  
DRAFTING ROOM Edited by RUSSELL F. WHITEHEAD

KENNETH REID & E. L. CLEAVER Published by THE PENCIL POINTS PRESS, INC.  
Ralph Reinhold, President, L. F. Nellis, Vice-President, William V. Montgomery, Secretary



## PUBLICITY AGAIN

THE ILLINOIS SOCIETY of Architects (Hats off to it for its progressiveness!) has sent a message to its members as follows:

"Dear Member: You will remember what Mark Twain said about the weather—everyone forever grumbling about it, but he'd never seen anyone *do* anything about it. And, for years, we've been complaining about the ignorance of the public—how little they understand about the need and the value of architectural service, etc., etc. But no one, up to the present, has done very much about it.

"Now the Illinois Society of Architects has launched a carefully planned, state-wide program of education.

"The enclosed folder, '*Just What Does an Architect Do for his Client?*', is the first of a series of informative pieces to be mailed to a selected list of 10,000 throughout the State of Illinois. [See pages 866 and 867 for reproduction of text of folder.]

"Each of these folders will set forth the major functions of an architect or tell of the specialized training, natural ability, integrity, and other qualities of a recognized architect. They will stress the fact that an architect is entitled to a fee commensurate with the value of the service he renders. . . ."

Here is an example for other architectural societies to follow. Some have already taken steps in the same direction, notably our friends in California. Others have plans under way. As Lancelot Sukert, President of the Michigan Society of

Architects, puts it in a recent weekly bulletin to his members, "The profession is in a most critical situation, perhaps the most critical in its history. The great majority of architects in this State are suffering from lack of work and are barely able to struggle along. . . . We are up against a big fight. This fight belongs to all architects."

He is right. Every architect, no matter how prosperous his practice may be, and every draftsman, no matter how secure his job, has something to gain by keeping the profession in general prosperous. Every architect can do his bit by seizing every opportunity to impress upon his community the value of architectural services. Every draftsman can help by adding his

voice wherever it may be heard in lay society. If the men of our profession are not willing to do this they are going to see their field more and more encroached upon by other factors in the building industry—engineering corporations with "architectural departments," building contractors with salaried designers, and real estate organizations offering architectural services gratis. These elements are all active—it is time for the architects to be active and we are glad to see the Illinois Society taking up the cudgels for the profession in such an energetic way.

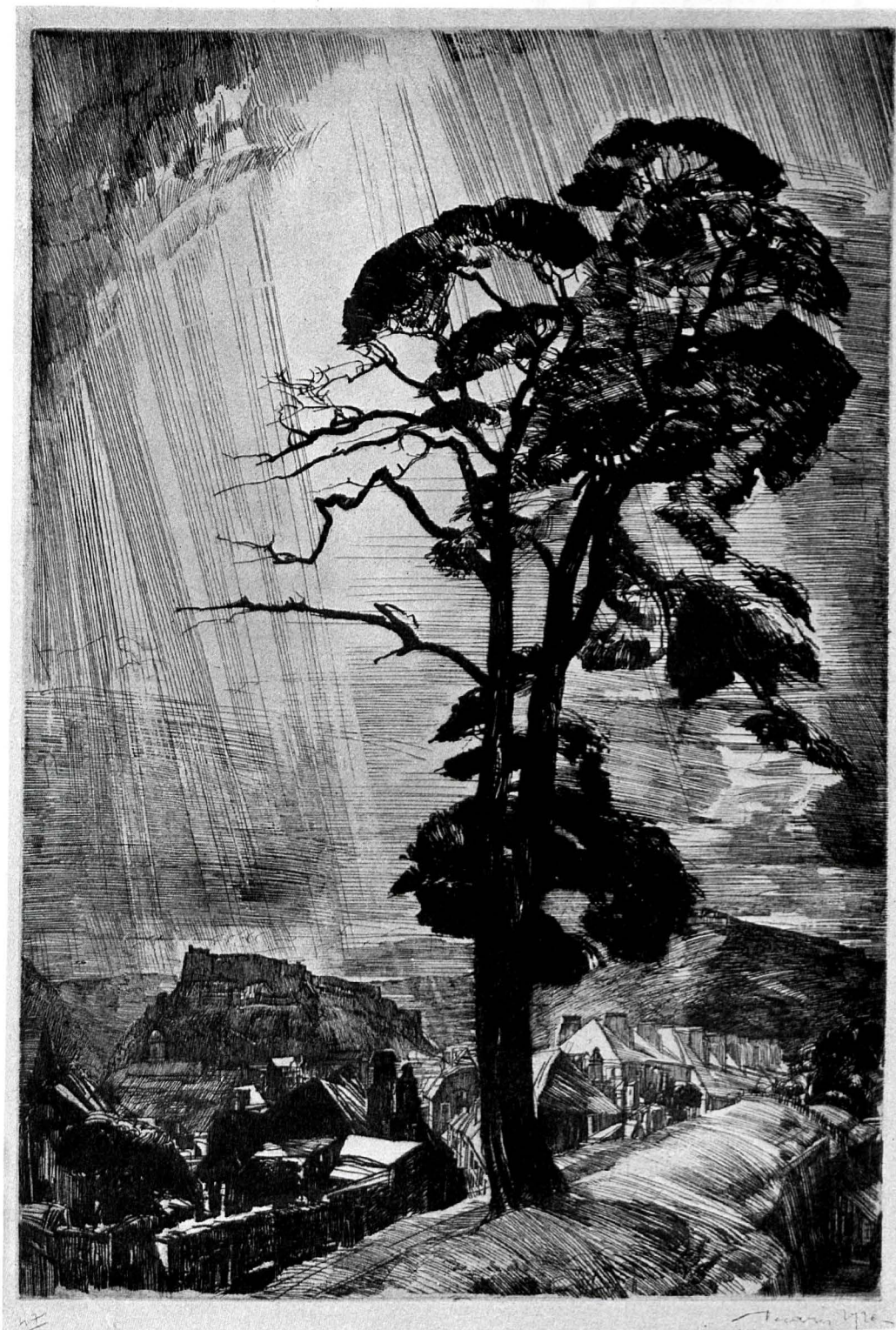
We understand that the whole subject of advertising architecture is to be freely discussed at the next A.I.A. Convention. May the discussion be stimulating and fruitful!

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"L'ARBRE—BESANÇON"—ETCHING BY DECARIS—SIZE OF ORIGINAL 17½" X 26¼"



# A BUILDING ON THE BOARD

A SELECTED GROUP OF DRAWINGS SHOWING THE PROGRESS  
FROM THE SKETCH TO THE FINISHED WORKING DRAWINGS  
OF THE GROSSE POINTE YACHT CLUB, ON LAKE ST. CLAIR

Henry and Richmond, Architects

EDITOR'S NOTE:—The drawings shown on this and the following pages show something of the development of the design of a large yacht club. The text, written by Ralph Coolidge Henry, of the firm responsible for the design, emphasizes the important features of the problem and its solution.

ALMOST MIDWAY between the westerly end of Lake Erie and the southerly end of Lake Huron lies Lake St. Clair, a beautiful sheet of water washing both the American and Canadian shores. It is in reality a very large fresh-water lake, among the largest in America, of such length and breadth that its opposite shores vanish beneath the horizon to any observer at the water's edge, although, by comparison with its great neighbors, Lakes Superior, Michigan, Huron, Erie, and Ontario, it is small indeed. Lake St. Clair is, nevertheless, the Mecca of a large and enthusiastic colony of amateur yachtsmen, and its broad surface provides almost ideal conditions for the lovers of all forms of water sports in summer and ice sports in winter.

Its broad outlet, the Detroit River, separates the thriving city of Detroit from the city of Windsor, in Canada; and carries an enormous volume of Great Lakes shipping to and from this mid-western metropolis.

The most desirable near suburbs of Detroit lie along the western shores of Lake St. Clair and here are many of the country homes of Detroit's prominent men. Some of these homes are delightful, set in grounds of enormous extent and great charm.

To the architectural imagination the natural setting and the immediate program of the yacht club problem were equally captivating. The outstanding characteristics of this region of the lake country are its apparently limitless extent of water surface, almost equally level and limitless terrain and a rich vegetation. It was at once apparent that the program demanded the informal and the picturesque in plan and that the composition required, for piquancy and flavor, some element of contrasting verticality in a region where all else is horizontal. The convincing first thought of an element to fulfill this function was of the campanile; why not one of slender proportions and marked height,

with a large bell in its lantern to strike the hours and half-hours of the dial-less ship's clock; why not one whose height would be doubled by its reflection in the mirror of the calm water surface; why not one with a modern aviation beacon at its apex?

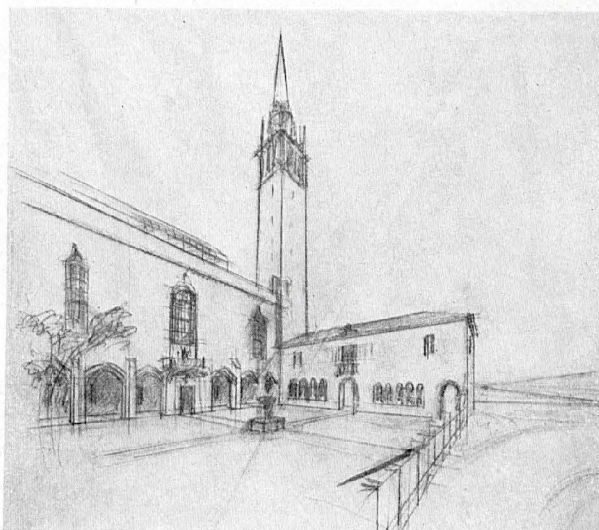
The Grosse Pointe Yacht Club property is a long thin slice of land, created by dredging and fill from the lake bottom, confined by the usual sheet piling and rip-rap, projecting easterly into the lake nearly a quarter of a mile and culminating in a peninsular site of several acres. This site is adjacent to large yacht harbors to the east and north created by confining the lake waters among surrounding pile-cappings of concrete, forming large quiet water areas of sufficient extent to permit the mooring of hundreds of yachts, large and small.

The footings of the yacht club building itself are likewise concrete cappings of white

oak piles. The superstructure is of terra cotta hollow tile to which, on the exterior, is applied a roughly-trowelled, warm-colored oriental stucco. The architectural trim is of stone. The roof is of variegated red-brown clay tile.

The attempt is here made to give the entire building a lighter and gayer atmosphere than typifies the more solidly mysterious prototypes of Venetian Romanesque and Gothic.

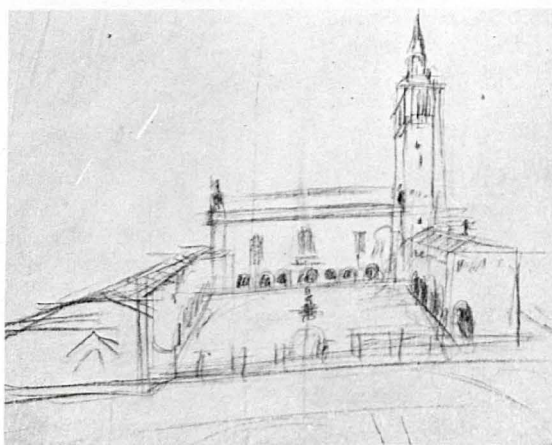
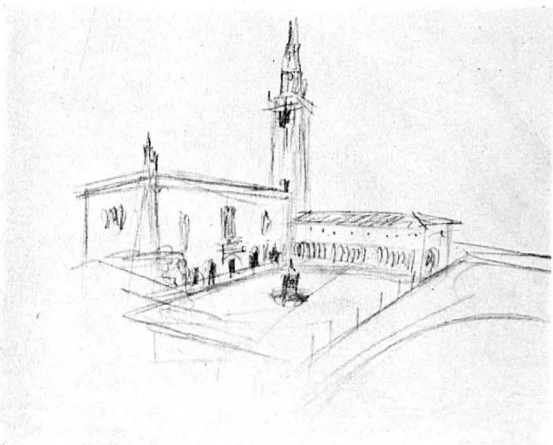
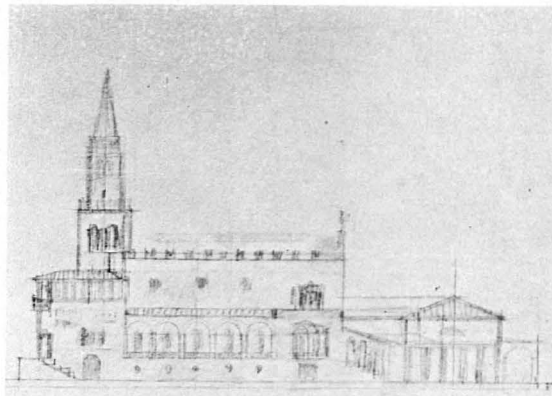
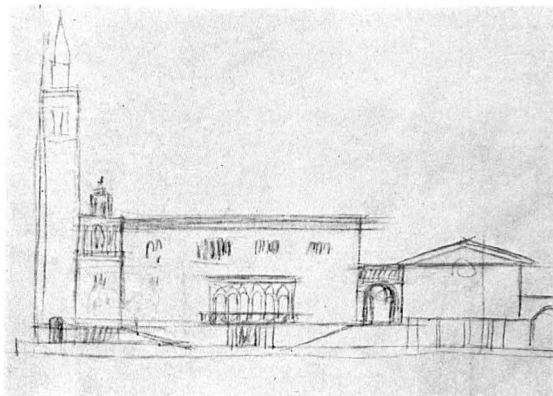
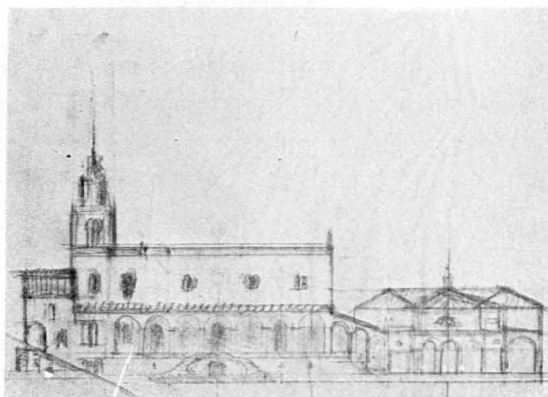
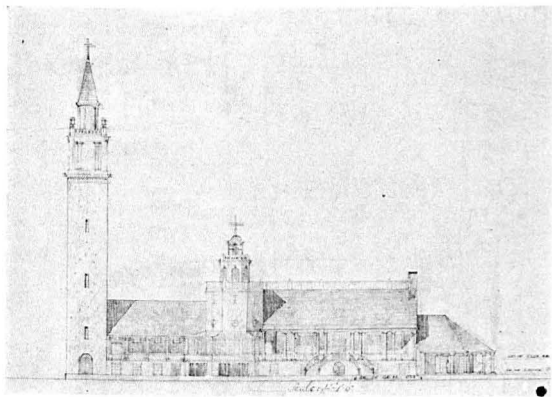
The main entrance to the building is through the west end of the northerly wing, approached by broad avenues next to ample spaces for the parking of cars in alcoves, so planted that one does not get the impression of vast areas of gravel, but rather the impression of a series of compartments that conceal the parked cars by promontories of trees and shrubs. This main entrance foyer is a broad straight thoroughfare looking easterly through a large picture window com-



ROUGH PERSPECTIVE STUDY



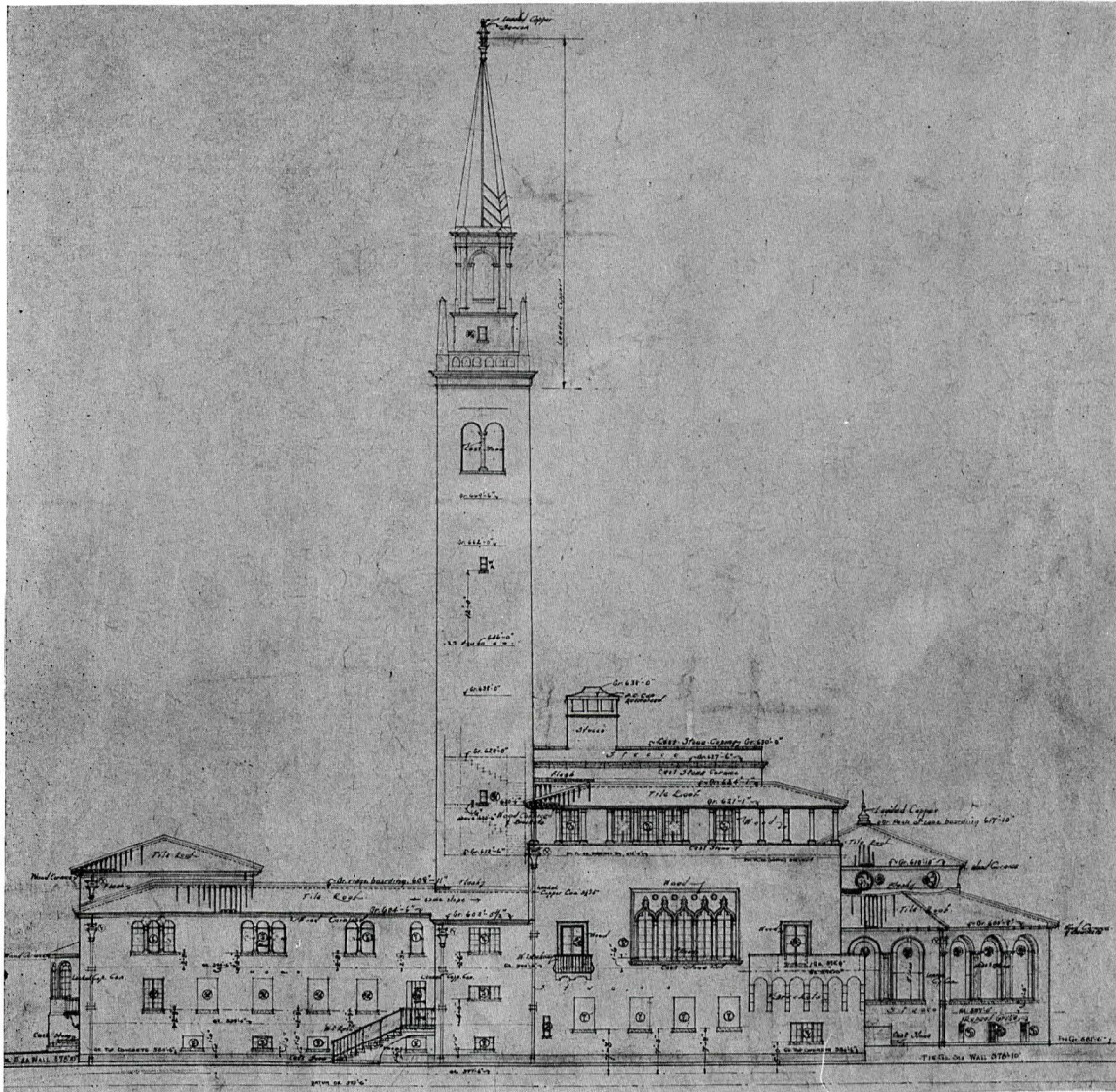
PENCIL POINTS FOR DECEMBER, 1929



A GROUP OF EARLY STUDIES FOR THE GROSSE POINTE YACHT CLUB  
HENRY AND RICHMOND, ARCHITECTS



## A BUILDING ON THE BOARD



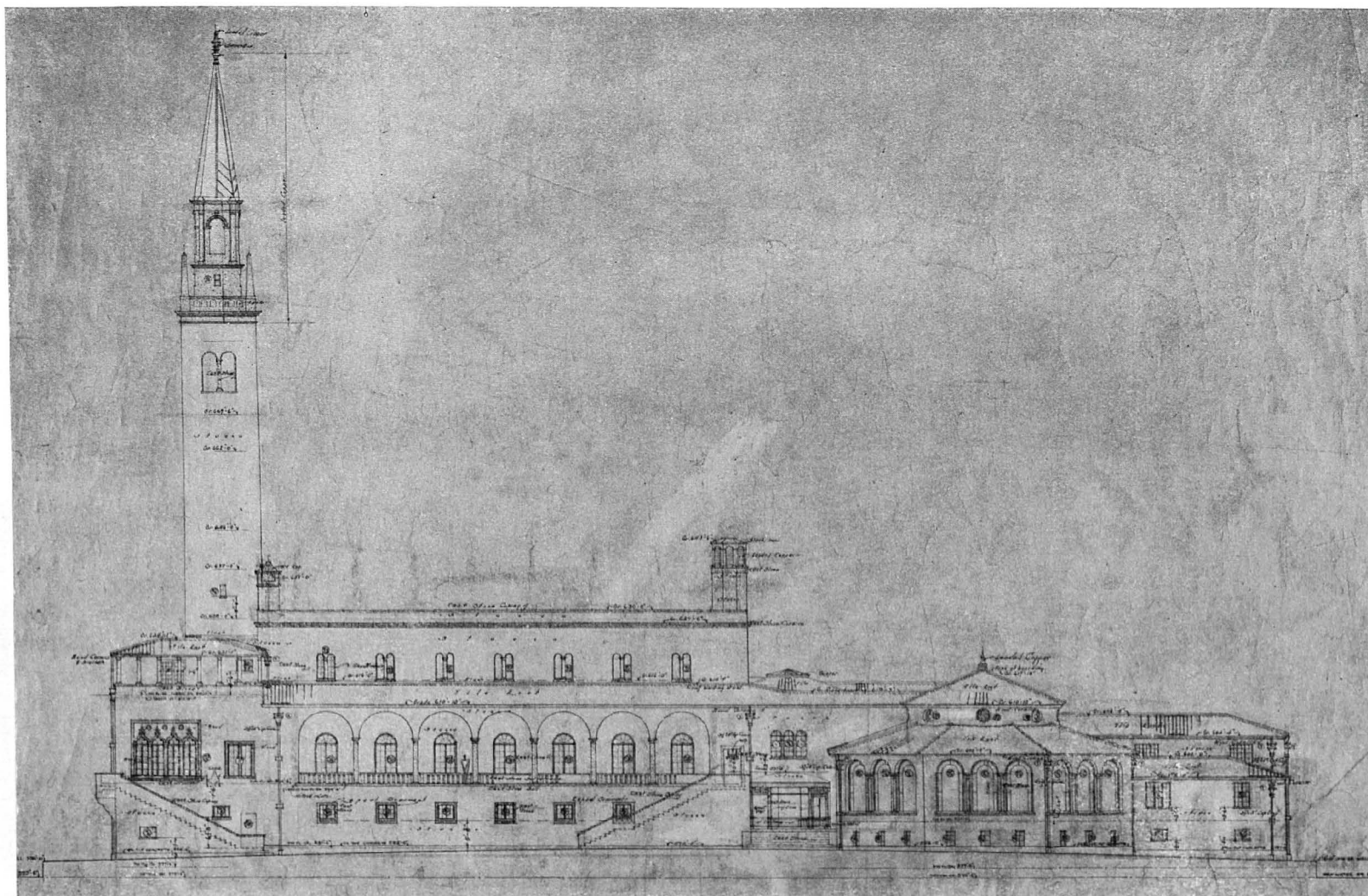
SOUTH ELEVATION—GROSSE POINTE YACHT CLUB, GROSSE POINTE SHORES, MICHIGAN

manding the yachting activities. The foyer is furnished with Italian cabinets of old brown wood, occasional Florentine busts and beautiful oriental rugs. Midway in this foyer is the focal rotunda of the composition from which a broad and easy stairway leads up to the main clubroom, the floor of which is raised a few feet only above the loggia level. From this rotunda, also, are the doors leading to the octagonal dining room, so placed in the composition of the plan as to release five of its sides for unobstructed view of the water. The central portion of the dining room is a vaulted clerestory supported on marble columns and decorated with frescoes of blue and old gold. Under normal circumstances this area would be reserved for dancing, but its other important function is to secure through the round windows of a conically-roofed clerestory, equally desirable light at the center of the room. The dining room will comfortably seat two hundred and fifty people. Directly connected with it

is the kitchen and serving room lighted and ventilated through a monitor as well as through lateral windows. At the west end of this serving room is the men's restaurant designed to accommodate members of the Club who may wish to have light refreshments without bothering with gold-plated clothes and low-neck shoes. The private dining-room wing and boatmen's service and locker rooms are also found at this northerly end of the plan.

The main clubroom, which is the dominating mass of the structure, is a room 40' x 80' in plan, approximately 30' high. The trim is of Kasota stone, the walls of sand-colored rough texture plaster, the floor a smoothly polished oak surface for dancing when occasion warrants, and the ceiling timbered with girders, beams, and decorated plaster caissons of a rich weathered brown. The seven arched French windows to the east lead directly to the open loggia, and on the westerly side are three high Gothic bays



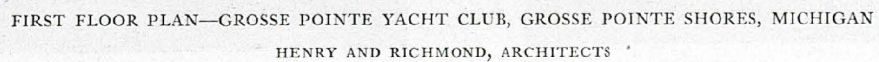


EAST ELEVATION—GROSSE POINTE YACHT CLUB, GROSSE POINTE SHORES, MICHIGAN

HENRY AND RICHMOND, ARCHITECTS

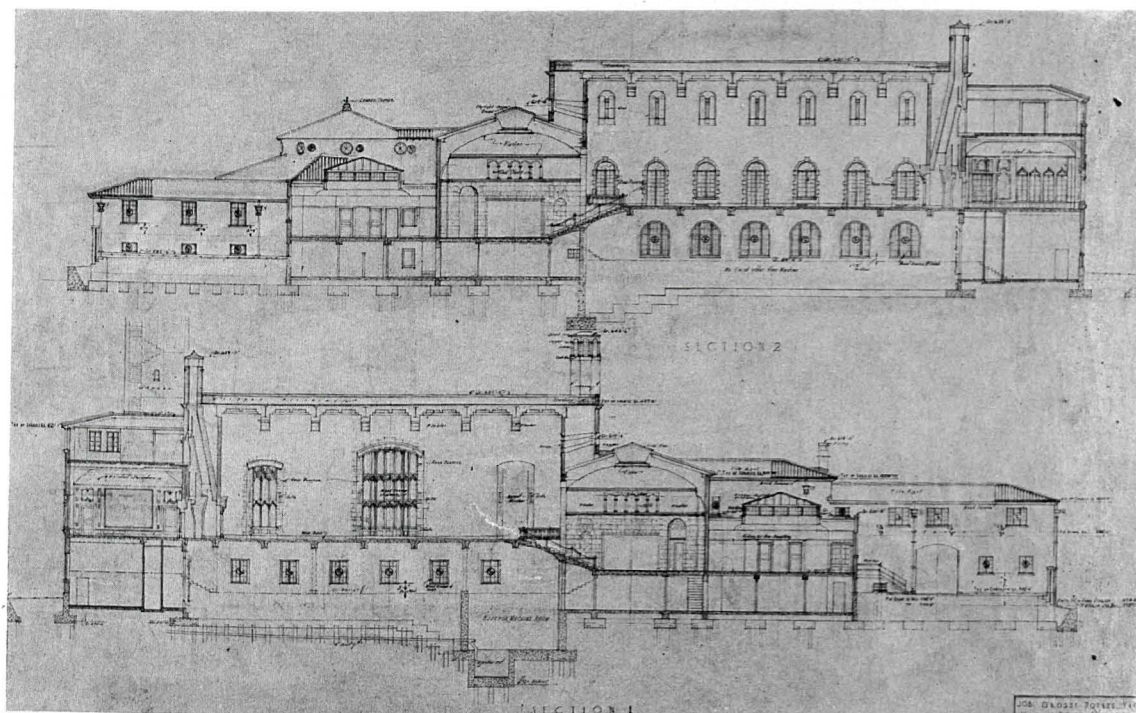


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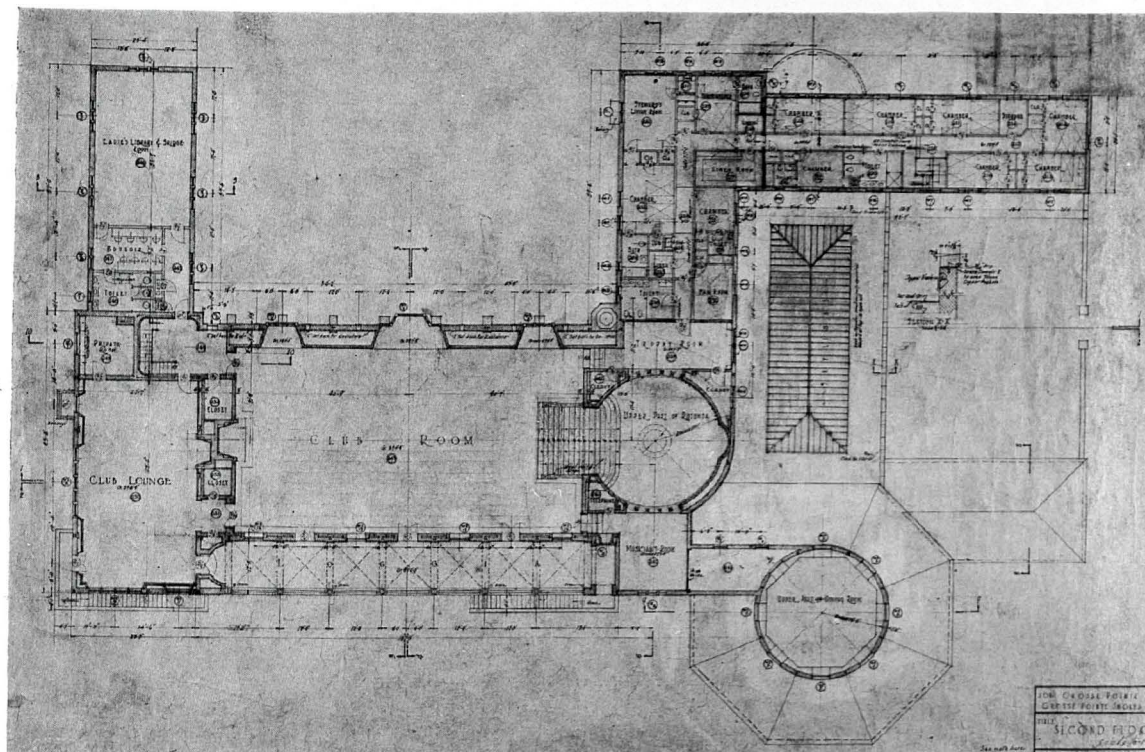




PENCIL POINTS FOR DECEMBER, 1929



SECTIONS—GROSSE POINTE YACHT CLUB, GROSSE POINTE SHORES, MICHIGAN

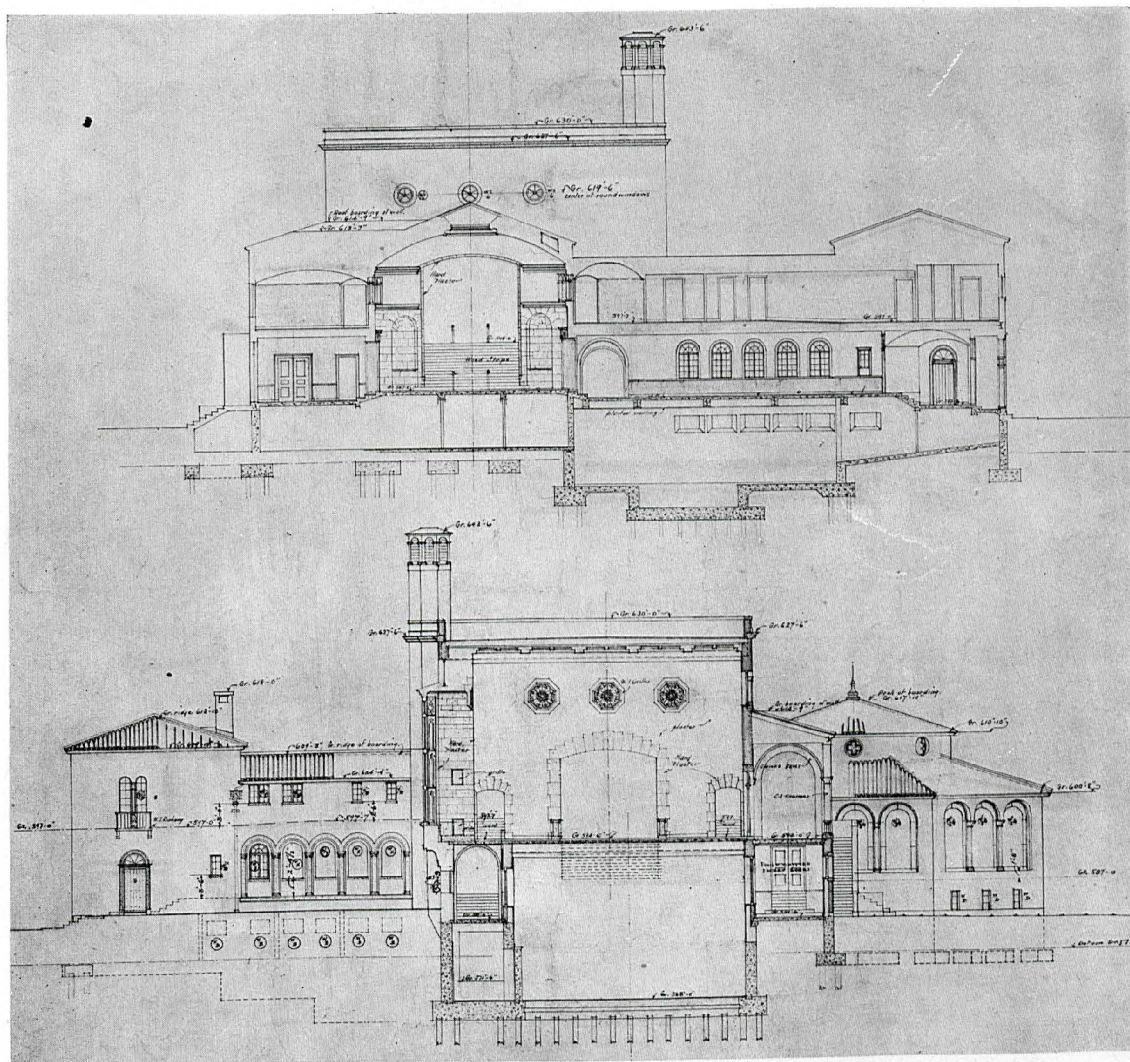


SECOND FLOOR PLAN—GROSSE POINTE YACHT CLUB, GROSSE POINTE SHORES, MICHIGAN

HENRY AND RICHMOND, ARCHITECTS



## A BUILDING ON THE BOARD



SECTIONS—GROSSE POINTE YACHT CLUB, GROSSE POINTE SHORES, MICHIGAN

overlooking the Italian garden and commanding the western view. The lighting fixtures in this room and, indeed, throughout the Clubhouse are for the most part wrought iron made in Italy.

Over the Kasota stone mantel of the fireplace, at the southerly end of the room, hangs an oil painting by Frank Vining Smith, a Boston marine painter. The picture, a canvas of approximately 10' x 20', is the gift of Commodore John H. French of the Club, and represents the race among the *Sea Witch*, *The Raven*, and *The Typhoon* which was sailed from New York to San Francisco in 1851.

Joining the clubroom is a large club lounge, a dressy and colorful room to which the ladies' wing, containing a library and a room for bridge whist, directly connects. Above the lounge on the third floor is the directors' room, a cozy apartment from which an open loggia commands the yachting from the vantage point of isolation. The flat awning covered open roof nearby furnishes opportunities for club members and their guests to witness the racing.

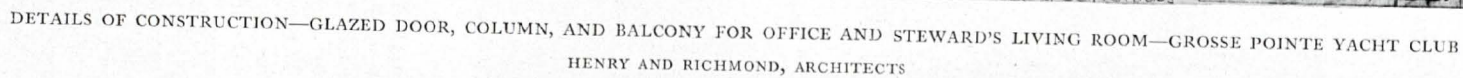
A staircase from this level leads to the top of the Campanile, in the lantern of which a five-thousand-pound American bell strikes the hours and half-hours in the appropriate manner of the ship's clock.

On the ground floor adjoining the main entrance foyer, under the main clubroom, is a modern swimming pool compartment with its solarium and a locker-room and bathroom wing. The solarium is so related to the swimming room chamber itself that all the swimming may be viewed in temperature conditions comfortable for those in street clothes, the dividing partition between the two being glazed and insulated so that the bathers themselves may have a higher temperature and humidity. It is not possible to enter the swimming pool compartment in street costume, and all precautions have been taken to maintain those other sanitary conditions which are the attributes of all up-to-date swimming pool equipment.

The architects' plans were started in the spring of 1927 and on the fourth of July of this year the Clubhouse was formally opened.

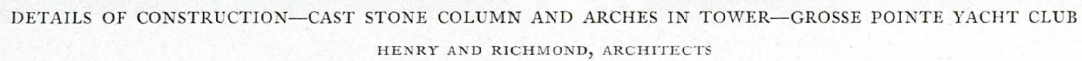


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## [ 837 ]

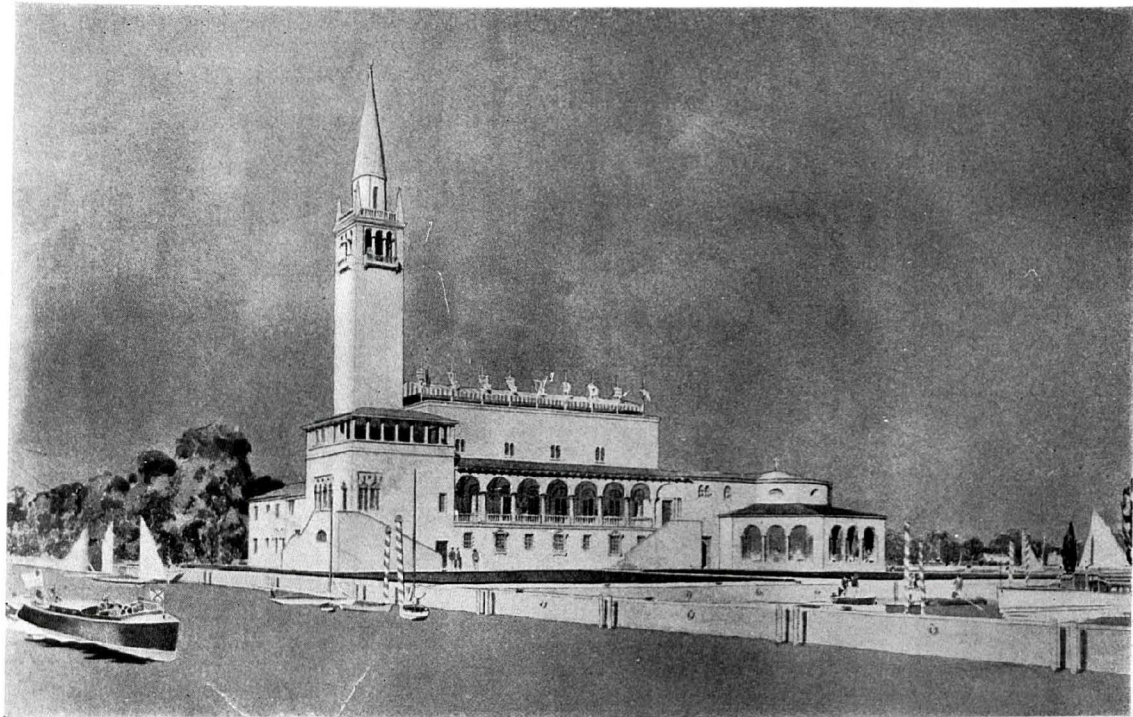


HENRY AND RICHMOND, ARCHITECTS





WATER COLOR SKETCH OF INTERIOR OF ONE OF THE LARGE CLUB ROOMS



FROM A WATER COLOR OF THE LAKE FRONT ELEVATION  
GROSSE POINTE YACHT CLUB, GROSSE POINTE SHORES, MICHIGAN, HENRY AND RICHMOND, ARCHITECTS



# THE GEOMETRY OF ARCHITECTURAL DRAFTING

## PART 5—PROJECTION OF INHERENT OBLIQUES

By Ernest Irving Freese

EDITOR'S NOTE:—This article, which is copyrighted, 1929, by the author, continues the series begun in the August issue.

**KILLING TWO BIRDS** with one stone conserves ammunition and extracts applause from the multitude—but, if perchance it requires *two stones to bring down the one bird*, the bird will herein be bagged, regardless! For the particular winged biped here alluded to is the prerequisite *entrée* of the geometric banquet about to be served. It's an elusive bird. Has a sentence for a name. It's the "*Technique of Linear Projection*"—aimed at in Part 4 with the straight-shooting triangles and the T-square. Dress for dinner!

*"Place the pencil at the one given point. Move the projecting straightedge into contact with the pencil. Move the pencil along the edge of the instrument."*

The above synopsis, quoted from Part 4, outlines the general *modus operandi* of projecting any *inherent* line on the board. It is a compendium of the manifold technique of speed-and-precision heretofore completely developed and detailed both in respect to the dextrous handling of the pencil and the ambidextrous management of the sliding instruments.

Inherent obliques, like verticals, are established in *direction* by the existing lines of the triangles. The technical details of projection in each case are, therefore, substantially identical. Hence, where the explicit process is not herein *fully* portrayed, either graphically or in the text, it is because the same is analogous to one already adequately set forth in Part 4.

Inclined lines may be projected in eleven differing directions by use of the triangles operating in conjunction with the T-square, employing the former either singly or in pairs as the case may demand. These eleven obliques, and the requisite placement and manipulation of the triangles to produce them, have been charted in Part 3 at Figure 16. Five of them—the 22½, 30, 45, 60, and 67½-degree lines are produced with the triangles used singly. Six of them—the 7½, 15, 37½, 52½, 75, and 82½-degree lines—require two triangles. Under one certain extreme condition, the 7½, 15, and 37½-degree lines require a three-triangle set-up, as will be shown later.

In naming an oblique, the angle of obliquity, regardless of the relation of the so named line to other obliques or to the vertical, will always be referred to the horizontal as a base. For instance, in Figure 37, herewith, all coordinate lines of the oblique wings would be designated as 45-degree lines, although one set lies at 90 degrees to the other. The octagonal diagonals are here 22½ and 67½-degree lines, respectively, but each is perpendicular to the other. The lines of the Lounge fireplace linings are

60-degree lines, whereas, in the 45-degree wing of the Dining Room, they become 15 and 75-degree lines, but in both cases they make the same 60-degree angle with the wall. This reference of all angular lines to the horizontal, for the purpose of designation only, avoids confusion with relative angular *measurement*, clarifies and shortens explanation, and immediately brings to mind a mental picture of the instrumental combination required to materialize the oblique so named. Moreover, where an inherent oblique is mentioned or called for, it will be designated by the lesser of the two angles required to total 180 degrees: in effect, then, an *obtuse* oblique is non-existent. If, say, it lies at an angle of 120 degrees to the horizontal, it remains, so far as the actual linear projection of the *line* is concerned, an oblique of 180 degrees minus 120 degrees, which is 60 degrees, or the supplement of the obtuse *angle*. Any oblique is common to *two* angles, as the diagram of Figure 37 makes clear.

So far, so good. You are now ready to tackle the "obliques." And, incidentally, you will learn some more "tricks of triangulation" as well as some more expeditious geometry of the drafting-room. In this Part, as in the foregoing Parts, any contingent geometry encountered in the laying out of the examples chosen for illustration will be made plain, forthwith, irrespective of the question as to whether or not it is particularly pertinent to the subject under discussion. In this way, by the time the more involved geometric problems are dealt with, you will have had not only a thorough training in, or knowledge of, manipulation and technique, but also will have accumulated a practical and applicable store of information relative to geometrical construction in general. No matter how "simple" a problem may appear, you may, nevertheless, herein find a way of *executing* it that saves one or more shifts of the instruments and, hence, *saves time*. Most anyone can, say, lay out an octagon. But who knows the *quickest* way of doing it *without sacrificing accuracy*? That's the point!

Now take a good look at Figure 37. There are several ways of laying out this common type of plan. It all depends on the starting-point. For the purpose of illustrating the technique of projecting inherent obliques, assume that the west corner, *a*, of the kitchen wing has first been fixed on the board by the laying down of the intersecting lines of the two walls. The known width of this wing is then laid off from *a* to *b*, thus fixing the south corner, *b*, as a given point from which the long 45-degree line *bc* must be projected in order to locate accurately thereon the essen-



PENCIL POINTS FOR DECEMBER, 1929

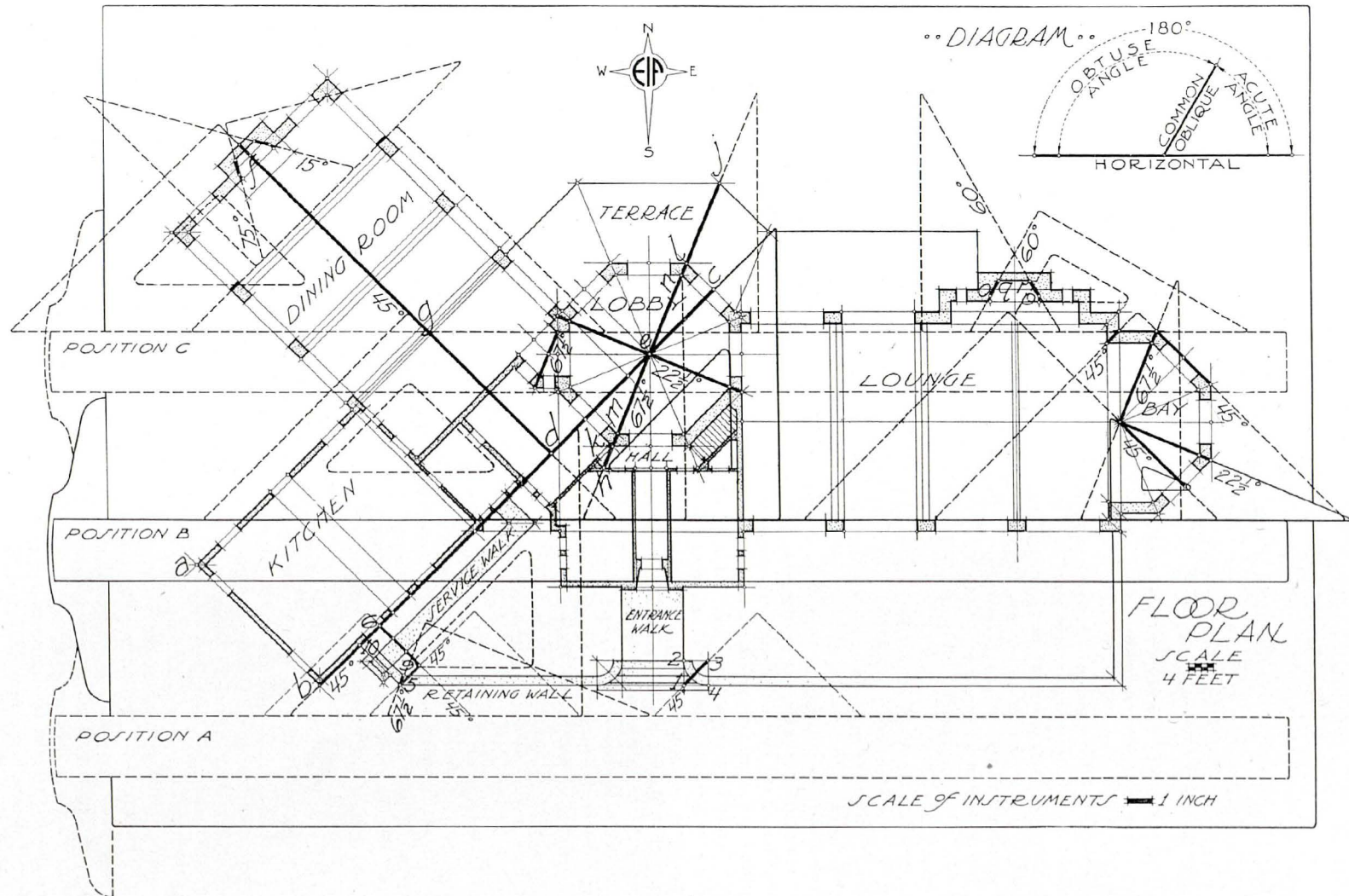


FIGURE 37—INHERENT OBLIQUES IN PLAN LAYOUT



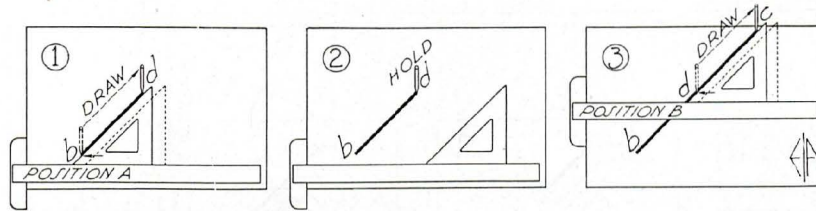


FIGURE 38—UPWARD PROJECTION ALONG LIGHTED EDGES

tial layout-points *d* and *e* of the Dining Room axis and the center of the Lobby octagon, respectively. This is the simplest case of oblique linear projection, the process of which has, in Figure 38, been "slowed down" to three stages and thereby made plain without further verbal ado—assuming, of course, that the knowledge heretofore promulgated in Part 4 has been duly assimilated. The only difference between this and the analogous vertical projection minutely described and detailed in Part 4 (Figure 29) is that, after projecting the initial portion of the line, say *bd*, the triangle must be moved far enough to the right to come within convenient reach of the fingers when the combination is slid upward to position "B" for projecting the prolonged portion, *dc*, of the required line *bc*, as shown. The process shown in Figure 38 is identical for all obliques procured with the triangles used singly when the given point occurs at the lower end of the line needed. In all these cases the pencil is drawn upward—away from the given point.

Now assume that the conditions are reversed, that is, that the required line must, of necessity, be projected from a given point, *c*, occurring at its upper extremity instead of at its lower one. The conditions are reversed, but the process is *not*. The process is outlined in the six-stage diagram of Figure 39, herewith, and is substantially the same as the one given in the nine-exposure reel of Figure 30, Part 4, for verticals. Note that the one given point is first projected downward, but that the required line is drawn upward—toward the given or shifted point.

In the two cases given in Figures 38 and 39, the lines have been drawn along the lighted edges of the triangles—assuming the light as coming from the left. However, unlike verticals, it is commonly necessary to draw obliques along the unlighted edges of the triangles, that is, along their right-hand ruling edges. It is to be noted, though, that the precise technique herein and heretofore explained, does not require that the line be seen as it is drawn, for the previously-placed pencil stops the projecting instrument at the exact point given. The line can then be drawn in the dark—or with your eyes shut—if you are inclined that way!

The two diagrams sub-

mitted in Figures 40 and 41 indicate clearly the process of projecting obliques along the unlighted edges of the instruments. In Figure 40, for instance, it is required to project a necessary line from the one given point, *f*, fixed at its upper extremity. The line *fd* in Figure 37, which is the axis of the Dining Room wing, would be such a line. Or, if the one given point is *d*, occurring at its lower extremity—as it is more apt to occur—then the required line is projected as per the six stages outlined in Figure 41. In these cases, the actual required lines are drawn downward: in the first instance directly, and in the second instance by first projecting the given point progressively upward. Here, as in all cases, the manipulation and technique operate to avoid the condition of having to push the pencil by rendering it easy and expeditious to drag it instead. The euphonious term "pencil pusher" is not a moniker to brag about. No draftsman skilled in the art of precise rendering ever pushes a pencil—he drags it.

It is quite a usual thing both in general laying out and in straight geometrical constructions, that required obliques must be projected through a given or fixed point instead of from it. In Figure 37, for example, suppose the center, *e*, of the octagonal Lobby is first fixed on the board by laying down the vertical and horizontal center lines of the octagon—a perfectly logical thing to do in this case, since this octagon is, in reality, the nucleus of the entire plan. It then becomes incumbent to project the required line *bc* through the one given point *e*. In all such cases bring the projecting triangle into touch with the pencil previously placed at the one given point. Then shift the pencil to that extremity of the triangle from whence the required line, or that portion of it within reach, can conveniently be drawn by dragging the pencil to the other extremity. In the case cited, the pencil would be shifted to, say, the vicinity of the point *d*, and the line would then be drawn from *d* to *c* through the one given point *e*. If an extension

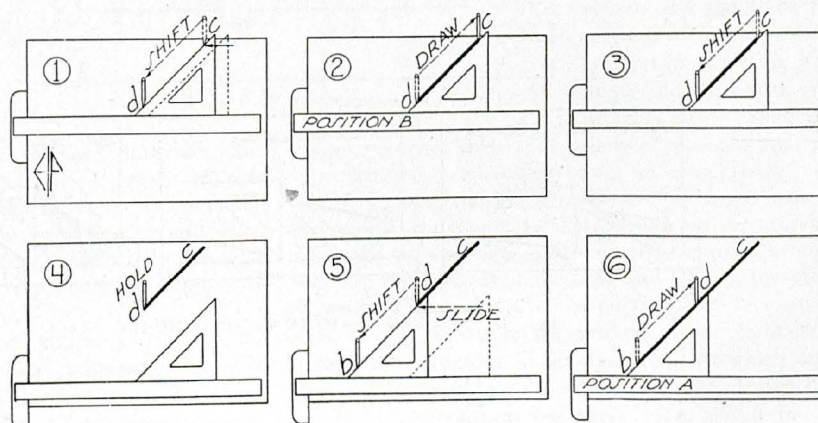


FIGURE 39—DOWNWARD PROJECTION ALONG LIGHTED EDGES



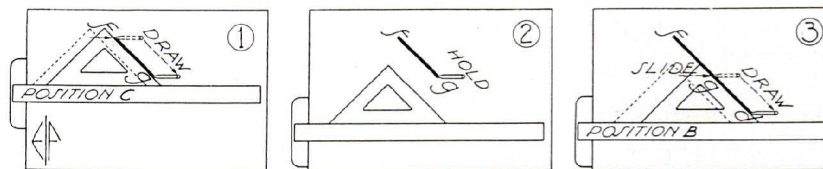


FIGURE 40—DOWNWARD PROJECTION ALONG UNLIGHTED EDGES

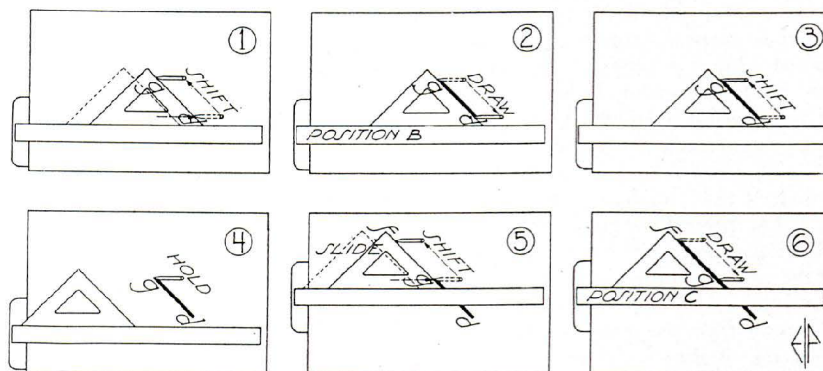


FIGURE 41—UPWARD PROJECTION ALONG UNLIGHTED EDGES

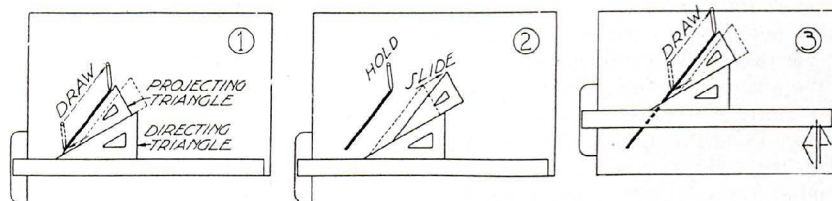


FIGURE 42—TYPICAL PROJECTION OF COMBINATION OBLIQUES

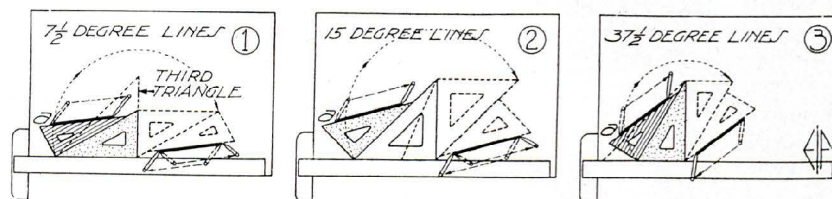


FIGURE 43—SOME TIGHT PINCHES



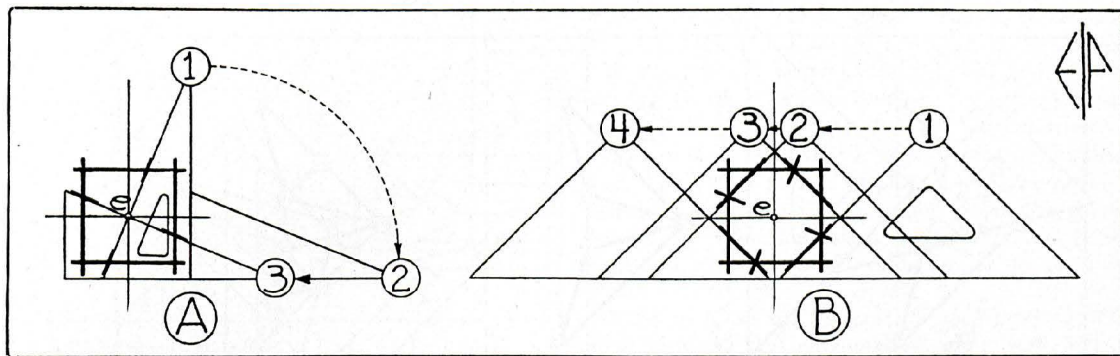


FIGURE 44—"CUTTING THE CORNERS"

of the initial line is required, the pencil would again be shifted along the edge of the unmoved instrument to point *d*, or thereabouts, and, while there held, the instrumental combination moved downward to position "A" so as to accommodate the required extension which latter would then be projected by a repetition of the initial process.

Another typical case of two-way projection is shown in Figure 37, where the  $67\frac{1}{2}$ -degree line, *h<sub>j</sub>*, is projected through the same given center, *e*, of the octagon. This useful oblique, where it crosses the prolonged horizontal wall lines of the octagon, locates at once the points *k* and *l*, as well as the points *h*, *m*, and *n* of the paralleling wall lines and the point *j* marking the break in the terrace.

In Figure 42 is diagrammed the projection and extension of a  $52\frac{1}{2}$ -degree line which dictates the typical procedure for all obliques producible by a *two-triangle* combination. In these cases the "projecting" triangle is operated by one or more fingers of the hand which, at the same time, is holding the "directing" triangle and the T-square in firm conjunction. Otherwise, the technique and manipulation for all such combination lines, and for any other position of them on the board, is essentially the same as for lines drawn in corresponding positions with the *single* triangles.

Figure 43 depicts the one extreme position on the board in which a *three-triangle* combination must be resorted to, in conjunction with the T-square as a base, to produce  $7\frac{1}{2}$ , 15, and  $37\frac{1}{2}$ -degree lines. In each of these three separate cases the ordinary two-triangle

combination yielding these obliques is drawn in solid lines. It is thus made apparent that, due to the *big* end of the projecting triangle being lowermost, it becomes impossible to project these lines to or from a point, *a*, any closer to the lower edge of the board than indicated in the Figure. In any one of these cases, the ordinary two-triangle combination, if re-

volv'd through 180 degrees *without turning it over*, will, as indicated by the dotted lines in the Figure, bring the lower extremity of the required line closer to the lower edge of the board. A third triangle is then added to the revolved combination in order to maintain same in equilibrium with the T-square. The required line can then be drawn along the reversed ruling edge of the projecting triangle. This is a good one to "practice on." It will tax your manipulative ability to the fullest extent to hold the T-square and the third triangle in solid conjunction with the directing triangle and the board, and, at the same time, to

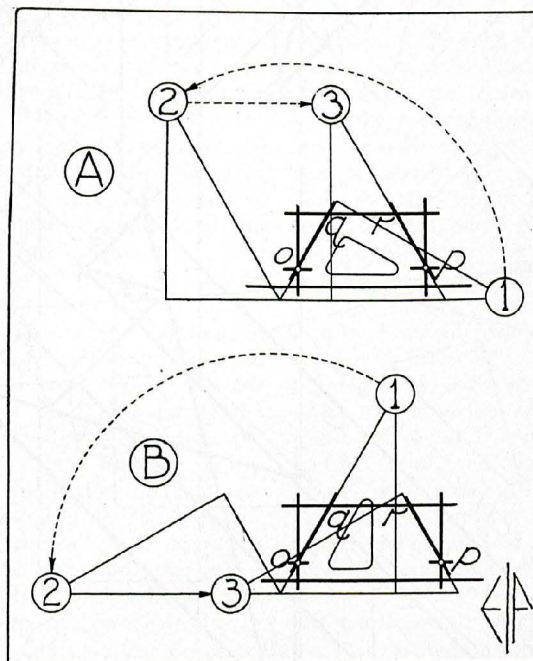


FIGURE 45—"JUST TURNING SIXTY"

maneuver the projecting triangle into position for drawing the needed line along its *lower* edge. In isolated cases, the above awkward situation can be averted by removing the T-square from interference with the two-triangle combination, meanwhile holding the directing triangle firm and sliding the other downward therealong to the point given. A case of this kind is shown in the extreme lower right-hand corner of Figure 47 at diagram "F," to which temporary reference may be made. The 15-degree line of the truss diagram has there been placed in the latter manner.



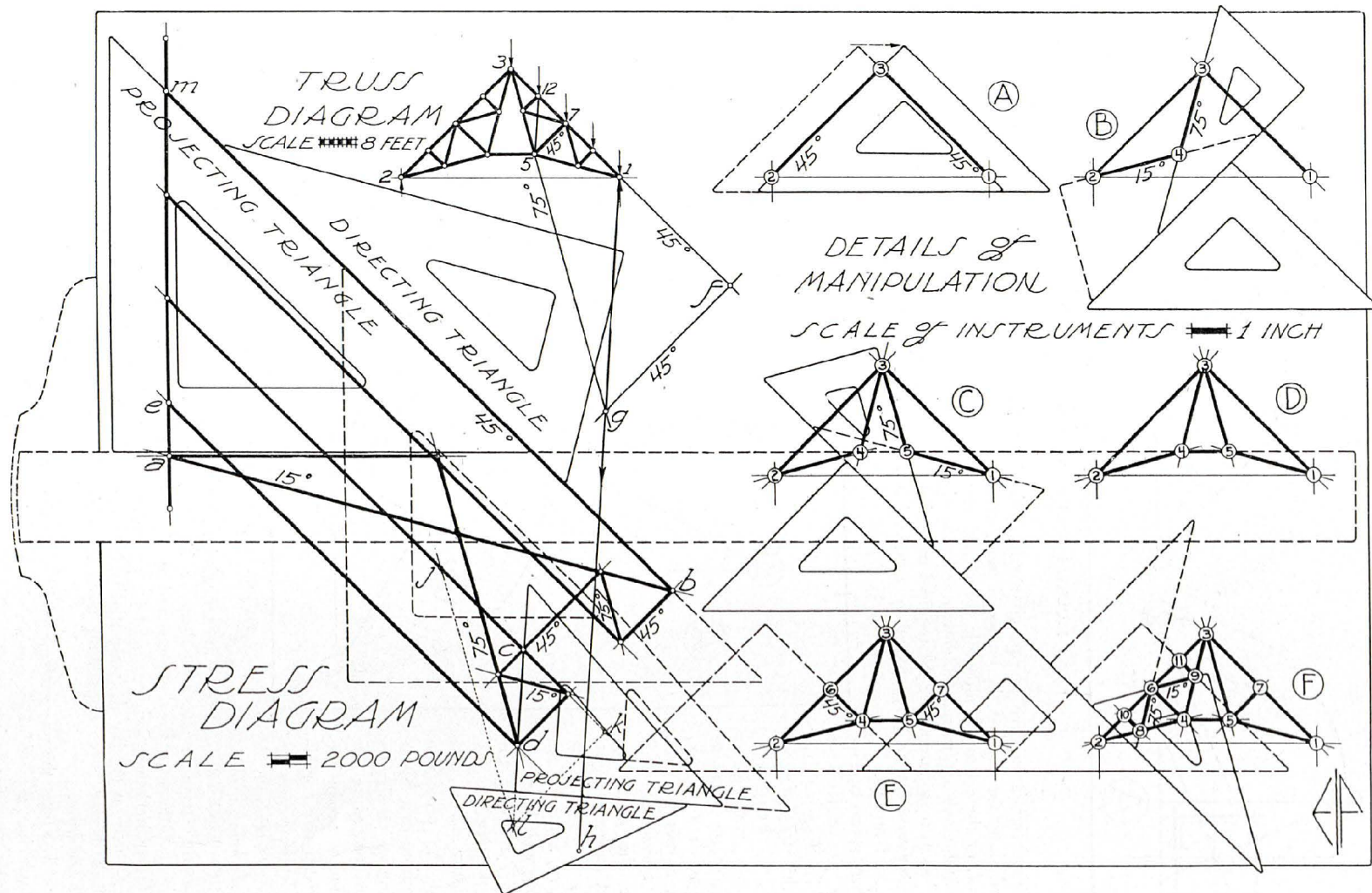


FIGURE 47—INHERENT OBLIQUES IN GRAPHIC STATICS



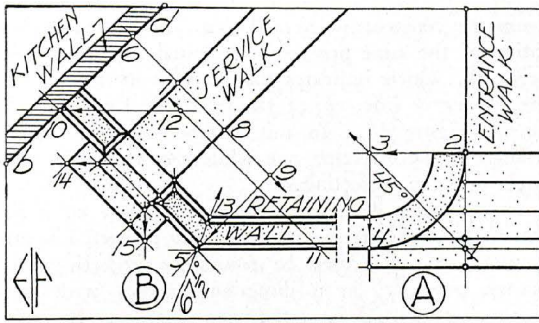


FIGURE 46—GEOMETRIC DETAIL OF FIGURE 37

The fastest method on record of laying out a full octagon is presented in Figure 44. First, as at "A" establish the square limits and cut these along the hypotenuse of the  $22\frac{1}{2}$ -degree triangle placed in the positions 1 and 3 as shown: the hypotenuse being aligned with center *e* by the pencil-point timely placed there for that purpose. Then, with the 45-degree triangle operating with its *hypotenuse* on the T-square, run in the four oblique sides as shown at "B." No motion has been lost. Every move produces a result. Two time-consuming factors have been eliminated: the *use of the compass* and the *picking up and turning over of the triangles*. Try it. Then lay out the half octagon of the Lounge Bay of Figure 37 in the same manner. Of course, the complete circumscribing rectangle need not be drawn—only the short lines marking the limits of the rectangular diameters, and of sufficient length to contain the horizontal and vertical sides of the half or full octagon, as the case may be. These lines will have been established in the initial stages of the plan layout.

Another manipulative expedient is indicated in Figure 45, which shows two methods of laying down convergent 60-degree lines *without turning the triangle over*. These apply to the laying out of the fireplace linings indicated on Figure 37, given the points *o* and *p* and the line of the fireback. They would apply equally well to the locating of the center of a 60-degree segmental arch, given the spring points. Observe, again, that this "simple" little operation *contains no lost motion*. Take note, also, that in the laying out of the linings of the Dining Room fireplace, the 60-degree triangle operates on the 45-degree edge of another instead of directly on the T-square, thus producing the 15 and 75-degree lines so marked in Figure 37.

In laying out the entrance walk and retaining wall shown in Figure 37, the points 1 and 2 thereby become fixed. The distance 1-2, then, establishes the outer radius of the curved buttress. The following problem then presents itself for speedy solution: "To draw a circular arc tangent to two given intersecting rectangular lines; one

point of tangency being given." Hence, as detailed at "A," Figure 46, project a 45-degree line from 1 to intercept a horizontal from 2, which yields the required center, 3, of the buttress. A vertical from 3 locates the point of tangency 4, if same is wanted, which, in this case, fixes the return point of the first riser. The above method employs the 45-degree line, instead of the scale or the compass, to *transfer measurement*. Ordinarily, this is a timesaver, and is of general application in all cases similar to the one given.

Now, to finish the "geometry" of Figure 37, the point 5, where the horizontal retaining wall breaks direction, must be located. Any of several conditions may be given, but the following "solution" will comprehend all of them. Now refer to detail "B," Figure 46. Project *any* line, say 6-9, perpendicular to *bd*. On this lay off the width 6-7 of the planting-space, then the width 7-8 of the service walk, then the distance 8-9 equal to 6-7. In other words, make the total distance 6-9 equal the required or desired length of the return wall. Then project 9 in a direction parallel with *bd*, to the front horizontal line of the wall—thus locating 5 where the wall changes direction. Or—an alternate method—project *any* line, 11-12, in a direction parallel with the required direction of the return wall, and make this distance equal the required length of the return. (In this case it is the same distance as 6-9 previously laid off.) It is now apparent that, since the line 11-12 here represents both the length and direction of the required line 10-5, all that has to be done is to project 12 horizontally to the line *bd*, which stops it at point 10, and then draw the required line 10-5 parallel with 12-11. This, in effect, moves the given line, 12-11, into the required position 10-5. Wherefore, another problem is "solved." You now know what it means "To draw a transversal of two given converging lines; the direction and intercepted length of the transversal being given." The lines *db* and 11-5 are the "two given converging lines." The "transversal" is the required line through the points 10 and 5: its given "direction and intercepted length" being represented by the line 12-11. In the particular case here illustrated, all of the obliques are 45-degree ones. The line 5-13 is therefore a  $67\frac{1}{2}$ -degree line which establishes the break of the other side of the wall as well as the breaks in the lines of the coping, that is, it is the *mitre line* of the two portions of the wall. Finally, note the use of the short horizontals and verticals for establishing the corner points 14 and 15 from which the first riser returns

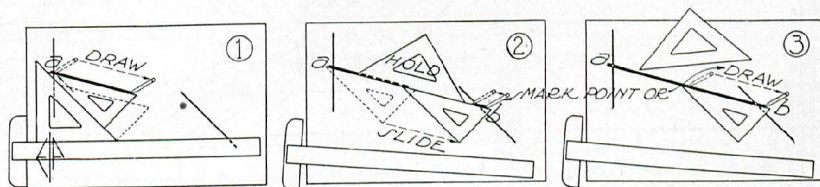


FIGURE 48—ALTERNATE METHOD OF PROLONGATION



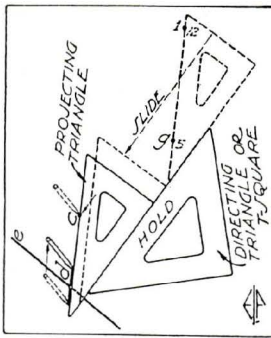


FIGURE 49

perpendicular to the wall. This is analogous to the same use of the 45-degree line already shown at detail "A," for transferring measurement.

In no branch of architectural drafting is there more call for precise linear projection than in the graphical analysis of roof trusses and other structural members. A typical case of this kind is illustrated in Figure 47. The lines are mostly "obliques" and, in the case shown—a common one—the obliques are inherent lines of the triangles. The truss diagram is here laid out by making but one measurement: the horizontal span, which fixes the points 1 and 2. The exact manipulation to produce all lines of this truss is fully detailed in the Figure: the operations being performed in the order of numbering noted on the progressive diagrams "A" to "F," inclusive. The alternate method here indicated of projecting the long 45-degree lines of the stress diagram (of which *mb* is one), by means of a "directing" triangle, is a practical variation of the alternate process heretofore indicated for verticals in Part 4 at Figure 33, and is particularly apt and expeditious for the type of

geometric construction here shown. A further application of the same process is suggested in Figure 48, herewith, which indicates the manner of producing the 15-degree line, *ab*, of the stress diagram worked out in Figure 47. In this instance the 45-degree triangle is the directing one while the 30-degree triangle does the projecting.

In the stress diagram of Figure 47, the point *d*, which limits the stress line previously projected from *e*, must, in some cases, be found by projecting the known point, *c*, in a direction parallel with the *nonce diagonal*, 12-5, of the truss diagram. But this 12-5 line is not congruent with any line of the triangles, nor is it here long enough to establish its direction with the exactitude required for the purpose of drawing a parallel thereto. There are two or three ways of overcoming this difficulty, dependent upon the relation of the two diagrams to one another on the board. One way: construct the large triangle, 3-1-f-g, similar to the given triangle, 3-12-7-5, of the truss diagram, by prolonging the truss lines and utilizing the inherent obliques of the instruments as indicated. The line 1-g will then accurately establish the direction of the *nonce diagonal* 12-5. The line 1-h can then be projected through *g*, possibly utilizing the T-square as a straightedge, and the required parallel therewith—which is *cd* of the stress diagram—established therefrom with the sliding triangles shown in this Figure. Or the parallel can be directly transferred from 1-g as per Figure 49. Another method: call the point *c*, of the stress diagram in

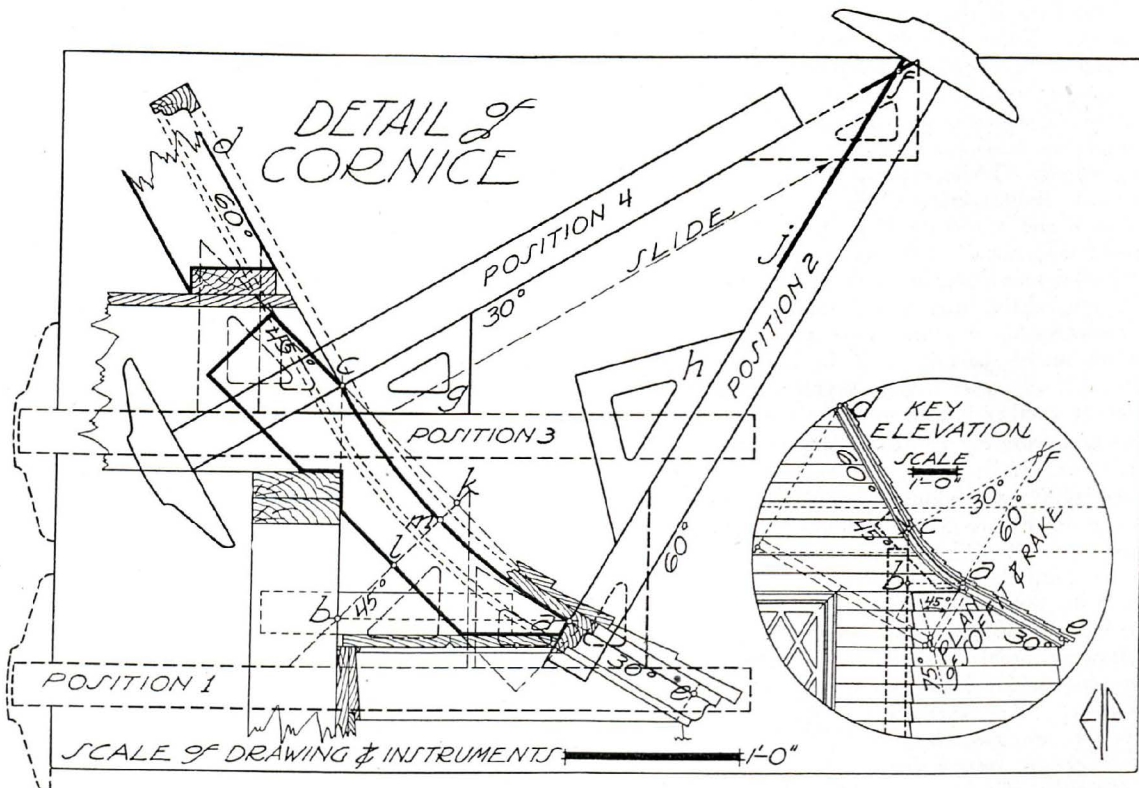


FIGURE 50—ON THE DETAIL BOARD



Figure 47, point 12 of the *truss diagram*. Then, from this point as a starter, enlarge that portion of the truss diagram required to yield the line *cd*. In the Figure, this results in the portion *j-c-k-l*, of which *cl* is the required line corresponding to the nonce diagonal 12-5 of the truss. But the easiest method of all is to lay out the truss diagram, to begin with, at large enough scale to establish accurately the direction of any extraneous lines therefrom required in the stress diagram. These lines can then be transferred *directly from the truss* by the general drafting-room method of drawing parallels heretofore illustrated in Part 1 (at diagram "E" of Figure 1)—of which the operation indicated herein at Figure 49 is a particular and more precise application.

At Figure 50 is presented a problem in oblique linear projection on the detail board. It is representative of numerous cases met with in the drafting-room, wherein long inherent obliques must be projected far beyond the possible or convenient reach of the triangles. The case shown in the Figure is a reduced reproduction of a full-size detail of a gambrel cornice and rake. The overhang, *ab*, is here equal to the vertical rise, *bc*, of the eaves sweep. Hence, the chord, *ac*, is a 45-degree line intermediate in slope between the main 60-degree rafter line, *cd*, and the "pulled down" line, *ae*. The sweep rafters are therefore "half pitch," and a 45-degree line through *b* will cut across the rafters at *lk* and, after the sweep is drawn, determine their minimum depth *ml*. It now becomes necessary "To draw a circular arc subtending an angle of 30 degrees; the given chord lying at an angle of 45 degrees to the horizontal." Center, *f*, of the sweep, is found as follows: Place the T-square in position 1. Slide the 60-degree edge of a triangle into contact with the pencil at point *a*. Remove the pencil, hold the triangle firm, and place a directing triangle, *h*, in contact therewith. Hold *h* firm, remove the other triangle, and shift the T-square to the projecting-position 2, upside down, in full contact with *h*. Draw the line *ff* of sufficient length to assure of a 30-degree line from *c* cutting it. Next place the T-square in position 3, place pencil at *c*, slide the 30-degree edge of *g* into touch, remove the pencil but hold *g* firm, and then shift the T-square into the directing-position 4, again upside down and in solid contact with the projecting triangle *g*. Now slide *g* up along the blade to cross the other line at *f*—the center required—from which the sweeps of rafters and rake must be drawn. But don't unlimber your beam-compass. That method of drawing long-radius arcs is too slow! Use the T-square. Drive an oversize pin, or a finish brad, or a shingle nail—anything that's *round*—into the board at center *f*,

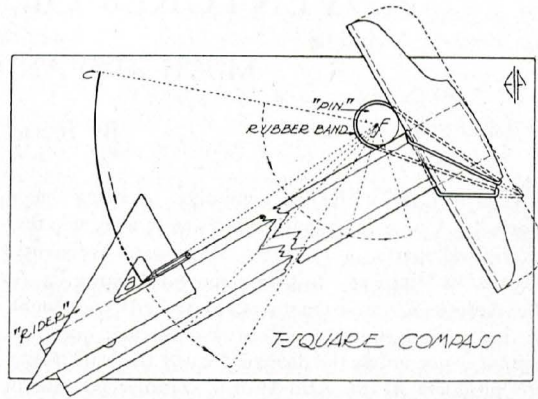
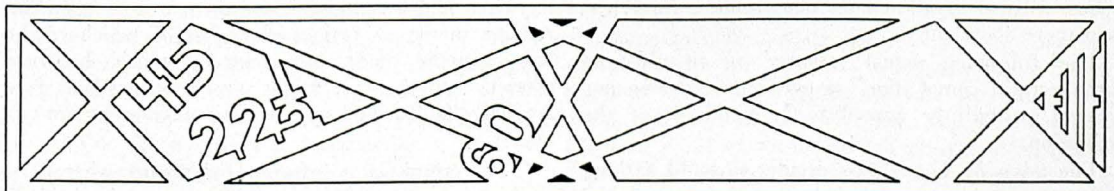


FIGURE 51

leaving the "pin" sticking squarely out of the board a distance at least as great as the combined thickness of the T-square head and blade. Slip a rubber band over the blade of the upside-down T-square. Slide the band on up the blade until the head of the T-square stops it and the band begins to—no, not *play*—*stretch*. When the stretch becomes sufficiently extensive, wrap the band over and under the head and blade as indicated in Figure 51. Slip the end of the band over the "pin." *Your T-square is a compass!* For the rubber band, looping-the-loop as shown, holds both the blade and the head in tight contact with the pivot. And, regardless of the *diameter* of this pivot—use a spool if you can make it stick!—any point on *either* edge of the blade will swing in a true circle: the actual radius of such a circle being an imaginary line from the center of the pivot to the edge of the blade—several radii being indicated in the drawing by way of proof. So—with the T-square harnessed to the "pin"—swing the blade into contact with the pencil held at point *c*, or at point *a* if you prefer. Then shift the pencil-holding hand onto the blade, still holding the pencil in contact therewith at the given point, and swing the T-square about the pivot—the *other* hand, meanwhile, exerting a combined bearing and directing pressure upon the blade and a centrifugal pull on the pivot. If your pencil hand requires "steading"—put a "rider" on the T-square blade as shown, and, before swinging the arc, bring the pencil into bearing against both the edge of the T-square and the inner edge of this rider. A very few minutes' practice will give you the "hang" of this T-square compass. It is not a makeshift. It's a precise and thoroughly practical instrument. And it's all on account of that ingenious method of "looping-the-loop."





# ADVENTURES OF AN ARCHITECT—II

## MUCH ADO AND NOTHING DOING

By Rossel E. Mitchell

AMERICANS PRIDE themselves on being "good sports." A poor loser quickly loses caste also, whether in politics, sports, or business. Americans frequently boast of willingness "to take a sporting chance." As the American nation matures, there will, no doubt, be less chance-taking. Your sophisticate does not gamble—not unless the dice are loaded for him. They are products of an Old-World commercial system which has long ago discarded the element of chance wherever it can be eliminated. Some day, gambling will be a thing of the past in American business. At present, Americans are the greatest gamblers in the world. Lotteries are defunct and horse-racing tabu in most states of the Union. But the great Mississippi Bubble taught nothing to your average American. He never read Washington Irving's gentle admonition, "Don't think real estate will never fall again." Florida "booms" have had their counterpart at varying scale in every section of the country.

However, there are few professions or businesses of vast magnitude and technical nature in which the element of deliberate, known chance enters so largely—one might say, so overwhelmingly—as in the building world. The life of the builder is a gamble from January to December. Under the competitive system of bidding now customary, a builder is compelled to take all sorts of chances. He must gamble his time against that of other bidders to "get the job." He pores over intricate blueprints for days and far into the nights. He spends money also, as overhead, in letter writing, telephoning, and estimators' salaries. His bid when completed is a gamble. He gambles that material will not rise in price, that wages will not go up during the course of the building operation. He bets that no unusual labor conditions will arise, that none of his sub-contractors will go bankrupt, die, or refuse to go on with their work at the price agreed. He gambles that the work can be completed within a certain number of days and bets that the weather will not hinder its completion. Then he frequently agrees to be fined smartly for each day his contract is incomplete after the specified date, and his prospective profit thereby becomes the ultimate gamble.

The more or less dignified practice of architecture is also a gamble. At one time within the memory of middle-aged practitioners, it was more so than a horse race, for the stakes were larger, the element of chance fully as great, and the opportunities for fraud even more abundant.

The following actual instance of an old-time "architectural competition" is neither overdrawn nor unusual, as will be agreed to by hundreds of the profession.

The town of Greengrass decides to build a town hall. An architect is needed, for ideas are scarce

articles at best and especially so among city fathers. So Mr. John Sawstuds, a local taxpayer who "draws plans" and erects buildings, is called into consultation. Sawstuds is a thoroughly "practical" builder. He advises the committee that all they need is a square brick affair with a slate roof and a corridor through the middle. There will be a town hall on the second floor and a heating plant in the basement. Nothing could be simpler. He submits a labored pencil "sketch" that supplies "all the room needed."

But there happens to be a doctor, or a lawyer or maybe even such a rarity as a cultivated merchant on the Board, who is not satisfied with Sawstuds' sketch. He has the temerity to suggest that the proposed building might give plenty of room, but would certainly look like a barn. And since this is to be a public building, it ought to be of handsome appearance.

So it is decided to hold a competition. Architects from neighboring towns are invited to "submit sketches," also a young local architect. The latter is not a taxpayer of moment and therefore does not carry much weight with the city fathers. But he and others are invited and the scramble begins. A day is appointed on which each man will be given a chance to present his credentials and sketches, and try to persuade the committee that he is best qualified to do the work. Sawstuds also gets busy. He has been privately informed that the committee members, or most of them, want him to do the work. Public sentiment demands a competition. So Sawstuds hastens off to some nearby town where he knows of a draftsman who works "on the side" for contractors, although drawing a substantial salary from his architect-employer. Sawstuds has all the information, and the draftsman whips it into shape.

The committee receives what it considers an impertinent letter from a firm of architects in the nearest city, who were invited to compete. The committee is informed that its methods of holding a competition are contrary to architectural ethics, unfair to competitors, and calculated to get a very poor result for the Owner. It is advised that an architectural competition is altogether too technical a matter for a committee of laymen to pass upon. That if said committee were competent to judge such a matter an architect would not be needed at all, and that if members of the committee were not themselves architects it would be impossible for them to pass upon the relative merits of various plans, all of which might have genuine merit, but some of which, however attractive to the eye, might possess serious and far-reaching faults, not apparent to anyone except an expert.

The committee is informed of means whereby a competition, if considered necessary, may be held in



such a way as to be fair to the competitors and valuable to the Owners, who happen to be the taxpayers. Also that unless a competition is the only possible method of procedure, the best thing the committee can do is to pick out a competent architect and let him give the problem the painstaking study it deserves.

This letter does not set well with the friends of Sawstuds on the committee. They resent the implication that they are ignorant of architecture. "I know what I like," booms a big dairyman. And "I guess we know what we want," pipes up the popular apothecary member.

But the more thoughtful one who suggested a competition now makes further observations. He thinks the big firm was right; a competition ought to be fair. The drawings should be unsigned, and the names of the competitor put in a blank envelope. The friends of Sawstuds oppose this, but are finally won over. The big dairyman has just had a barn built by Sawstuds, and still owes him money. He thinks the matter can be "handled" all right.

So the great day arrives, and at the appointed hour there is much buzzing and whispering. The committee is seated at a raised bench, and the architects come in one by one. Several young men display elaborate and painstaking drawings, well conceived and beautifully executed. They recite their experience and qualifications with reasonable modesty and restraint.

A representative of the city firm appears, without drawings, and makes a business proposition for conducting the building enterprise. Sawstuds' friends give him the cold shoulder, and he is informed that his proposition will be given due consideration.

Finally Sawstuds is asked to appear, last but not least. His talk and ramblings consume an hour, and can be summed up in four words, "You know me, Al."

Then the committee goes into executive session and examines the "unsigned" drawings. Each set has an emblem, the duplicate of which is to be found inside the opaque envelope. After all have been seen, one committeeman opines that "they all look pretty good, but the *Cloverleaf* set looks best to him."

Another committeeman squints dazedly at the costly products of professional brains and training, and says, "Dogged if that *Cloverleaf* don't look good to me too." A third follows and a fourth. "How beautiful it is for brethren to dwell together in unity!" Every man jack friendly to Sawstuds favors the *Cloverleaf*! The opposition man rather prefers another. In fact, he thinks the *Cloverleaf* about the poorest design submitted. He calls attention to a particularly beautiful façade that seems to have been overlooked. "Very pretty," says a Sawstuds man, "but I like this plan better; maybe we could get this plan and that outside!" Finally a vote is taken. Four to one for *Cloverleaf*! The accompanying envelope is opened and lo! John Sawstuds is the winner! Everybody is happy that such a reliable local man is to do the job. The announcement is deferred for an hour or two "for the sake of appearances." The young architects depart crestfallen, and sigh for

better luck next time. Sawstuds is not even to be found. That night at the lodge the big dairyman draws Sawstuds aside.

"Well, old top, I want to congratulate you."

"Thanks, Bill, and I want to thank all you fellows. I'll give you a real job."

"Sure. Ain't I been scrapping for you from the first? By the way. You know I've been carrying that four-leaf clover you gave me in my pocketbook. You'd better take it. Put it in the family album. Maybe you'll need it again some time, eh?"

After all, life itself is a gamble with the dice often loaded against one. It has been a cause of wonderment and thought to many an architect and many a builder whether or not the extreme uncertainty of the building business is not one of the compelling reasons why men who enter it continue in it a lifetime. Rarely does a man become an architect or builder and have any further liking for other work.

The alluring stakes of big operations he may secure; the pride of accomplishing tangible and enduring results; the constantly changing problems that challenge his effort and tax his ingenuity; the pride of overcoming severe difficulties—even the heart-breaking disappointments—all combine to "get" a man who once becomes a part of the great construction industry.

My own first great gamble came in less than six months after I had hung out my shingle as a practicing architect. The stake was a big one for those days, and for the small city I had started out to improve with my architectural ideas. An institutional building was projected, and a "drive" successfully put on for funds. Several architects contributed, among them myself. The building committee, therefore, believed a competition the proper method to secure the services of an architect. They were high class men and determined to have things done decently and in order.

A nationally known architect was retained as adviser. A careful "program" was prepared, and every safeguard taken to insure fairness. Eight architects were invited, six local and two from large Eastern cities. The drawings were to be submitted by a certain date, and the decision made under the advice of the technical adviser. The winner would receive the commission to design and supervise a fine, large building, and incidentally be brought prominently before the entire business and professional public. I determined to leave no stone unturned toward winning that competition.

I realized this was to be a real scrap. Architects with large office organizations and a lifetime of experience were my competitors. The problem was an exceedingly difficult one, due to the selection of a site altogether inadequate for the purpose. During the campaign for funds I had given the problem much thought, knowing it was sure to come up in some form or other. My next step was decisive. Securing a list of the latest and most modern buildings of a similar nature that had been recently erected or were nearing completion, I took to the



Pullmans and went on a tour of first-hand inspection to see exactly how the other man had solved the problem.

Having sucked up some large gobs of information, the next step was to secure one or two capable draftsmen to help in the preparation of the drawings. This accomplished, we set to it with a will. For days we sketched, studied and figured. At last the scheme developed. We felt we had arrived. The next course was to prepare the final drawings, and the time was now short. Closing hours were forgotten and we worked from 9 a. m. until 12 midnight. Three days before the competition closed we kept at it until 2 in the morning. The next night we worked until 3 a. m. and the final night we continued on through without a break except to snatch some lunch. We delivered the drawings at 9:30 a. m., the time set, and went home to catch up sleep.

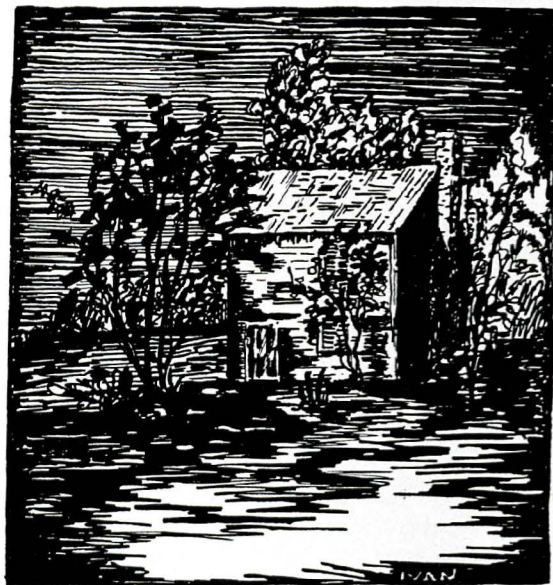
During the ten days of uncertainty that followed I busied myself with other matters to avoid anxiety. Finally, when I had about concluded to forget the competition, a telephone call advised me of the great news of my selection as architect for the institution. It may appear strange that I did not feel greatly elated, but my study of the problem had already demonstrated to my own mind the extreme difficulty of building satisfactorily on the site selected. Events proved the wisdom of these observations. The building was pronounced a complete success by the building committee when finished. For a year or two I was the object of frequent congratulations for doing a fine work. Thereafter the structure rapidly became too small for the increasing demands put on it, and

for many years I had the unpleasant experience of being blamed for erecting inadequate facilities, on a site where space was figured for use, not on a basis of the square foot, but more than once by the square inch!

The managing director died, and the new director, a fine fellow with big ideas, looked condescendingly on the work of his predecessor. There is a national committee which is usually consulted about such buildings and this building was no exception. They examined the plans, approved the arrangement and, when the building was finished, pronounced it the most modern, complete, and efficient building for the purpose yet erected in the United States. The personnel of this committee changed with the years. The building becoming greatly outgrown, complaints were made constantly by managers.

Once I was about to be retained as architect for a committee contemplating the erection of a building for a similar institution in another city. I referred to this structure and to the members of the building committee who were conversant with the problems which had been met and overcome.

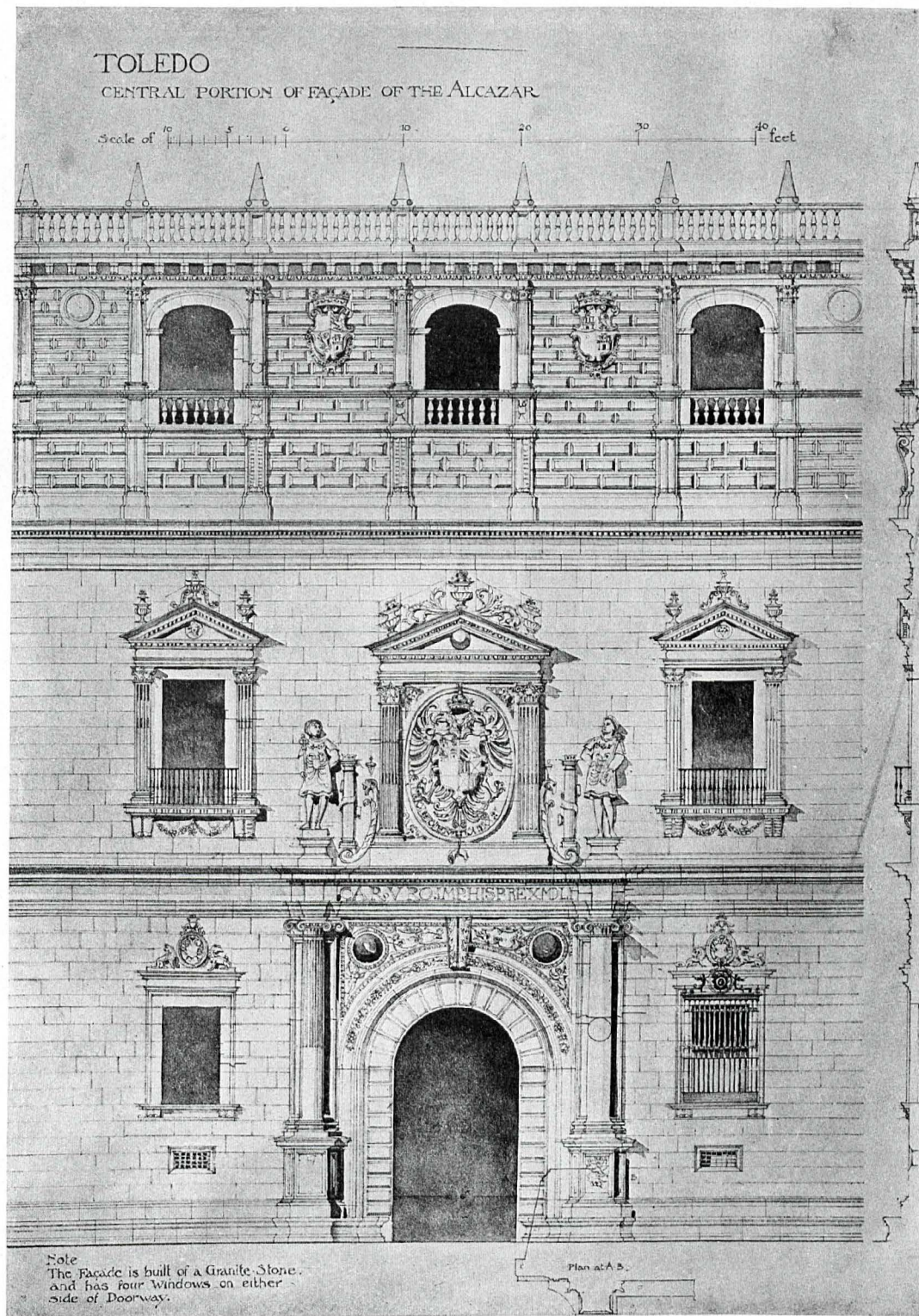
They gave me a flattering endorsement. But the manager of this institution preferred another architect. He got into touch with the national committee, whose changed personnel knew nothing of the conditions governing the erection of my other structure. They pronounced my building "Everything an institution of that nature should not be." I lost the job. Soliciting an explanation for the action of the national committee, I could get no satisfaction except that "It was so utterly inadequate!"



PEN AND INK SKETCH BY IVAN NATCHUK

"NEGRO COTTAGE"





RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN  
A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PENCIL POINTS



PLATE XLVIII

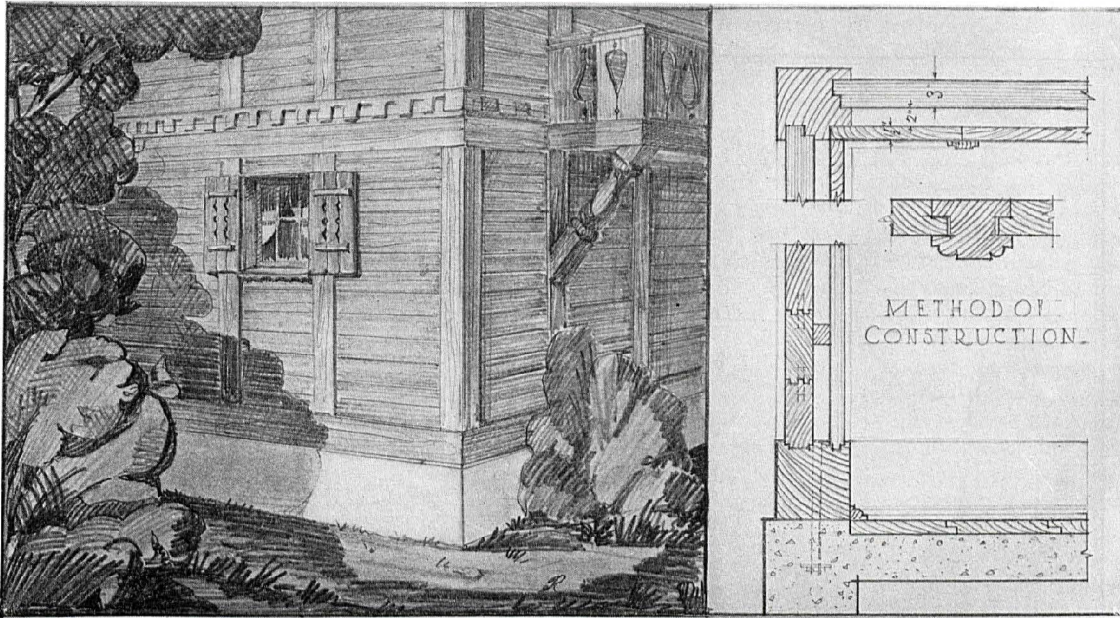
VOLUME X

NUMBER 12

*"Charles V. decided in 1537 to make the Alcazar into a Royal Palace for himself, and chose as architect Alonso de Covarrubias, who designed the beautiful façade which forms the subject of this plate. The front is constructed of a species of granite, forming a new face to the old walls, which at the entrance are ten feet thick. The doorway, though designed by Covarrubias, was carried out by Henrique de Egas. In the shield over the doorway are the arms of Charles V., surmounted by the Austrian eagles with the pillars of Hercules on either side. For the last ten years the Alcazar has been undergoing restoration on fireproof principles, being intended as headquarters for the Military School, which at present is located in the Hospital of the Holy Cross."*

A. N. PRENTICE.





A SKETCH AND CONSTRUCTION DETAIL DRAWN BY THE AUTHOR

## THE SWISS CHALET

*By Jack Paterson*

PROBABLY NO HUMAN habitation has met so well the needs of its inhabitants or suited so well its location as has the Swiss chalet. We go to Switzerland for various reasons—health, recreation, education and in more than one case to study its architecture. And most of us return impressed by the craftsmanship and sound architectural methods employed by their builders of two and three hundred years ago.

I went to France during the summer of 1928 from the University of Washington, at Seattle, on a scholarship offered by the West Coast Lumbermen's Association. The program outlined in the scholarship called for some original research on the chalets of Switzerland as a termination of the summer spent studying at Fontainebleau, France.

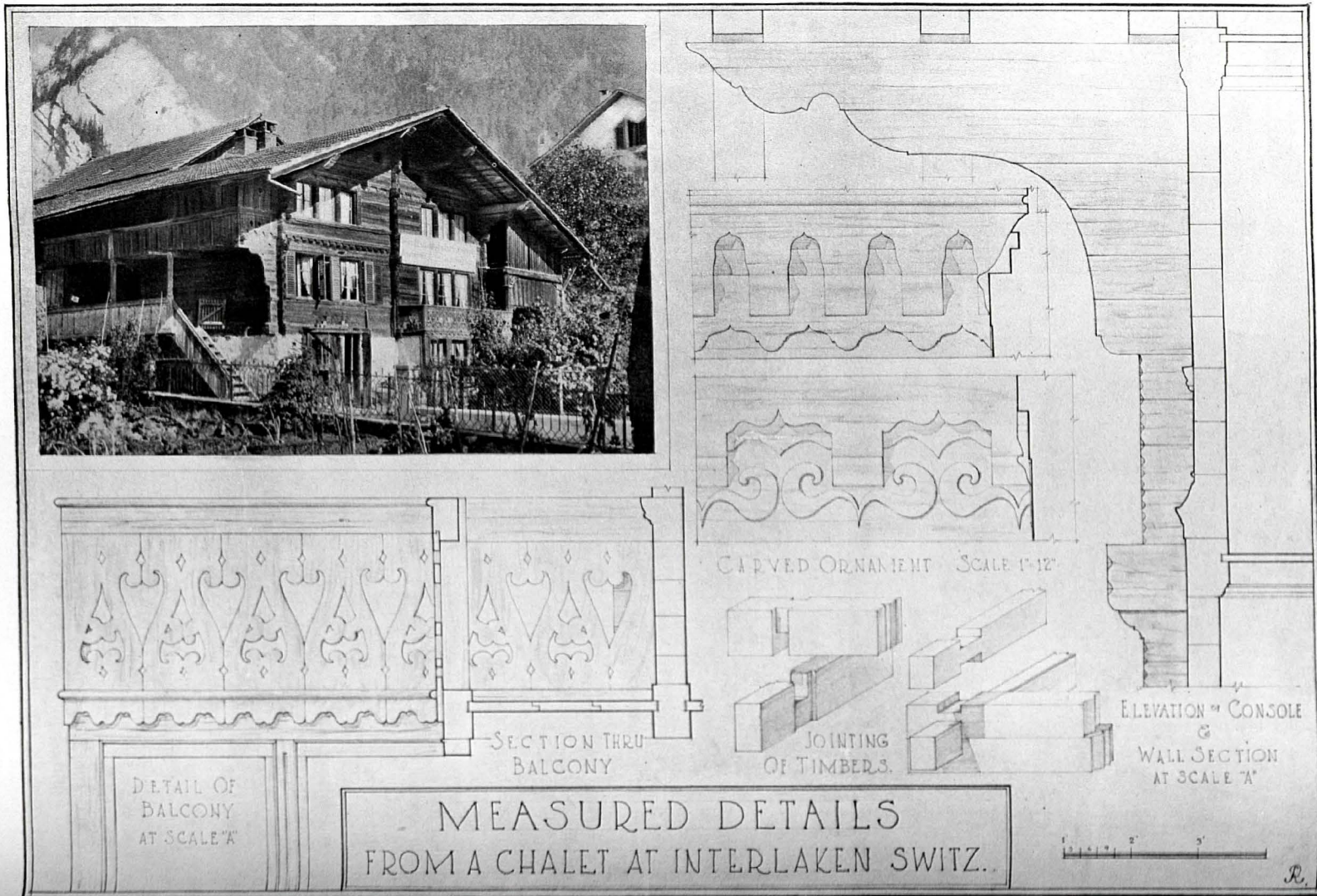
This article presents my personal observations, and information on the chalet I gathered from others who have made a more extended study of this type of architecture. It is illustrated with a number of drawings and photographs I made while studying various examples of the chalet.

I left Paris one Sunday morning in late September for Lausanne, Switzerland, and arrived at Vallorbe on the Swiss border about four o'clock in the afternoon. The railroad station made me really feel that I was in Switzerland for it had marked chalet character, though done in a modern spirit. From Vallorbe we rose slightly over the low mountains and then gradually swung around into a long series of switchbacks that brought us, through green pastures, down to Lake Geneva.

My first real introduction to the chalet came the next afternoon at Montreux, a short way down the lake from Lausanne. The mountains of the Bernese Oberland rise steeply behind Montreux and the slopes are covered with castles and chalets. The chalets of Montreux are gay little things all covered with florid carvings and bright awnings. They certainly belong to the flamboyant period of chalet styles. In order to study the true character of the Swiss chalet, however, the Bernese Oberland must be visited, so from Montreux I took the train to Gstad, a little town in the heart of the Oberland. At Gstad I saw the chalet in what, to me, is its most virile and picturesque character.

Bright and early the morning after my arrival in Gstad I took my pack sack full of sketching material and a camera and set out. Every house in the town of Gstad is a chalet more or less and I was overcome by their very profusion; so out I set for the country around. A short distance outside of Gstad I found what I was looking for, a little group of chalets upon a hillside with a road curling up and around a few pine trees. The air was fresh, the ground still hard with the frost of the night before, and the pines of the bluest green. The Alpine sunlight was clear and getting warmer, certainly a situation for viewing the chalet under the most ideal conditions. Up I went, following the road. As I rounded the bend and stood in the shade of the pines, there across the road, clinging with its back to a sharp rise of the hillside, was a chalet. Picture the bright yellow green of an Alpine pasture, the warmest of burnt siennas, the natural





A CHALET AT INTERLAKEN, SWITZERLAND—PHOTOGRAPH AND MEASURED DETAILS BY JACK PATERSON



## THE SWISS CHALET

wood color of a chalet, the emerald green of the shuttered windows, Alpine sunlight warming the frosty air and the mellow music of cowbells coming from far and near. Could anything more be needed to make one feel that the chalet with its gracious roof shading like a hat the warmly colored façade is indeed a part of the landscape, an integral feature of its setting? It is certain that I will never think of a chalet without visualizing that particular time, place, and color though I can not remember seeing any chalet that did not similarly harmonize with its surroundings. For instance, the chalets on exposed and weather-beaten hill-sides with outcroppings of gray shale are rugged and weather-beaten, too. For every warm and beautiful chalet or village of chalets you can find a counterpart in gray, wind-swept chalets that express a crueler, harder life than that of the sheltered valleys.

Swiss forests are composed mostly of red and white pine, and it is the red pine that gives the chalet such a marvelous reddish brown color that is the delight of everyone who beholds it. Red pine takes this color after a short exposure to the weather, and nothing, it seems to me, goes better with the blue-green forests and yellow-green of Alpine pastures than a red pine chalet, made warmer still by the penetrating brilliancy of Alpine sunlight.

What are the admirable features, architecturally, of the Swiss chalet? Perhaps we could, for our purposes, list these features as honest, sturdy construction, a certain grace and beauty of ornamentation and, finally, an appropriateness, the real character necessary to a structure of wood, placed in surroundings that call for naturalness and strength.

Just how the chalet came to its present stage of development is very interesting history. Its prototype is in man's primitive dwellings of wood. Wherever wood was plentiful, from the Himalaya Highlands to the Swiss Oberland, we find that man's early efforts at housing himself and his possessions were curiously alike. Lest India and Switzerland seem far from home we must remember that our own log cabin belongs to the chalet family.

Why is there such a similarity between these dwellings of wood? Because they were all trying to solve similar problems with the same material. Thus if we examine the principal structural features of the chalet we find real reasons for everything that was done. The Oberland chalet is built on a rubble

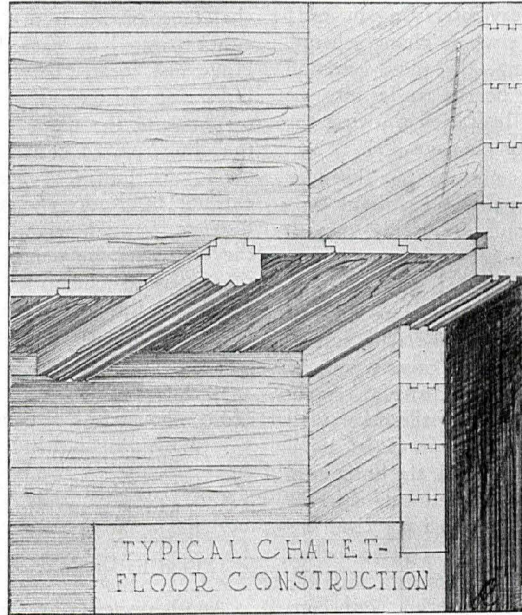
masonry foundation that generally is raised to a height of five or six feet. Why: to raise the wood above the heavy blanket of snow that covers the ground during the winter. The walls are laid up of heavy timbers interlocking at every intersection. Why? Remember how a log cabin is laid up? It is the primitive and sound method of building a wood wall. The roof of a chalet is supported by heavy timbers. It is broad, flat-pitched, and has heavy overhanging eaves well supported by brackets or consoles. Why? Because some time in man's development he learned that snow was a good insulator. That roof will hold

a whole winter's collection of snow, keeping those within warm when all outside is white and cold, and at the same time, because of the distance it projects, protecting the walls from the winter storms.

Let us get a clear mental picture of the chalet before dealing with its detailed structure. Think of it as a rectangular box, the interior of which is broken up into rooms by walls and floors which firmly interlock with the exterior walls, thus forming a perfectly rigid structure. The boxlike structure is capped by a rather flat-pitched roof whose generous projection is supported by huge consoles formed by corbeling out the upper members of the lateral walls. The interior walls

of the chalet are expressed by allowing the beam ends to project beyond the exterior wall surface, and it is the interior walls of the top story that one sees as supporting consoles for the roof projection. Another chalet element is obtained when the floor beams are projected some distance, carrying a balcony. In addition to the balcony, the invariable dentil-like band of ornament occurring at the different floor levels helps to express the structure.

With this picture in mind we can now trace the various phases of chalet construction. When a family determined to build a chalet they consulted a master carpenter and he planned to suit their needs. Then neighbors were gathered and the timber provided and everyone set to work under the direction of the master carpenter. First a shallow excavation was made, then a rubble masonry wall was laid up to a height sufficient for a basement. The construction of the chalet wall did not differ materially from that of the log cabin. Base timbers, frequently as large as 10" x 14", were laid on the masonry foundation. These were interlocked with each other and were firmly anchored to the foundation wall. Then on



DETAIL OF FLOOR CONSTRUCTION  
DRAWN BY THE AUTHOR



these base timbers were laid the wall timbers, one on top of the other, until the floor above was reached, leaving, of course, the openings for doors and windows. These timbers were notched to one-quarter their depth on both top and bottom sides and were grooved the whole length so that when laid up a solid and airtight wall was formed. Each beam was pegged down at intervals of three feet to the one beneath it as an added factor of strength. As the floor level above was reached a heavier beam was laid on the wall and this beam had generally a great deal of carving on it. The inside face of the floor beam, as I will call it, was grooved to take the floor boards.

The floor of the chalet is very interesting in itself and quite in character with the whole chalet scheme. There are several floor systems—the most common being a pan system. The floor boards are let into the beams as may be seen in the illustration showing the general construction of the floor on page 861.

The ceiling of the chalet is nothing but the floor viewed from below and this makes a beautiful ceiling when the boards and beams are richly carved, as they not infrequently are.

Before discussing the chalet roof I would like to say a few words about a rather different type of wall construction, more modern but typically Swiss nevertheless. Here the wall is of two thicknesses with an air space between. The outside is built of plank about three inches thick and laid up much as the other wall is except that at the corners and at intervals of about eight or ten feet a vertical is introduced, the horizontal pieces being let into the vertical. The inside is in the form of vertical paneling that is blocked out from the outside wall, leaving an air space of some two inches. Very beautiful interior effects are obtained with the paneling. Outside of this difference in wall construction there is not much change in the other chalet motifs. The sketch on page 859, of the corner of a chalet done in this style, will explain the effect obtained.

The crowning glory of the chalet is the roof, a flat-pitched affair with eaves that often have a projection of six to nine feet. This projection is carried either by consoles or brackets. The consoles were formed by corbeling out the lateral walls, which were built up till they took the place of rafters. This method of carrying the roof was typical of the Oberland chalet and due to its wonderful supporting ability the roof can carry tons of snow through the winter. When the bracket method of supporting the eaves was used the Swiss, instead of corbeling out the walls, cut them flush and substituted an ornately carved brace. The chalet roof covering is generally large slate shingles that are tied down by heavy slats. Where there are severe gales in the winter the roof is weighted down still more by big pieces of rock or shale which are kept in place by the slats. The chimney in the older chalets was merely an opening in the roof built up several feet, with a flat cover attached to a lever, by which it was raised or lowered. In olden times all cooking was done over an open fire so that this type of chimney was necessary to

carry off the smoke. Since the introduction of the stove the chimneys of the Swiss chalets have developed—beautiful little bird-house effects that go very well with the pine tree entourage so common to the chalet.

Here, then, we have the chalet a solidly built home which satisfies the requirements imposed by its location and the rigor of the climate. The chalet, however, did more than this. It was the outlet for whatever æsthetic feelings the Swiss felt, for the religious fervor of the times, for poetry and philosophy. And this leads us logically to a discussion of the ornament of the chalet.

One of the interesting and most characteristic of chalet ornaments is the inscription. Inscriptions are either painted or carved and are generally of two kinds: one, located between the roof and the last story, indicating the date of construction, the names of the owners and the name of the master carpenter; and the other, placed between the stories, being religious quotations, poetry or general philosophizing. These exterior inscriptions seem to apply to the Protestant districts of Switzerland, for in the Catholic districts they are more frequently inside. The earliest inscriptions were in Roman lettering, but later—about 1739—all of the inscriptions were in German script.

Walter Larden in his book on Swiss inscriptions quotes several which are particularly appropriate for an architect to have carved over his front door. One, from a house in Wattsfluh, dated 1752, is:

"There lives no man so wise or experienced that he can build so as to please everyone. Though he do his very best, the world lays it not to his credit. But he who trusts God has built wisely and soundly."

Another variation of the same theme is:

"Who builds to face the public roads must let the people talk (i.e. criticize the house). Melchior Leimen and Barbra Zuback. 1741."

These carved and painted inscriptions are very decorative, the flowing lines and flowery curves of German script providing a fine outlet for the sense of rhythm and design of the Swiss workman. However, the very character of the script so desirable from the standpoint of art has made it almost impossible to decipher the meaning of many of the inscriptions, and this is further hindered by the old dialects of German in use by the Swiss at that time, and also by a more modern and reprehensible custom of scrubbing down the walls of the chalet with pumice stone, soap, and water.

One of the admirable features of chalet ornament is that whether it be carved or painted inscriptions, consoles or brackets, carved floor beams, balconies or any of the numerous bands of carved ornament, one and all are expressive of the structure, and are neither trivial nor forced in character. A fair idea of typical chalet motifs may be derived from the measured drawing and the page of details (see pages 860 and 863), though it must be borne in mind that the



variety of ornament is almost limitless, as each chalet is more or less the expression of someone's individual taste.

Practically all of the chalet ornament was carved on the timber while still on the ground. Much of the intricate carving was done with the crudest tools, out of the solid timber, and we can only stand in wonder before the work of these master craftsmen. Certainly their homes were works of love and neither time nor effort was spared to make them as beautiful and as durable as humanly possible; they were done in a simpler, homelier, and more pious age, when to build on the shifting sands was contrary to the conceptions of a God-fearing people.

The chalets of Switzerland were produced in an age of craftsmen. They are undoubtedly the product of their age and any literal transplanting of the chalet out of its surroundings, or its period, or its traditions, would not only be as unsuccessful but, in its way, as expensive as transplanting the medieval cathedral with all of its Middle-age ornamentation and craftsmanship. But just as the structure, the ornament and the character of the Cathedral at Chartres is an inspiration to us, so can these little Swiss chalets in their purity of style, in their honest construction and delightful character inspire us to make our modern house of wood have something of a like quality.

There is many a hillside lot in the city whose natural beauty and opportunity for something unique in the way of a house is neglected for lack of a style, for lack of some special architectural character that belongs there. There are country residences where something of the chalet's stability and harmony with its surroundings would be admirably suitable. In the many parts of the country where summer homes, camps and hunting lodges in the mountains are popular, there is an opportunity for adapting the Old World chalet, or the American log cabin, into

an architecture that is appropriate, practical and beautiful; that is, a New World chalet.

The chalet offers many suggestions which have the justification of honesty for an interesting wood technique in the small house. The balcony with its pierced wood ornament is easy to construct and is, moreover, beautiful. This same thought can be applied to window boxes. Inscriptions, or ornament, are easily made in these days of sand-etching, and that offers everyone a chance for individuality in his house; he can praise his God or philosophize, whichever he pleases.

There are characteristic chimney tops made of tile or cinder concrete which add to chalet character. It seems to me that there is no feature that harmonizes better with its typical entourage than these bird-cage chimney tops.

Wishing to determine just how practical it would be, from the standpoint of cost, to construct the Swiss chalet type of dwelling in the United States, I obtained figures on the additional lumber cost for such a house. The cost of all the wood in the average modern wood-sided frame construction home, I learned, amounts to about 10 per cent of the total bill. About 20 per cent more lumber would be called for in the chalet type. This would increase the total cost over ordinary frame construction approximately two per cent. The greater durability, distinctiveness and other merits of the chalet construction, it seems to me, would more than compensate for the additional cost.

In concluding, I wish to express my appreciation of the friendliness of the Swiss people, particularly those who so willingly helped me in my research on the chalet, the courtesy and consideration shown me by the Chalet Fabrique at Interlaken, Switzerland, and again to thank the West Coast Lumbermen's Association for providing the scholarship, without which this study would not have been undertaken.



# Just what does an ARCHITECT do for his CLIENT?

The services of a present-day architect are commonly divided into five stages. These are often called the five fundamental functions of an architect and are described as follows:

**1** "PRELIMINARY STUDIES", which are really the diagnosis of the building problem, proceed first with the careful questioning of the client as to that which he wishes to accomplish. In this study the architect must be sufficiently familiar with human desire to read between spoken words the unexpressed wish.

And to these wishes he must add those things which his own skill and experience dictate as essential to the full, up-to-date solution of the client's problem, such as location of rooms to assure convenience and comfort, straight-line routing of materials in industrial buildings, etc.

In studying these problems the architect must also consider site conditions, present and future land values, relationship to transportation, adjoining property conditions, public utilities including sewerage, gas, water, heat, electricity, etc.

After the plan scheme is worked out, the architect must then design a building dress that shall be a logical interpretation of the plan—pleasing in aspect, harmonious in color combination, and at a cost appropriate to character of use and neighborhood standards.

The architect next prepares an approximate estimate of cost. This is based on floor areas, volume and similar tentative factors. No accurate estimate can be made until working drawings and specifications determine actual quantities of material and labor.

At this point the architect consults with the client as to whether he wishes to proceed with the original scheme as outlined, or if it should be modified to reduce cost, or to increase efficiency or ornamentation. Should changes be desired, they are worked out in preliminary form and a new approximate estimate prepared.

NOTE: Standard forms of agreement between the architect and his client provide that "Preliminary Studies" shall be modified and remodified by the architect until the client's problems have been solved. During this period the client may, within reason, change his mind as to a given project as many times as he desires, and without involving himself in extra expense. This "Preliminary Study" work usually represents about one-fifth of the architect's complete service.

**2** "WORKING DRAWINGS" to scale are now made up. In this second important function of an architect, he prepares drawings which



indicate sizes of parts, designation of materials, etc.

NOTE: On this work the architect employs numbers of draftsmen and engineers, and salaries and material expense, as well as chances of error, are so great that marked changes cannot be made except at extra cost to the client. Since "Working Drawings" are perfected in a sort of evolutionary process, to disturb the regular continuity of office program very greatly increases the chances of duplications, omissions, or miscalculations. It is best for the client to make haste slowly on the preliminary design, then leave the "Working Drawings" severely alone. "Working Drawings" represent about three-tenths of an architect's entire service.

**3** "SPECIFICATIONS," carefully worded and covering all items of information not set forth in the drawings, is the next task of the architect. Before writing these specifications he must review catalogs of materials, inspect and test samples of materials and devices, interview salesmen and compare market prices, determine what is best suited for the job, and act throughout as the client's purchasing agent.

NOTE: Before a building is completed and furnished ready for use 25 or more contracts are usually let. And as five bids are commonly required on each contract, 125 or more interviews are necessary. Upon receipt of the bids by the architect they must be opened, read and tabulated—a task that often involves several days' work. "Specifications" commonly represent about one-tenth of the total work of the architect.

**4** "SCALE AND FULL-SIZED DETAILS" of the work are then prepared by the architect. These include all the necessary supplementary drawings required to enable the builder to so provide and shape his

material that it may be placed in the building with minimum delay and chances for error.

NOTE: In this process of detailing the architect considers the best methods of assembling parts to avoid the evil effects of shrinking and swelling, easy motion of moving parts, water-proof and dust-tight qualities, etc. In these drawings, too, he gives particular attention to details of carved ornament, etc., which assure the beauty of the building. Correct details not only reduce cost of construction, but greatly increase the comfort and convenience of the building. "Details" represent about one-tenth of the total work of the architect.

**5** "GENERAL SUPERVISION OF THE WORK" is the fifth and final step. This consists of drawing properly-worded construction contracts between the owner and contractor, also such inspection by the architect or his deputy of work in process to assure conformance with specifications. The architect's supervision also includes the careful auditing of the contractor's accounts from month to month, issuance of certificates to the owner concerning the amount due the contractor, from time to time, securing statements from contractors as required by Mechanics Lien Law, and safeguarding the interests of the owner in many other ways.

NOTE: "General Supervision of Work" (not including the continuous service of a clerk-of-the-works), where contracts are let on the general contract basis, commonly requires about three-tenths of the architect's total service. If, however, the work is let on separate contract basis it involves considerable extra expense for service on the part of the architect, including the continuous service of a clerk-of-the-works, and is paid for in addition to his regular fee. Rightly rendered, however, this additional service will save the owner—in cost and efficiency of the building—several times the supplementary fee.





# THE DRAFTSMAN'S LIBRARY

*The Logic of Modern Architecture*, by R. W. Sexton; 133 pages, 9½" x 12½"; price \$8.00; published by the Architectural Book Publishing Company, New York.

A thoughtful book, an interesting book, a useful book—in short, a good book—is the way we shall characterize this volume by Mr. Sexton. It is the first we have seen in which the much discussed subject of "modern" architecture is presented from a real American point of view. Most of the books on "modern" which have come to our attention have been so influenced by what some group of European architects were doing or by some radical or revolutionary obsession that they have seemed a bit unnatural and forced. Mr. Sexton has, however, by applying common sense to the question, given us what seems at the moment to be a satisfactory justification for the present trend of design. His illustrations are well selected and plentiful and represent what the sane designers of this country are doing—not conservative, not radical, but just a happy medium. We believe that any designer or draftsman can get something worth while from a careful study of the material that is found in this book.

*Mechanical Equipment of Buildings*, Vol. I, Heating and Ventilation, by Louis Allen Harding and Arthur Cutts Willard; 963 pages (including index), 6½" x 9"; price \$10.00; published by John Wiley & Sons, Inc., New York.

The second edition of this valuable handbook has been completely revised and extended so that it is now up-to-date and abreast of the best modern practice in Heating and Ventilating. It is not a book that one reads, but having examined it with care we are confident that it would be a most useful and dependable volume to have ready for consultation whenever need should arise. For those architects, "spec" writers, and draftsmen who have to settle questions on the subject of heating and ventilating buildings it is a standard reference work which may be confidently followed.

*Golf and Country Clubs*, by Clifford Charles Wendehack; 157 plate pages, 50 text pages, 9½" x 13"; price \$15.00; published by William Helburn, Inc., New York.

This is a most comprehensive volume on golf and country clubs consisting of a well selected group of 157 plates reinforced by 50 pages of text discussing every phase of country club design. Most books we have seen of this general type give plenty of plates but are lacking in text matter. Here, Mr. Wendehack, who has done so many country clubs that he may fairly be considered an authority, has presented to the profession the fruits of his experience—and his discussion is detailed. He gives facts and figures concerning not only the general problem but the details as well. Every part of a well equipped country club is covered. Altogether, we feel that the book is an admirable production and hope that it will set the style for future books about other kinds of buildings.

The illustrations include seventeen of the author's own clubs and thirty-three by other leading architects. These are shown by means of photographs of exteriors and interiors and by plans.

*Wrought Iron and Its Decorative Use*, by Maxwell Ayrton and Arnold Silcock; 187 pages, 9¾" x 12¼"; price \$17.50; published by Charles Scribner's Sons, New York.

The art of the smith has, since early times, been used for the enhancement of architecture. Good wrought iron ornament has a charm unmatched by other materials or crafts. This book, by two British architects, is beautifully illustrated with examples of wrought iron as it is found in the British Isles ranging in period from mediaeval times to the present day. It will prove useful to the designer (and his name is still legion) who draws upon the treasury of the past in developing his own designs. The text is treated in a historical way as the following chapter headings indicate:—General History, Fourteenth to Seventeenth Centuries, Seventeenth Century Developments, Jean Tijou, The Welsh Smiths, The West of England Smiths, The Midland Smiths, Miscellaneous Examples, and The Decay and Revival of Smith-craft.

*Edifices de Rome Moderne*, Volume II, by Paul Letarouilly; 56 plates, 9¾" x 14½"; price 7/6; published by John Tiranti & Company, London.

This second volume of Letarouilly reprints continues the Tiranti series of inexpensive editions of famous architectural documents. It covers 56 selected plates of Palais et Maisons together with a description of the plates included in Volumes I and II. The plates are clearly printed at a size which, though reduced considerably from the original edition, is still quite legible. The best feature of this publication is that it brings this famous document easily within the reach of the average draftsman.

*Through France with a Sketchbook*, by Samuel Chamberlain; 109 pages, 8¾" x 11"; price \$6.00; published by Robert M. McBride & Company, New York.

Those who have followed the writings and drawings of Samuel Chamberlain as they have appeared during the last few years in *PENCIL POINTS*, *The American Architect*, and other journals will welcome the appearance of this book in which are presented a number of his sketches, etchings, drypoints, and lithographs, together with an account of the adventures which befell him as he went up and down and to and fro through France. Practically all of the material has been published before in the magazines, but it undoubtedly gains by being presented all together here as a permanent record.

There are not many architects we know who have the capacity to get quite as much of a kick out of life as the author of this book, and of those there are very few indeed who, like him, are able to convey through the medium of their writings the full value of their observations and experiences. Chamberlain's prismatic personality is unusually ready to absorb all the color from the pageant of life which is going on about him, and he in turn gives this out in his writings with a vividness and freshness that makes the incidents he recounts live again with full intensity in the minds of his readers. We are sure that whoever loves to draw will not only find pleasure and profit in studying the many diversified examples of his sketching skill but will also be thoroughly entertained by what he has to say.



# THOMAS HASTINGS

1860—1929

THE PASSING AWAY of Thomas Hastings at Nassau Hospital, Mineola, L. I., on October 22nd, after an operation for appendicitis, removes one of the most noted figures of recent years from the field of architectural practice in America.

As a member of the firm of Carrère and Hastings and as an individual architect practicing alone since the death of John Carrère in 1911, Mr. Hastings was long one of the eminent figures in the development of modern architectural design in the United States. His influence has been far-reaching and he has done much to make modern architecture one of the Nation's great assets of native intellectual and artistic expression. His inspirational influence is to be found mainly in the earliest works which the young firm of Carrère and Hastings executed at St. Augustine, Florida, during the first two or three years of their partnership and in some of the comparatively recent buildings of a commercial nature, such as the stores of Black, Starr, and Frost on Fifth Avenue and one or two others, but his technical influence, by example, in the production of competition and working drawings, was potent throughout his long career as an architect. He was directly helpful to many young students and draftsmen by giving generously of his time to criticism and advice leading to their technical advancement.

Mr. Hastings was born in the City of New York. He studied at Columbia University for two years and afterwards went to Paris. There he entered the Ecole des Beaux Arts and worked in the Atelier André (later Laloux) until 1884, when he returned to New York and obtained a position in the office of McKim, Mead, and White. The following year he and John Carrère, who had been working in the same office, formed the partnership of Carrère and Hastings.

From the outset the firm was successful. Its first commissions included the Ponce de Leon and Alcazar Hotels and the Presbyterian Church and Methodist Church and Parsonage at St. Augustine, in which picturesque masses, good proportions, Spanish and Italian Renaissance motives and details were charmingly combined with American habits of design. The appropriate well designed garden and landscape setting and even the painted interior wall decorations of the hotels were the work of the young enthusiastic architects and their few architectural assist-

ants. The work gave great promise of new qualities of refinement, sentiment, and beauty—promises partly fulfilled in later work, in which, however, sentiment was soon replaced by academic formalism; and modern demands were often constricted to fit the architectural forms of the eighteenth century.

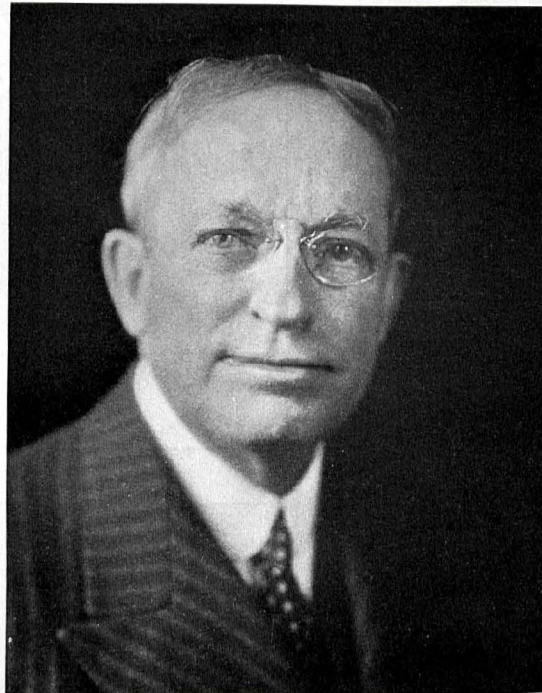
Carrère and Hastings returned from St. Augustine to New York in 1887 and opened an office in one of the old Colonial period houses which stood on the site fronting Bowling Green, now occupied by the Customs House, and

began a general practice of architecture which soon developed into one of the most noted in the country, causing the continued expansion of offices and consequent frequent moving of location. The firm expanded its reputation made in Florida by submitting many designs in competitions, almost but not quite good enough to win—among them an effective composition in Renaissance style for the Cathedral of St. John the Divine. The firm produced very good drawings which were much sought after by the architectural press for illustration in the magazines and a national and even international reputation for technique and scholarly design resulted before any great amount of their work had been constructed.

Mr. Hastings chiefly was credited with creating and fostering the fine technique

and that kind of designing which adheres closely to precedent. He recognized that France in the 18th Century did better with the combination of architecture and landscape accessories than had been done previously or since, and he chose the monuments of the periods of the Louis as the models upon which to base nearly all his designs whenever they provided a precedent that could be adapted. He loved the rich decorative architecture and the formal gardens designed by the architects of the period of the late Renaissance and was hugely interested in the books upon such subjects. He was a scholarly architect of strongly artistic leanings rather than a great artist of scholarly attainments. He prided himself upon being practical and rightly considered all planning as the most essential province of the architect. He contributed a liberal share to the general improvement of residence design, especially of city residences, of which those of Elihu Root and H. C. Frick of New York are examples, and in a more limited sense, though more numerous, to

(Continued on page 889)



THOMAS HASTINGS





MR. AND MRS. BURT S. DE FREESE AND CHILDREN SEND OLD-FASHIONED GREETINGS



PRINT BY ERNEST R. HARDIN, USED ON THE COVER OF A FOLDER



LEON KEACH SENDS HIS FRIENDS THIS PEN AND INK SKETCH



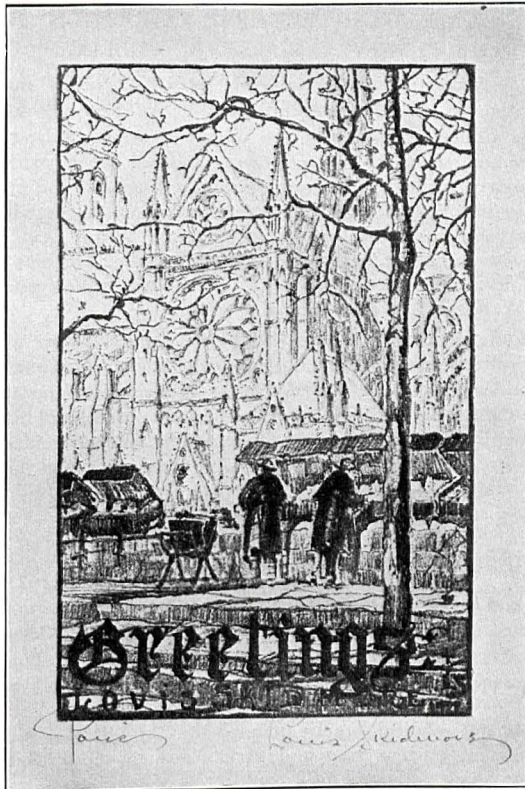
Even if we were this busy we'd take time to wish you a **Merry Christmas**-Francis M. Turner, Jr.

JOHN HELD, JR., MADE THIS FOR FRANCIS M. TURNER, JR.

FOR THOSE WHO MAKE THEIR OWN CHRISTMAS CARDS WE PRESENT THESE INTERESTING SUGGESTIONS

*The design by Ernest R. Hardin, and those shown opposite, printed in red, were submitted by Samuel E. Gideon*

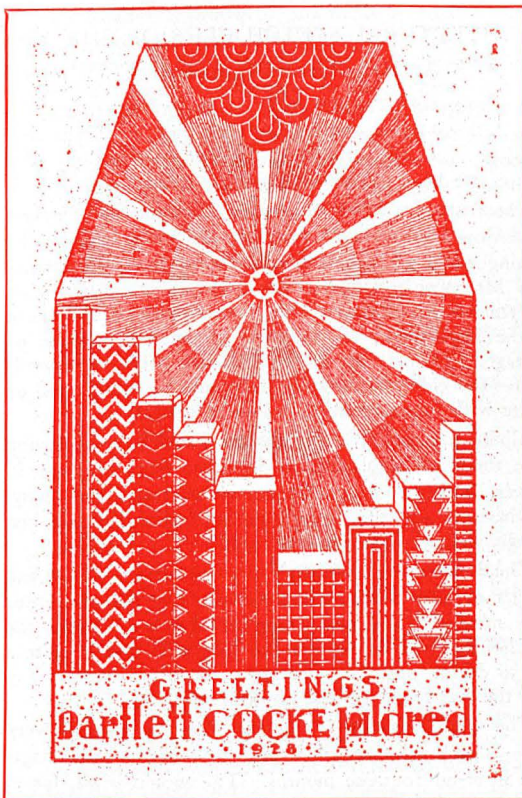




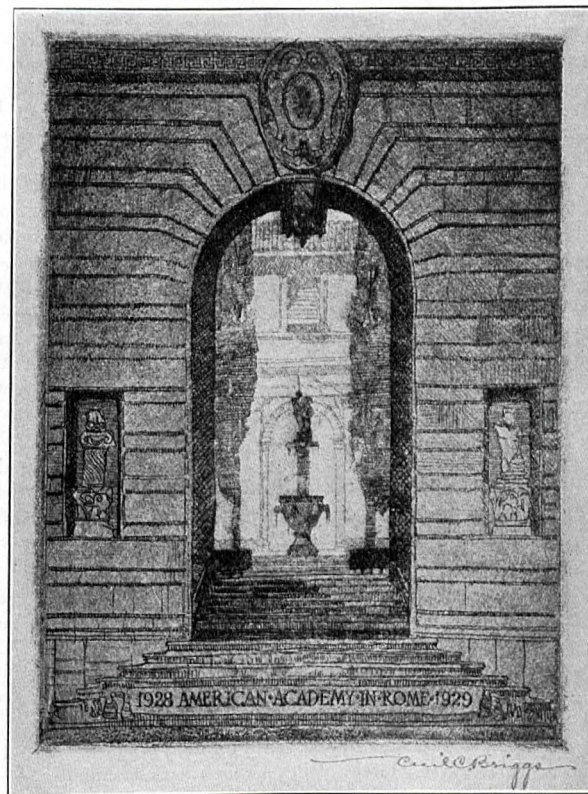
LOUIS SKIDMORE MADE THIS SKETCH IN PARIS



AN AMUSING CARD BY JOHN CANADAY



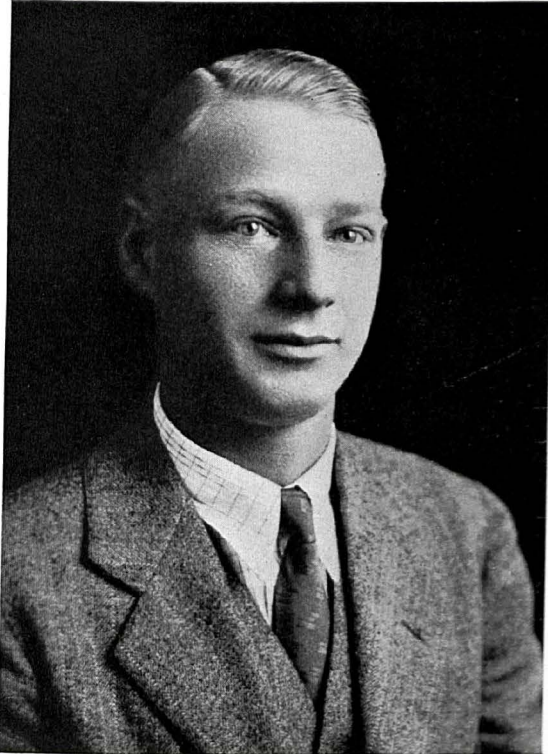
A MODERNISTIC DESIGN PRINTED ON A GRAY CARD



AN ETCHING FROM ROME BY CECIL C. BRIGGS

YOUR CHRISTMAS CARD MAY BE AN INFORMAL SKETCH OR A DIGNIFIED ETCHING





JACK PATERSON

JACK PATERSON, the author of the article on *The Swiss Chalet*, in this issue, was born in Seattle, Washington, in 1907. He started his architectural training in the Broadway High School, Seattle, and entered the University of Washington in the fall of 1925. He has been employed by several Seattle architects but most of his training was in the office of Thomas, Grainger, and Thomas.

During his junior year at the University he won the scholarship given by the West Coast Lumbermen's Association which was awarded on the basis of all-round architectural ability shown over a period of three years of University work. This scholarship provided \$1,000 to be spent in studying three months at Fontainebleau, followed by a trip into Switzerland for the purpose of studying the Swiss Chalet.

Mr. Paterson's article and some of his drawings made in Switzerland are published on pages 859 to 865.

#### SKETCH CLUB ATELIER OF NEW YORK

THE SKETCH CLUB ATELIER opened two classes on October 1st and 3rd and a great interest has been shown by the consistent attendance and the enthusiasm of the classes over a very long evening, from 6:30 until many times after eleven o'clock.

This year three sketch contests will be held on given problems, the work to be exhibited the following week and criticism and judgment made by a prominent architect. A small cash award of \$5.00 will be given for the first prize and a year's subscription for PENCIL POINTS as the second prize. Mr. Harvey Wiley Corbett has consented to judge the first contest.

The Sketch Club Atelier has suffered a great loss in the passing of one of its advisors, Mr. Thomas Hastings.

#### LANDSCAPE ARCHITECTURAL EXHIBITION AT THE PENNSYLVANIA STATE COLLEGE

AN INTERESTING EXHIBITION was recently held by the Division of Landscape Architecture at the Pennsylvania State College. In one of the college classrooms a landscape setting was created portraying a paved terrace with a modern garden termination feature, a fountain, and an enclosure of clipped hedges, beyond which was a naturalistic background planting. The fountain feature was a simulation of tile, painted on beaver board. The head and basin were modeled and cast in plaster by Professor C. W. Wild of the Division.

The plan for the exhibit was the result of a number of competitive plans submitted by the senior students in Landscape Architecture. The design of Herbert S. Conover was the one selected and carried out. All of the work of arranging the exhibition was done by the students under the direction of Professor John R. Bracken, Head of the Division.

#### PHILADELPHIA ARCHITECTURAL EXHIBITION

THE 32ND PHILADELPHIA ARCHITECTURAL EXHIBITION opened in the Wanamaker Store on the evening of October 31st with a remarkably fine dinner meeting. This was a memorial to Milton B. Medary and was held jointly by the Chapter, the Club, the collaborators in the Year Book, and was also largely attended by City Officials, and prominent citizens who also participated in the Private View which followed.

#### ARCHITECTURAL SKETCH CLUB OF CHICAGO

##### ATELIER PARSONS-ADAMS-BOOTON

THE WORK HAS STARTED with a crowd of some forty to fifty fellows doing the esquisse for the first Beaux-Arts Problem and, with the help of Mr. Adams and Mr. Booton, we hope to make the season a huge success.

The first of a series of monthly Get-together-Smokers was enjoyed by some 73 members and their friends; the evening was a great success, as the speaker was none other than Mr. Alonzo Iannelli who spoke on the *Relation of Sculpture to Architecture*. Mr. Iannelli was formerly head of the Department of Sculpture at the Art Institute of Chicago. In addition to the speaking there were sandwiches and cider (as no good beer could be found) and of course with a smoker there had to be smokes.

Albert Eiseman, Jr., our former Massier, upon having done the Club scholarship of last year went and won it, thereby having to leave for Europe to travel and study. He has left and the "gang" at the Atelier bid him bon voyage, success, and pleasures.

The Summer Sketch Competition has come to a close and a prize of fifty dollars will be awarded to the competitor who submitted the best group of sketches. From the sketches received we believe the Jury will find it quite a job to decide upon the best group, as each is best and to pick the best from the best is—well we'll see.

The Club magazine *Treads & Risers* is growing very fast—from a mimeographed page to a twenty-page magazine in about fourteen months. The success is all due to the labors of the Editor, our President, Gerald Bradbury. We wish him a lot of success and hope to see it a fifty-page magazine in the near future.



## GUY LOWELL MEMORIAL COMPETITION

THE GUY LOWELL MEMORIAL COMPETITION in architecture will be held on the first Saturday and Sunday in February, 1930. The competition is open to citizens of the United States of good character, who are between the ages of twenty-one and thirty-one, who have had at least three years of office experience. Competitors may prepare their drawings wherever conditions conform to the requirements of the committee in charge, but these drawings must be sent to Boston for judgment.

The value of the scholarship, which is given in memory of Guy Lowell, is represented by an annual award of \$1,000 to assist draftsmen and students in schools of architecture with three years or more of office experience, to benefit by six months' travel in foreign countries. The scholarship is under the direction of a managing committee of three, composed of the Chairman of the Committee of Education of the Beaux-Arts Institute of Design, the Head of the Department of Architecture at the Massachusetts Institute of Technology, and a practicing Architect in Boston.

All questions and applications should be addressed to Mr. H. P. Richmond, 12 West Street, Boston, Mass., so that they will be received by December 23rd.

IMPORTANT EXHIBITIONS AT  
ARCHITECTURAL LEAGUE OF NEW YORK

THE ARCHITECTURAL LEAGUE of New York has opened, in its clubhouse at 115 East 40th Street, New York, the first of a series of important one man or one firm exhibitions designed to focus public attention on what the officers of the League believe to be the best work being done in this country at present in the fields of architecture, sculpture, and painting. The first show, which runs from November 14 to December 12, is of the work of Holabird and Root of Chicago. In the opinion of competent observers this firm is turning out work which stands out as of uniformly high quality. The League is attempting, by every means within its power, to give broad publicity to this show and to those scheduled for later appearance, and will try to interest the general public by this means in the subject of architecture and the allied arts. The shows are definitely not being run to exhibit the work of local League members but rather with the idea of honoring outstanding firms and individuals selected from the entire country. By doing the thing in a broad, impartial, and generous way it is felt that the profession of architecture generally will be assisted to rise in public esteem.

## PRATT ARCHITECTURAL CLUB

THE CLUB IS PLANNING on a novel event to close out the Old Year in the form of a New Year's Eve Luncheon at the Fraternity Club on December 31st. It is hoped that any members or old grads who are in New York for the holidays will make their presence welcome on that day. The next affair following this will be the Bridge and Dance at the Club on January 25th, 1930.

We are holding forth at the luncheons every Tuesday with an occasional speaker to vary the routine. On Nov. 12 those present enjoyed an interesting talk by Mr. L. R. Blasius of the New York Telephone Co., whose subject was "The Bi-Products Developed in the Bell Laboratories." Other speakers are scheduled for future dates. The most ambitious event on the year's program is the exhibition of work of Pratt Architects to be held next spring in New York. Special announcements will be sent out in the near future concerning this and other contemplated events.



ERNEST BORN

THE WORK OF Ernest Born is familiar to readers of PENCIL POINTS through the reproductions of his drawings that were published in the July and November issues. This month we present as Plate XLVI a black crayon drawing by Mr. Born, one of a series showing the Soldiers' and Sailors' Memorial Bridge at Harrisburg, Pa. This particular series of drawings was made for the architects, Gehron and Ross, by whom Mr. Born is now employed.

The drawings by Mr. Born shown last July were office studies and renderings while the subjects included in last month's issue were lithographs and drawings made during European travels. The latter group, therefore, is a more direct expression of his personal tastes and inclination.

## COMPETITION FOR THE ROME PRIZES

THE AMERICAN ACADEMY in Rome has announced its annual competitions for fellowships in architecture, landscape architecture, painting, sculpture and musical composition.

The competitions are open to unmarried men not over 30 years of age who are citizens of the United States. The stipend of each fellowship is \$1,500 a year with an allowance of \$500 for transportation to and from Rome and \$150 to \$300 for materials and incidental expenses. Residence and studio are provided at the Academy, and the total estimated value of each fellowship is about \$2,500 a year for three years, with opportunity for extensive travel.

The Grand Central Art Galleries of New York City will present free membership in the Galleries to the painter and sculptor who win the Rome Prize and fulfill the obligations of the fellowship.

Entries for competitions will be received until *March first*. Circular of information and application blanks may be obtained by addressing Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York, N. Y.



# MORE LETTERS CONCERNING THE ARCHITECTS' SMALL HOUSE SERVICE BUREAU

*From Harry Lucht, Secretary-Treasurer, The Architects' League of Northern New Jersey.*

To the Editor of PENCIL POINTS.

DEAR SIR:—

"Concerning the discussion relative to The Architects' Small House Service Bureau being conducted in PENCIL POINTS, permit me to state I have read the letters favorable to same in the October and November issues disagreeing with those opposed thereto.

"Those of Mr. Parker and Mr. Brown of course are from those having an interest in the bureau, as Director and President of the New England Division, and naturally represent such opinion which is not disinterested or impartial.

"Nevertheless, Mr. Parker's statement 'that the speculative builder is the crux of the matter and that back of him stands the money lending power of the Building and Loan Associations and Co-operative Banks who are at times doing serious injury to their communities by making possible the construction of many small houses that never ought to be built' is of interest in view of the fact that one of the largest Building and Loan Organizations in New York City maintains a 'plan department' furnishing 'Stock plans' on which loans are given, 'saving' 'unnecessary' costs to the borrower! There is another question.

"The statement of Mr. Brown 'We are heartily in accord with the main complaint of your correspondents; namely, that small houses should be designed by architects. That is why The Small House Service Bureau was formed.' Now this is amusing. It reminds one of international peace conferences with all nations paying homage to peace and disarmament whilst they are feverishly building and adding to their armies and navies for opposite reasons.

"I ask, will all the A.I.A. members favoring the A.S.H.S.B. subscribe to the same statements as follows: Churches, Banks, Office Buildings, Public Buildings, Schools, etc., etc., should be designed by architects, that is why a Stock Plan Bureau should be formed to sell plans at a fraction of the cost of engaging an architect to do so?

"All of the writers seem to overlook the point that broadcast advertising on a national scale, overshadowing all other educational or publicity work of all kinds combined concerning the practice of architecture, that fixes \$25.00 as the worth and price of an architect's plans for a small house, is doing more harm than the questionable and infinitesimal good accomplished by this business. What an opinion the layman must form of the A.I.A., particularly when an architect tells his client that the A.I.A. also advocates a different price for his services for such plans!

"Mr. Liang, way off in Tientsin, China, did not overlook this point in his interesting comment and point of view from that land.

"Mr. Fisher's letter (he also is interested as a member of the bureau) states, 'It is forcing the speculative builder to build better planned and designed homes.' This is highly amusing; the evidences in the suburbs that market small houses in greater New York, New Jersey, and Long Island are a tragic contradiction. Nevertheless we would be interested in knowing just how this 'force' is effected. We would like to put it into effect.

"He would like to know what we think would happen if the A.I.A. withdrew its approval of the A.S.H.S.B. or if it (the Bureau) were dissolved. It would be a bless-

ing. When we asked at least 6%, 8%, or 10% fees for architectural services on the small home as proper and endorsed by the A.I.A. the small home owner would not laugh and jeer at us and tell us he could obtain A.I.A. approved, recommended, and endorsed designs for \$25.00.

"But more important, the A.I.A. then could engage in a nationally broadcast publicity and educational plan—'do not use stock plans—penny wise and pound foolish—engage a good competent architect at a proper fee, it pays.' It could both encourage competent architects to go after this work on a paying basis and the owner to go after the architect! This it does not do at present.

"The next letter is also from another A.S.H.S.B. director, Mr. Lippmann. Yes, yes, we admit the publicity in favor of good house design and the A.S.H.S.B. too. But the architect and his practice play second fiddle.

"Mr. Boyd's reference to the Bureau as 'a practical demonstration of the unselfishness of the profession, and its willingness to be something more than a luxury, something more than a group of somewhat remote specialists who are not interested in anything so vital as the very small American home' brings to my mind the question of at whose expense all this generosity—at the expense of the big architects whose offices could not afford to take a commission to do a small house or that of the small architect who can and will, at a proper fee, one that it would not, however, pay the large office? Just what kind of unselfishness is this?

"We can write letters and discuss the matter until we are blue in the face but there are a few facts that it will never alter. The majority of small houses built from stock plans or carpenters' designs are in the large majority of instances a blot on the landscape, the exceptions are infinitesimal in proportion. Stock plans encourage dispensing with architect's services. A small home needs the full and complete services of an architect for exactly the same reasons as does any structure intended to service parallel functions, though different, as important.

"The A.I.A. should encourage architecture as architecture with no exceptions for any group or class of buildings and there will always be dissension and dissatisfaction with the contradiction existing between \$25.00 for stock plans and the circular of information as to architect's fees and functions.

"We again reaffirm that the A.S.H.S.B. has been tried and that the results in evidence from such plans over a period of years prove that full architect's services are a necessity, one the owner cannot afford to be without. If this is not so and the Bureau is a success, then let us extend its scope to larger fields, churches, banks, public and institutional buildings, industrial and business buildings, for to the layman this seems equally as plausible and practicable, particularly to standard school buildings and banks with the same problems and size plots. Thank goodness business men in these institutions realize it pays to engage an architect! Thanks be they are not educated as is the small house owner by the A.S.H.S.B. with the A.I.A. endorsement! Stock Church plans plus some of the meddling job holding architectural advisory boards maintained by some denominations at added cost carried by small churches who can just about afford the cheapest kind of building, enough to hamper the architect as is, would be another fine thing."

*(Continued on page 876)*



## A.I.A. DEVELOPS SYSTEM OF HONOR AWARDS

A SYSTEM OF HONOR AWARDS, "creating year by year a visible history of the advance of architecture in the nation's cities," is being developed by the American Institute of Architects.

A definite plan governing the determination of exceptional architectural merit has been adopted, and will be carried out by Chapters all over the country. "The plan," Mr. Hammond said, "represents nationwide extension under uniform control of honor award programs already sponsored by Chapters in New York, Chicago, Los Angeles, and other cities."

The Minnesota Chapter, Mr. Hammond also announced, has decided to issue awards for the best in Minneapolis architecture. Similar action, it is expected, will be taken by other Chapters so that eventually distinction in architecture will annually receive public recognition throughout the United States.

The aim of the Institute, as stated by Mr. Hammond, is "to encourage the appreciation of architecture, of allied arts of design, and of the industrial arts."

The honor plan was framed by a special committee of the Institute of which David J. Witmore of Los Angeles is chairman. Other members are: Joseph D. Leland, Boston; Raymond Hood, New York; John P. B. Sinkler, Philadelphia; Nat G. Walker, Ft. Myers, Fla.; Pierre Blouke, Chicago; George W. Spearl, St. Louis; Ralph H. Cameron, San Antonio; Arthur Loveless, Seattle; Raymond W. Jeans, San Francisco.

Awards will be determined by a jury selected by the Executive Committee of the Chapter from nominations made by the Chapter Committee on Honor Awards. Each jury is to consist of three corporate members of the Institute not members of the awarding Chapter.

## THE ARCHITECTS' LEAGUE OF NORTHERN NEW JERSEY

ALMOST TWO HUNDRED COPIES of the *Architect's Profit and Production Cost* as published by PENCIL POINTS were distributed gratis to every member, practicing architect, and those licensed and registered to practice architecture in our territory, Bergen, and Passaic Counties. It is felt that this expense is well justified from different angles and that other architectural organizations would do well to consider the advisability of doing likewise. This is of benefit not only to those receiving same but to the entire profession.

On November 14th our entire membership attended a meeting of the New Jersey Society of Architects and other architectural organizations at Toni's at 18 Green Street, Newark, N. J., where Amendments to the New Jersey State Registration Law and other matters were discussed. The meeting was addressed by the President of the State Board of Architects, Mr. Brazier, President of the National Council of Registration Boards and A.I.A. Committee, and by State Senator Ralph Chandless.

A Draftsmen's Exchange is maintained and conducted free of charge to employees and employers.

A committee is preparing rules and regulations for publicly awarding prizes and mentions for architectural merit on different classifications of structures, as an incentive to better construction and design and at the same time focusing public attention upon the Architect.

Another committee is preparing a Year Book which will be issued this winter.

Several summer festivals and outings have been conducted together with the Architects' Club of North Hudson and this fall and winter will witness many interesting meetings and activities.

## CONNECTICUT ARCHITECTURAL LEAGUE

AT THE OCTOBER MEETING of the Connecticut Architectural League, Inc., it was unanimously voted to continue the effort begun six years ago to obtain the enactment of a law providing for the registration of architects in Connecticut. This law has had the opposition of the Connecticut Manufacturers' Association on the theory that such a law might be a wedge which could possibly be used to open the way to state enrollment and regulation of the crafts and of labor. With more than thirty of the forty-eight states having architect registration laws, several extant more than a score of years, it is hoped to convince the legislators of the next general assembly that the manufacturers in common with the rest of the people of the state will derive nothing but good from the proposed law.

President Shiner appointed the following named members a committee to have charge of the registration law activities: Lorenzo Hamilton, Meriden; Philip Sunderland, Danbury; Leonard Asheim, Bridgeport; Ferdinand Von Beren, New Haven; Alfred Mausolf, New Canaan; Carl J. Malmfeldt, Hartford; Walter R. Shiner, New Haven; G. L. Bilderbeck, New London; and George H. Gray, New Haven, *Chairman*.

For the coming year President Shiner has appointed an educational committee to consist of: Harold H. Davis, New Haven; William F. Brooks, Hartford; Alfred W. Boylen, *Chairman*. This committee is planning for a series of lectures both technical and of general interest.

The publication of a monthly journal was authorized. This is to be started as a bulletin and no advertisements are to be printed other than classified want advertisements which are to be gratis to the members. The editorial board appointed for the coming year will be made up of: Douglas W. Orr, New Haven; Raymond J. Percival, Hartford; Walter R. Shiner, New Haven, *Chairman*.

Under the direction of the several vice presidents it is proposed that a series of luncheon meetings be held in the several cities of the state during the coming winter and spring. In each of the cities where the luncheon is held all of the architects of that city will be urged to attend. The purpose of these meetings is to promote the interests of the League in general and those of the proposed registration law in particular.

The new members elected at the October meeting were: Carl J. Malmfeldt of Malmfeldt, Adams & Prentice, Hartford, and Calvin Kiessling, New Canaan.



FROM A LINOLEUM CUT BY MEYER GREENBERG, OF DETROIT, MICHIGAN



MORE LETTERS CONCERNING THE  
ARCHITECTS' SMALL HOUSE SERVICE BUREAU

(Continued from page 874)

From Herbert Ainsworth Blogg, Architect, of Seattle,  
Washington.

Editor, PENCIL POINTS PRESS.

DEAR SIR:

"In answer to an article in your magazine of June, 1929, entitled 'A Protest to the A.I.A. from the Architects' League of Northern New Jersey':

"First as to the meaning of the statements in paragraph seven, what kind of co-operation is meant? It sounds somewhat like waving a club.

"Again in paragraph nine, what is meant by the phrase 'doing small houses and make a living thereby'? If the work is done as it should be done there is a mighty small living in it.

"As to the content of paragraph ten, no such condition exists here for it is not possible to so compete.

"The entire matter resolves itself into the need of educating the general public as to what is good architecture, and as to the real need and money value of the architect's service to the owner and the public in general.

"If the Architects' League of Northern New Jersey has a constructive suggestion that will eliminate the very bad examples of hundreds of houses built by contractors who do not have proper plan service it is their duty to broadcast it. The wholesale builder, and even the small builder, will not use the service of the trained architect as they feel that it is a needless expense. We know that the service of a competent architect would improve their sales, but, to date, few, if any of us, have been able to sell the idea to the contractor or the public. I think that the fault is probably ours.

"Perhaps the remedy lies in getting a law passed in each State forbidding the erection of any structure without the full service of an architect licensed by that State. Considering the inadequacy of most of the present architects' laws, and how hard it has been for us to get them at all, one can see that we have a tough job ahead. Few of our young men are sufficiently experienced to pass a rigid state law examination, so they would still be 'out in the cold.'

"As to the last paragraph of the statement by the Architects' League of Northern New Jersey, I deny the allegation in toto. Having served as Director of Service of the North Pacific Division of The Architects' Small House Service Bureau for nearly four years I know whereof I speak. On the average I give about eight hours of my time, weekly, to Bureau business as well as furnishing telephone service, and listing, office space, and stenographer for answering many letter inquiries. For this service I have collected from the Division an average of \$25.00 per month and nothing on my original investment to help the Division start off. The remuneration for office space, telephone, and stenographer has only been available for the last two years. The products of some plan services are not worth \$5.00 a set. Some are worth more than is asked.

"It is my understanding that it has never been the aim of The Architects' Small House Service Bureau to educate the public to the idea that the value of a set of plans for a small house was \$25.00 or \$50.00, or any other set price, for we in the profession know that the service of the architect cannot be set at a fixed price. The value of his service depends upon his skill in his profession. The

American Institute of Architects recognized this when it issued its 'Schedule of Minimum Charges.'

"Large profits? It is to laugh."

From Wilfred W. Beach, Architect, Chicago, Illinois.

Mr. Russell F. Whitehead,

Editor, PENCIL POINTS

DEAR MR. WHITEHEAD:

"After reading the 'Letters Concerning the Architects' Small House Service Bureau' in your October issue, I am constrained to voice my opinions on the subject, after holding off these many years. To a certain extent, this discussion is distinctly one-sided, confined as it is almost entirely to architects who have no interest in planning 'houses of not more than six primary rooms.'

"The 'holier than thou' attitude of those who insist that the product of The Architects' Small House Service Bureau far transcends the output of the average practitioner along the same line may be warranted—or may be open to argument. My own inspection of the Bureau's working drawings leads me to suspect that many of them were designed by draftsmen lacking intensive experience and contact with clients along this line, hence much of the 'improvement' is in exterior design at the expense of plan.

"Be that as it may, if we are to assume that architecture is primarily a *business*, by means of which the majority of us attempt to earn a livelihood, there is a distinct question as to the business acumen that would be exhibited by the big men in the profession putting out complete standardized working drawings of the type of buildings upon which they depend for their profit, and selling sets of blue prints and specifications of these buildings at reduced prices. Is it not equally obvious that the small architect would never have been so foolish as to have fathered these small-house plans?

"In the first few years of my own practice, I welcomed the small-house client, whose work, though not in itself distinctly profitable, served to increase my clientele and to stabilize my organization. As I outgrew the need of these 'pot boilers,' I was glad to be able to increase my charge for this type of service, even though the volume of it was thereby materially reduced. But I cannot see that either the profession or the public was benefited in any great degree by having the Bureau compete at reduced prices for this small-house business—and thus drive the novice into seeking more important work at a cut commission. He will continue to make a living at the expense of the public—that portion of the public seeking something cheap—and some of his work will be good and much of it bad, whether the product be inconspicuous or monumental.

"The subject is too involved for true analysis, but it has seemed to me that, if the Institute could have had a real sympathy for the problems of the small architect as well as for the unfortunate clients he was so abusing, the Bureau would have been made to function through those offices that were doing the majority of this business and have conducted its educational campaign where it would have done the most good, within the profession (where it would have been appreciated) instead of before that cold public, upon whom the major impress has been a presumed realization of 'how little the blue prints are really worth and what fabulous profits there be in architecture.'

"What boots it that the Institute 'gets out from under' by its naïve statement 'That it approves the idea only'? What more does the Bureau need—or to what could the

(Continued on page 886)



# HERE AND THERE AND THIS AND THAT

CONDUCTED BY RWR

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

The publishers reserve the right to publish any of the material, other than the prize winners, at any time, unless specifically requested not to do so by the contributor.

PRIZES FOR THIS month have been awarded as follows:

- Class I—George Nelson of New Haven, Conn.
- Class II—Hunter Barrington of Santa Monica, Cal.
- Class III—Stephen V. D'Amico of Pittsburgh, Pa.
- Class IV—H. C. Taylor of Bartlesville, Okla.

Don't forget the new heading for this department. A total of fifty dollars in prizes will be awarded. Competition closes on December 10th at 5 P. M. For detailed information see the November issue, page 807.

For those of you who have made your own Christmas cards, a special competition will be open from now until January 6th. Each competitor may submit as many cards as he wishes but they must be of his own design. If you haven't already started to work on your cards you may find some helpful suggestions on pages 870 and 871.

Designs in any medium will be eligible for the ten dollar prize. The winner will be published in the February issue of this department.

For your immediate consideration, however, the new heading for **HERE AND THERE** is the thing!

It may be a bit early, but here's hoping that Santa Claus will fill your stocking with everything you want and that everybody has a very **MERRY CHRISTMAS!**

We want to call your attention to a letter from Mr. Oliver Twitwell Oliver in which he thanks Mr. Laidlaw for boosting his *Competition for the Corner Stone of a Gasoline Filling Station*. It will be recalled that the program for this competition was printed in the Here & There Department last month. Mr. Oliver Twitwell Oliver's letter is printed on page 879.



"BROWNING'S HOUSE"

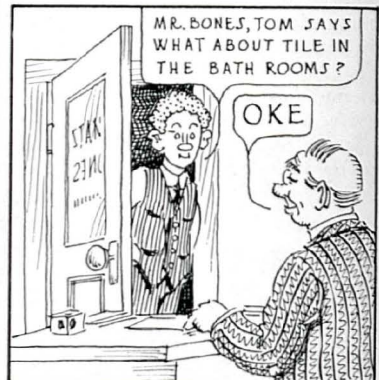
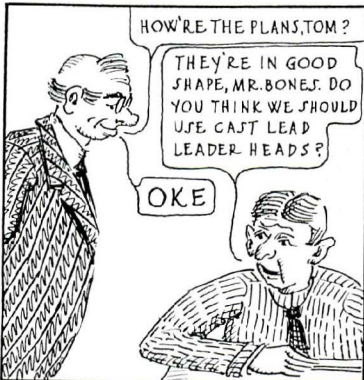


"PRAGUE"

PENCIL SKETCHES BY GEORGE NELSON  
(PRIZE—Class One—November Competition)



•THE•BOSS•GOES•IN•FOR•SLANG•  
•AND•EFFICIENCY•  
•WITH•UNEXPECTED•RESULTS•



DRAWN BY STEPHEN V. D'AMICO, OF PITTSBURGH, PENNSYLVANIA  
(PRIZE—Class Three—November Competition)



## HERE AND THERE AND THIS AND THAT

OLIVER TWITWELL OLIVER  
ARCHITECT-AT-LARGE

November 8th, 1929.

Byron F. Laidlaw,  
Office of Benjamin Wistar Morris,  
101 Park Avenue,  
New York, N. Y.

MY DEAR MR. LAIDLAW:

Words fail me in expressing my gratitude to you for your noble and unstinting efforts in promoting the competition to complete my Gasoline Filling Station on 42nd Street. I feel that your time and generous labor should be worthily honored. In these times of great financial stress and strain so full of moments of inertia and radii of gyration this unselfishness, this sacrifice on the altars of the oil octopus needs more than just a hand-out of thank you. I therefore am of the unshaken opinion that an honorarium in accordance with the value of your valuable and unreplaceable time should be accorded you. Therefore I am enclosing you a check (for exactly no dollars and one cent) that I hope most sincerely will repay you for all this effort for the promotion of fine solid architecture. Will you extend to Messrs. Geesebone, Von S. Walter and H. R. Hutchins my cordial and irrepressible greetings for their help in this great overtaking.

Believe me, most sincerely yours truly,

(Signed) OLIVER TWITWELL OLIVER.

### DRAFTING ROOM LIMERICKS

By Hunter Barrington of Santa Monica, Cal.

(PRIZE—Class Two—November Competition)

A man who was called a designer  
Set forth for a cruise on a liner.

His hunger for art  
Was pronounced from the start,  
But his hunger for victuals was minor.

An art connoisseur who collects  
Rare treasures quite often reflects—

"The sign near the door  
Of the curio store  
Should sometimes be read 'ART OBJECTS.'"

A draftsman who smoked cigarettes  
Had moments of sober regrets.  
Burnt holes on his tracing  
Got worse with erasing  
And contractors took 'em for jets.

A bashful young draftsman named Cox  
Went shopping to purchase some smocks.  
The girl in the store  
Cast her eyes to the floor  
When he asked, "Do you smell artists' socks?"

### ARCHITECT'S SPECIFICATIONS FOR A WIFE

By H. C. Taylor of Bartlesville, Okla.

(PRIZE—Class Four—November Competition)

BIDS: The Architect reserves the right to reject any and all applicants.

MAINTENANCE: The applicant will be held responsible and shall make good at her own expense all damages done to the Owner's heart during the period of courtship, and if awarded contract must guarantee to keep Owner well fed and satisfied for the rest of his natural life.

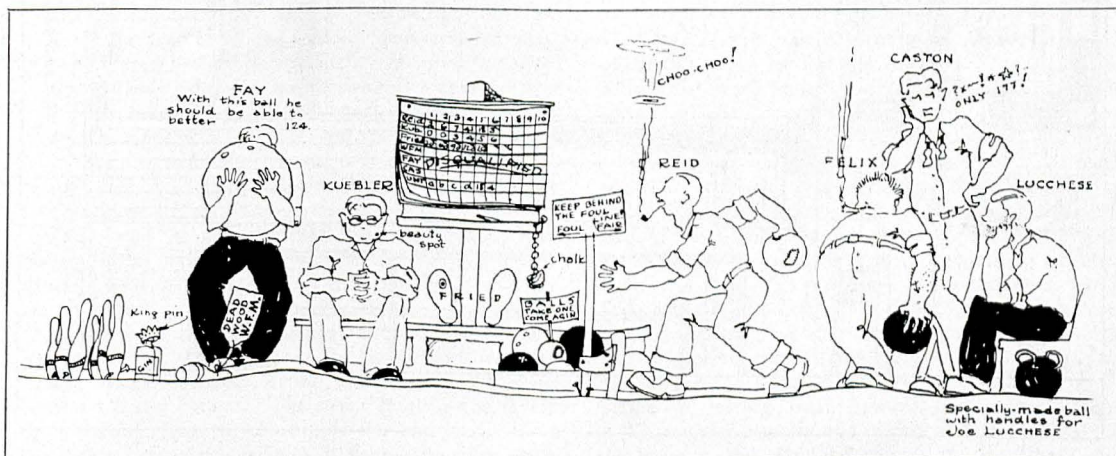
GENERAL CONDITIONS: Must be blond or equal. Must be five foot two with eyes of blue or other approved make. Rear elevation must be in keeping with other like parts, and shall not overbalance the rest of her structure. Must have brains as well as beauty, this fact must be certified to by the latest certificate of a national Correspondence School.

PAINT: Only a first class paint job will be accepted. Paint must be applied in a neat and workmanlike manner, with no streaks, smears, wrinkles or other blemishes.

FEES AND PERMITS: All Minister's fees and Permits to be married, will be taken care of by the Owner (otherwise Architect).

HEATING: Must maintain a uniform temper, and not first be hot and then cold or vice versa. Must guarantee a back that will keep the Owner's feet warm when the temperature outside stands at twenty below zero.

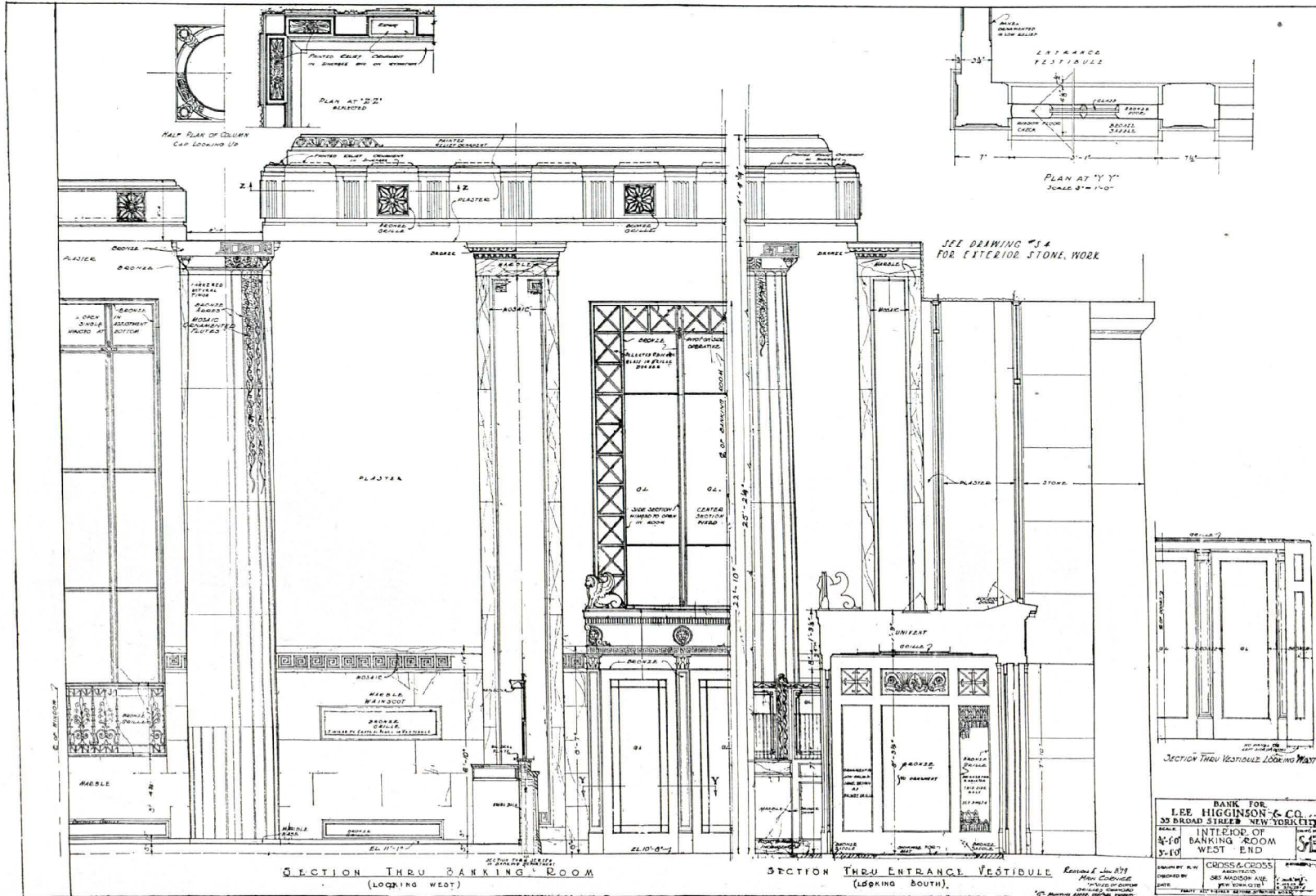
PAYMENT: Accepted applicant will receive Owner's hand at altar, and 85% of his kisses every two weeks or oftener if cause can be shown that payment is due.



"THE BOARD OF TRANSPORTATION BOWLING CLUB MEETS"—CARTOON BY THOMAS S. ARCURI, OF NEW YORK



PENCIL POINTS FOR DECEMBER, 1929



DETAILS OF CONSTRUCTION—INTERIOR OF BANKING ROOM FOR LEE, HIGGINSON & COMPANY, NEW YORK

CROSS AND CROSS, ARCHITECTS

(See also page 884)



sought, will be directed to a real architect? Is he not as apt to be turned over to some draftsman, perchance a direct employee of that branch of the Bureau?

"Is it not possible that the Institute, in its commendable but, possibly, misguided effort to assist that portion of the public who were not the direct clients of ninety-nine per cent of its membership, has, as a matter of fact, become godfather to a child that bids fair to appropriate all the mush-and-milk that should be the allotment of its own infants?"

"Verily, there be at least two sides to the picture."

A LETTER FROM A. K. ROOT,  
GENERAL MANAGER OF ACCESSORIES DIVISION,  
AMERICAN RADIATOR COMPANY

PENCIL POINTS.

GENTLEMEN:

Extract of a letter received from Dr. Oliver A. Lothrop, 151 Beacon Street, Boston, dated August 16th:

"Last year I installed a new Gas Heater on my low pressure, single pipe vapor system. The radiators in the house were not changed. They were miscellaneous types of old steam radiators. Some were of your older models, both hot water and steam. One chamber had an old steam radiator of 48 ft. The steam filled this radiator satisfactorily but it was not large enough, as the room required about 65 ft. I then asked my steamfitter to put in a new radiator for me. He chose one of your new models of 72 ft., 12 sections, 5 columns. It was a hot water radiator and he told me you made no more steam radiators and could not get one.

"This radiator did not heat the room as well as the old one, so I took this one out and put in a 6-column one supposed to give 84 ft. of radiation. This was only slightly better and I made the observation that the steam entered the radiator, passed through the top and warmed and closed the air valve. It then heated the top and worked down the sides, but the lower quarter never heated, except the two end sections.

"Evidently these water heaters, when used with steam or vapor, are not vented right and we get an air pocket and, therefore, do not get full value out of the size we order.

"In a patient's house I visited, I noticed this same cold area. Mr. . . . , an engineer I spoke to, said he had cases like mine and was relieved by tapping the radiator in a different place. This was tried on mine but helped only slightly because they had to locate the tapping in the middle connection between two columns, which is too high. He now suggests that the only thing that can be done, if we cannot get a steam radiator, is to plug the next to the last section at the top—more expense and questionable result.

"All the trouble has cost me over a hundred dollars for a thirty-dollar radiator and nothing gained. That is why I am writing you for advice and help."

This letter is typical of thousands of cases where owners suffer because radiators on steam jobs do not develop their rated capacity—the reason being that they are air bound.

A few years ago, all principal radiator manufacturers standardized on water radiators for use on both water and steam. These have the section connected by the nipple both at top and bottom. The steam entering the radiator short circuits along the top nipple tier and closes off the Air Valve before the radiator is vented—leaving an air

pocket that naturally prevents the radiator from working properly. Thousands of dollars have been spent unnecessarily by the trade who does not realize the cause of this trouble and who, accordingly, puts in extra sections, as in the case here recorded. A few wise contractors, who have discovered that their radiators were air bound, are resorting to the expedient of putting a blind nipple in the top of the next to the last section so as to divert the steam travel and protect short circuiting from closing off the Air Valve prematurely. This also is a cumbersome and expensive method.

Leading engineers have recognized this condition for some time, as evidenced by extracts here quoted from "Plumbers Trade Journal"—issue of November 15, 1928:

"The use of hot water radiators for steam has brought up another refinement which is the use of some sort of stopper in the top port of the end section, as at D in the diagram. This directs the steam across the top and down into the end section, then up to the air valve at B. The original arrangement with the air valve at C is said to leave an air pocket in the heart of the radiator, as at D."

also from "Domestic Engineering"—issue of January 12, 1929:

"Don't use hot-water pattern radiators for (one pipe) steam heating, unless the last section (end opposite the steam end) is connected up with a blind nipple on top. (Air Valve is closed by incoming steam or vapor from condensation before all of the air is out of the radiator, resulting in sluggish circulation.)"

For the good of the industry and for the protection of both the trade and the public, this subject should be given emphasis editorially by your publication. As indicated, there are several solutions to the problem. We think the best solution is found in the In-Airid Air Valve, which was designed specifically to meet the new venting problem when radiator manufacturers changed their practice and discontinued the manufacture of an independent steam type of radiation with nipple connections only at the bottom. It might be argued that we had a selfish motive behind this thought based on the more general use of the In-Airid Valve but the bigger idea is that the trade is in difficulty as are also architects and engineers and the public at large. Steam heating is being criticized unjustly and leaders of thought in our industry should undertake the education of the trade and show it the several ways out of the difficulty.

#### ARCHITECTS' CLUB OF BROOKLYN

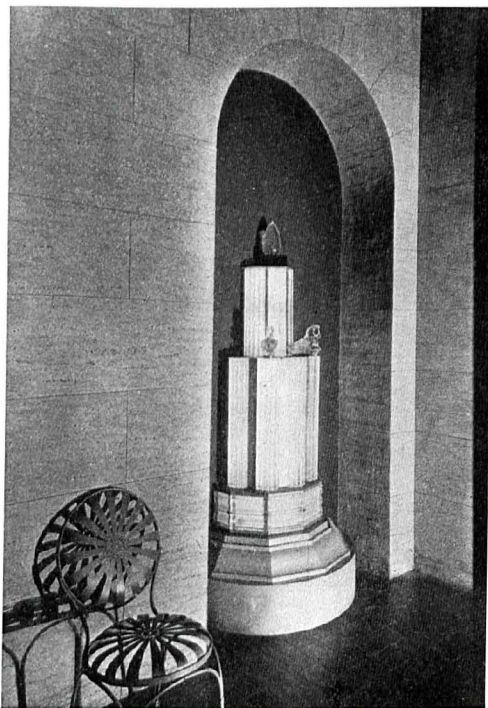
ON OCT. 21st, a regular meeting of the Architects' Club of Brooklyn was held at the Brooklyn Edison Co.'s auditorium on Pearl Street. This was an unusual event on account of the Edison "Golden Jubilee."

The attendance was very large. Preceding the meeting a buffet supper was given by the Edison Co. The meeting was then convened and was addressed by Messrs. Harold and Balkan of the Edison Co., who extended their invitation to the architects and expressed their sincere wish to co-operate with them in matters pertaining to electric light and power. We were then addressed by Mr. D'Andrade of the Edison Co., who delivered a lecture on modern lighting, which was very interesting and left a lasting impression on all those present. He also expressed the desire of the company to help the architects and the public in solving their lighting and power problems.

The regular meeting of the club then took place. Later we went to the electrical exhibit in the Edison offices.



PENCIL POINTS FOR DECEMBER, 1929

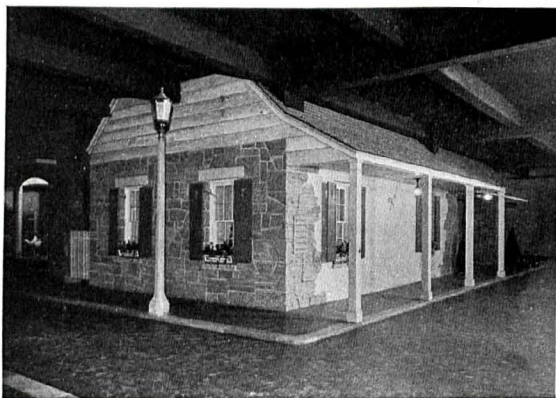


*Above*  
MAIN STREET  
AND THEATRE

*At Left*  
FOUNTAIN  
OF LIGHT

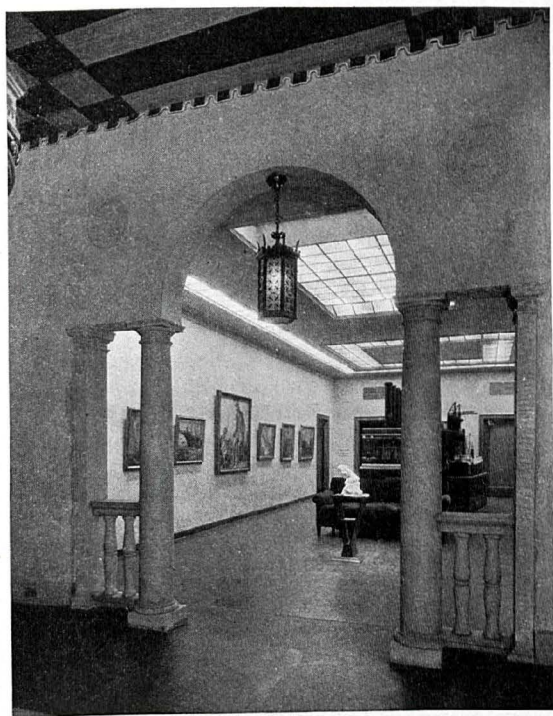
*At Right*  
ILLUMINATED  
FOUNTAIN  
IN LOGGIA

*Below*  
SMALL  
RESIDENCE  
AND  
DEPARTMENT  
STORE  
WINDOWS



VIEWS OF "LIGHTING INSTITUTE" AT GRAND CENTRAL PALACE, NEW YORK—F. P. PLATT AND BRO., ARCHITECTS





ART GALLERY AT LIGHTING INSTITUTE

F. P. PLATT AND BRO., ARCHITECTS

## A PERMANENT LIGHTING LABORATORY

A PERMANENT FREE EXHIBIT of extreme interest to all architects and specification writers is the Westinghouse *Lighting Institute* which has been in operation for some time at the Grand Central Palace on Lexington Avenue in New York. Within the limits of a complete floor in the building, occupying an area about equivalent to a city block, the architects for the job, F. P. Platt & Bro., built a street lined with typical small buildings such as might be found in any city—a small bank, a motion picture theatre, an art gallery, a garage, a residence, an electric merchandising store, a schoolroom, a florist's shop, a factory or shop building, a department store front, a loggia for a country club.

In each of these "buildings" they installed the most up-to-date and complete lighting and electrical equipment so that the observer can see in action all the modern lighting arrangements that are at his disposal when he has the problem of designing any one of these types of building. Technical information concerning lamps, fixtures, control apparatus, etc., can be obtained from the attendants upon request.

The Institute affords an opportunity for architects, specification writers, and draftsmen to acquaint themselves with a large variety of equipment and lighting apparatus in actual operation without having to spend a lot of time visiting different buildings. Incidentally there is a good deal of direct architectural interest in the show in seeing how the architects for the job solved some of the unusual problems which presented themselves.

The illustrations on this and the facing page give some idea of the scale upon which the Institute was constructed. It represents an investment of over half a million dollars.

## THOMAS HASTINGS

(Continued from page-869)

the palatial country house, of which the most notable examples are those of Mr. Murray Guggenheim at Elberon, N. J.; Mrs. C. D. Gambrill at Newport, R. I.; Commodore Benedict at Greenwich, Conn.; and H. M. Flagler at Palm Beach, Florida. His monumental works are all in a refined key, well studied, conservative of the principles of proportions as laid down by the authorities of the cinquecento in Italy who endeavored to fix standards by which art might be created or approximated by the use of rules. The pedestal to the Lafayette Monument in the Court of the Louvre at Paris; the excellent amphitheatre at Arlington Cemetery; the House of Representatives Office Building at Washington; the obelisks in the Circle at Buffalo; the William Cullen Bryant Memorial in Bryant Park, N. Y.; the improvement of the setting of the Washington Memorial column at Baltimore; the projected alterations to the United States Capitol building; the buildings at the expositions at Buffalo, St. Louis, and San Francisco; the New York Public Library; the City Halls at Portland, Maine, and Paterson, N. J.; Carnegie Foundation Building at Washington; Court House at Richmond, Staten Island; Bank of Toronto; and many other buildings accredited to Carrère and Hastings; as well as Mr. Hastings' more recent individual designs for the War Memorial Fountain projected for Central Park; War Memorial Arch and colonnade around Washington Square; all belong in the general classification of academic architecture albeit of a high type.

Mr. Hastings did not admire steel construction nor high buildings, regarding both as ugly expressions of greed. His early efforts in trying to decorate high narrow strips of building with late Renaissance motives as in the old Edison, Pierce, and Mail and Express buildings were all failures which he did not hesitate to describe as such. Of later designs his Transportation Building, Montreal, is the best.

Thomas Hastings was a descendant from early settlers in America on both sides of his family. His father, the late Rev. Dr. Thomas S. Hastings, was president for many years of the Union Theological Seminary in New York. He belonged to a number of the best clubs including the Knickerbocker, Century, and Piping Rock.

He received many honors in recognition of his work, among which were the Royal Gold Medal of the R.I.B.A., and the degree of L.L.D. from the University of Liverpool; also Mr. Hastings was a Member of the Institute of France and a Member of the Legion of Honor. He was a former president of the Society of Beaux-Arts Architects, Beaux-Arts Institute of Design, and of the Architectural League of New York, a trustee of the Academy of Arts and Letters, and of the Museum of French Arts, a Founder of the Federal Arts Commission, and during several years a director of the American Institute of Architects.

Mr. Hastings was an energetic, hard worker of quick aggressive personality, tempered by urbanity and enlivened by a ready wit supplied by a constant stream of irony. His philosophy was Aristotelian. As a man to work with he was joyous, highly amusing, and encouraging. Who that has ever worked in the office of Carrère and Hastings (and quite a number of his friends among young and able designers have done so) will ever forget his daily visits to each and his unfailing salutations, "Good morning. Oh, let's see this! That's nice, very nice. Very nice!" followed sometimes by a suggestion, a short discussion or criticism, pleasantly given, and his invariable parting words, "I like your architecture. Bully for you! Chouette!"

FRANCIS S. SWALES.





# SERVICE DEPARTMENTS

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

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

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

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

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

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

## THE MART

Prof. Earl D. Hay, Department of Mechanical Engineering, University of Kansas, Lawrence, Kansas, has the following copies of *PENCIL POINTS* for sale: June, 1920; February, March, and August, 1921; nearly all of volumes 4 to 10 of *The White Pine Series of Architectural Monographs*.

L. R. Johnson, 35 Strong Avenue, Babylon, N. Y., wishes to obtain copies of the January, February, and March, 1929, issues of *PENCIL POINTS*.

James L. Harrison, 1759 E. Kendale, Memphis, Tenn., has for sale the complete set of *PENCIL POINTS* unbound from Volume 1, No. 1, to the latest copy with the exception of the December, 1928, issue. He will not sell separately.

John G. Legel, Jr., 218 S. Main Street, Charles City, Iowa, has for sale the following copies of *PENCIL POINTS*: complete issues for 1926, 1927, and 1928, at \$3.00 per year; also March, and December, 1925, also copies of the *Western Architect*, 1921 to 1928, inclusive, and miscellaneous copies of *The American Architect*.

Robert E. Williams, 1319 No. Second Street, Harrisburg, Pa., wishes to sell the following copies of *PENCIL POINTS*: 1920, November, and December; 1921, complete; 1922, complete; 1923, all except January and December; 1924, 1925, 1926, 1927, and 1928, complete; 1929, January, February, April, May, June, July, August, and September.

Harold L. Lynn, 206 Delaware Avenue, Charleston, W. Va., wishes to purchase a copy of the December, 1928, and January, 1929, issues of *PENCIL POINTS*, and will pay fifty cents a copy. He also has a copy of *Architecture* for November, 1928, for sale. Price \$1.00.

A. L. Carter, 4840½ N. Ashland Avenue, Chicago, Illinois, has for sale a complete set of unbound *PENCIL POINTS* from June, 1920, to December, 1928, inclusive.

C. Engelkamp, 1813 Garrard Street, Covington, Ky.,

has the following copies of *PENCIL POINTS* for sale: August, September, October, November, 1921.

Proudfoot, Rawson, Souers & Thomas, 810 Hubbell Bldg., Des Moines, Iowa, have the June, and September, 1920, issues of *PENCIL POINTS* for sale.

Coffin & Coffin, 522 Fifth Avenue, New York, N. Y., wish to procure a copy of the February, 1928, issue of *PENCIL POINTS*.

S. J. Novotnick, 191 Fulton Street, Woodbridge, N. J., has the following books that he would like to exchange:—*Monograph of the Works of McKim, Mead & White*, 1879-1915, 100 plates; *Modern French Architecture*, 1899, edition with 97 plates of views. Both in excellent condition. *The Practical Requirements of Modern Buildings*, 1928 Edition; *Modern French Ironwork*, by Henri Clouzot, 1928 Edition, 36 plates 31" x 18"; *The Monograph of the Works of Moller, Meigs & Howe*, 1923 Edition, 212 pages 12" x 16". These three are brand new. Will exchange these for the *Work of Charles B. Platt* or *Dwight James Baum*; or books on late Georgian, New England or Colonial architecture, also Elizabethan, Jacobean, Norman, or American Colonial, or any good architectural late editions on residences.

Jean C. Laing, Librarian, University of Toronto, Toronto 5, Canada, would like to have the following copies of *PENCIL POINTS*: June, July, August, and September, 1920; January, February, March, May, June, July, August, September, October, and November, 1921; all of 1922 except May and August; February, March, April, June, July, August, and November, 1923.

## PERSONALS

HOWARD B. PEARE, ARCHITECT, and President of the Westchester County Society of Architects, has moved from 11 North Avenue to 202 North Ave., New Rochelle, N. Y.

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FREE EMPLOYMENT SERVICE ITEMS WILL BE FOUND ON PAGES 82 AND 84 IN THE  
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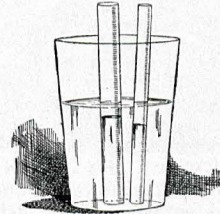


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**Wanted:** Thoroughly competent and diligent architectural draftsman with not less than ten years' experience who can assume charge of drafting room and see that drawings are turned out right from sketches. Mostly country house work. Requires man of good taste and appreciation of residence planning with considerable experience in such class of work and thoroughly familiar with frame construction, structural details, etc. Office is located in Connecticut. Write full particulars in first letter. Box No. 1245, care of PENCIL POINTS.

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**Position Wanted:** Licensed architect, 19 years' experience as draftsman, designer, chief draftsman, desires connection with New England or Middle Western architect. Capable of assuming entire charge of a medium sized office and getting results. Sketches, working drawings and specifications. Age 40, married, Gentile. Unquestionable references. Box No. 1249, care of PENCIL POINTS.

## PERSONALS (Continued)

(Continued from page 890, Editorial Section)

VICTOR GALIER has moved from the Society for Savings Bldg. to 201-202 Marshall Bldg., Cleveland, Ohio.

DANIEL DENISON STREETER, ARCHITECT, announces that he has opened an office at 101 Park Avenue, New York. The Brooklyn office remains at 217 Havemeyer Street. W. E. KITTLE, ARCHITECT, is opening an office at 521 Robeson Building, Champaign, Ill.

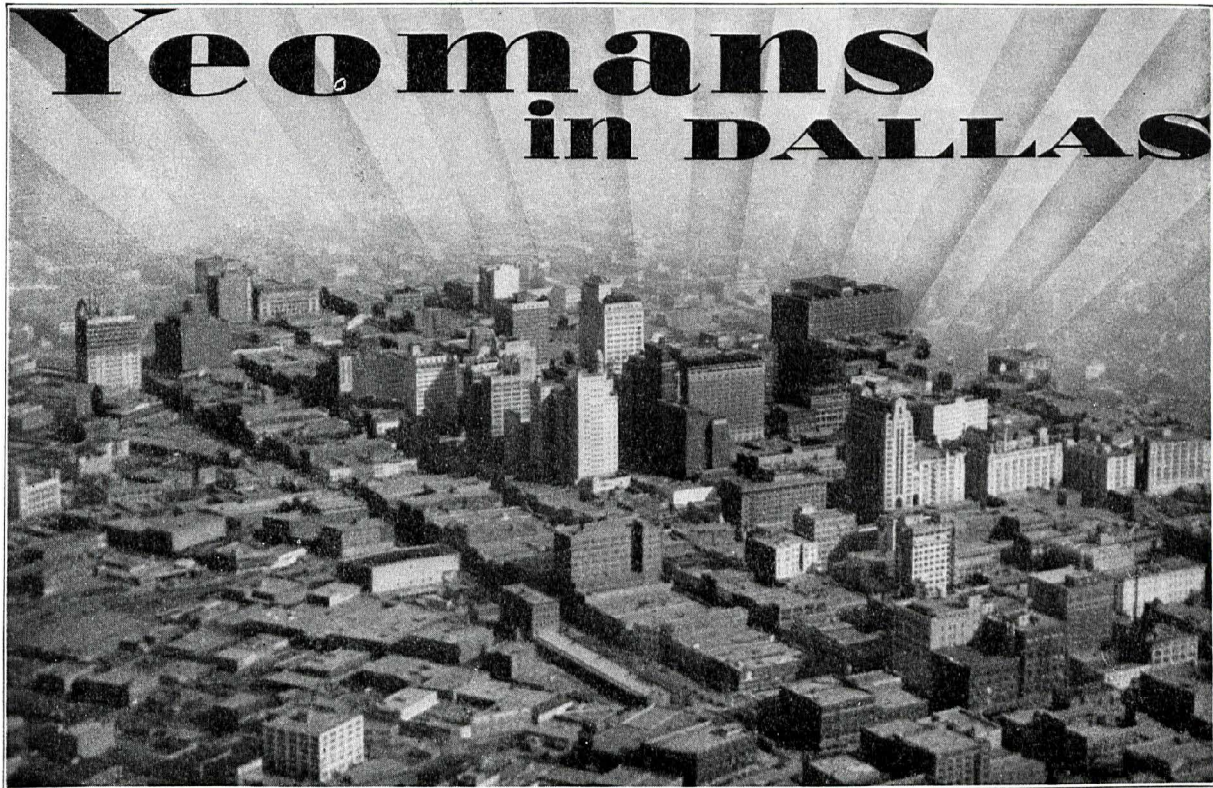
PAUL H. SMITH, ARCHITECT, has moved from 10 West Elm St., Chicago, to 1600 Peoria Life Bldg., Peoria, Ill.

LAWRENCE, HOLFORD, ALLYN & BEAN have moved from the Chamber of Commerce Building to 925 Failing Building, 5th and Alder Streets, Portland, Oregon.

CHARLES A. HAUSLER, ARCHITECT AND ENGINEER, and Harry Firminger, Associate, have moved from 642-643 Hamm Bldg., to 702 New Minnesota Bldg., St. Paul, Minn.

DAVIS & WALLDORFF, ARCHITECTS, have moved their office from 17 to 29 Whitney Avenue, New Haven, Conn.





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Maple Terrace Apts.	Methodist Publishing House
Morten Hotel	Leader Building
M. K. & T. Bldg.	Dallas High School
Kress Store	Grossman Bldg.
Higginbotham, Bailey, Logan Bldg.	Lamar School
Ferris-Dunlap Company	Harris Lipsitz Co.
Dallas National Bank Bldg.	Labor Temple
City Hall	Sam Houston School
Armour & Company	Haskell Bell Tel. Exchange
Highland Park High School	

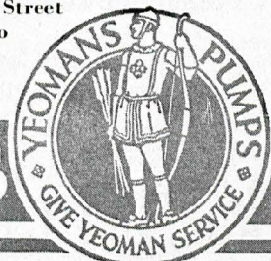
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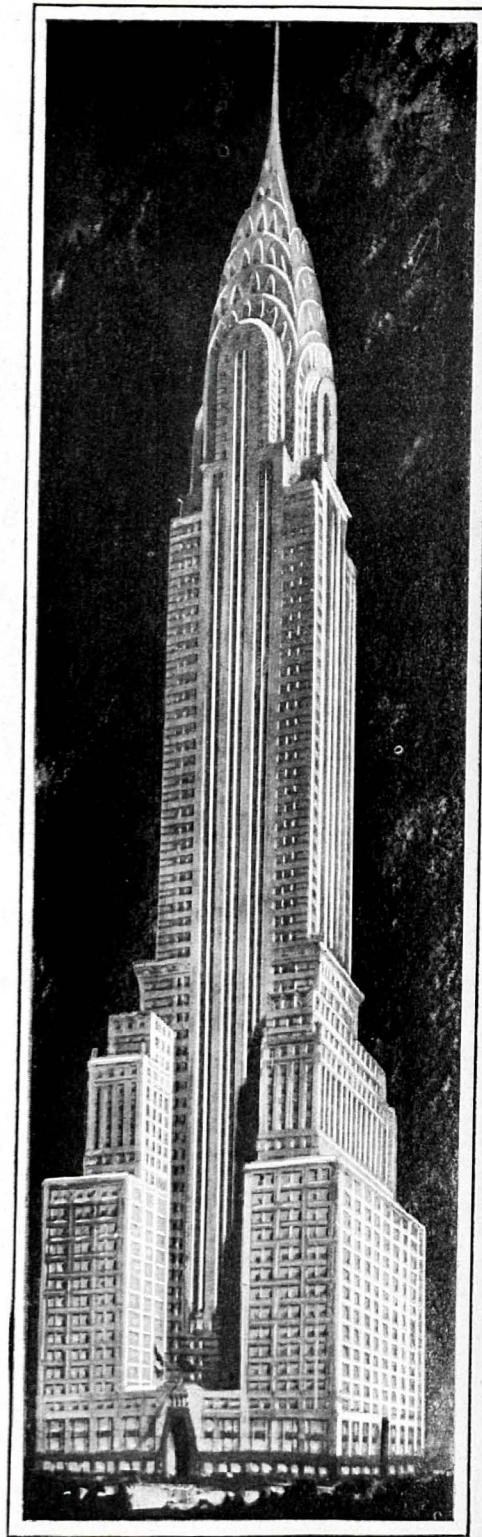
The set-back floors—the 24th, 27th and 31st—will also be furnished with Aluminum backed copings, Aluminum handrails, and handrail supports.

A large cast Aluminum flagpole holder symbolizing the winged cap on the Chrysler car will be placed above the main entrance on the fifth floor level, and from between its wings will arise a flagpole.

An architectural rendering of the Chrysler Building is shown at the right, and close up pictures of some of the Aluminum fabrications used in its construction will be found on the opposite page.

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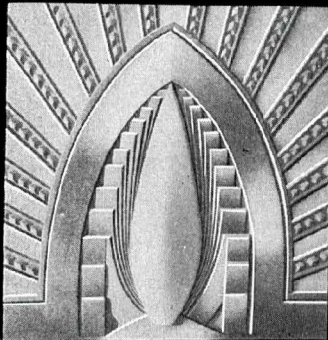
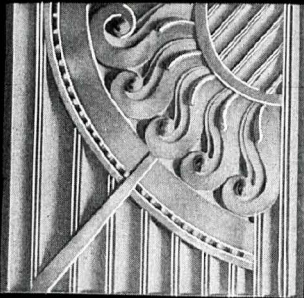
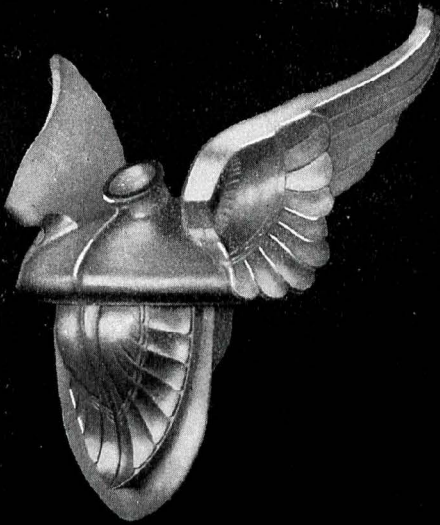
# ARCHITECTURAL ALUMINUM

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THE fabrications shown on this page—each of which is specified in the construction of the Chrysler Building—are excellent examples, both of the wide range offered by Aluminum in matters of ornamentation and design and of its usefulness as a building material metal.

A substantial saving in permanent upkeep is one very definite advantage. No painting is required to protect these castings from the action of the elements . . . for the material is non-corrodible and will last as long as the building on which it is placed. The permanency of the design detail is also assured, since the indented surfaces will not be filled and gradually obscured by coats of paint applied at intervals as a protective measure.

An added advantage is found in the fact that Aluminum will not develop rust, and hence will not streak and stain the adjacent surfaces.

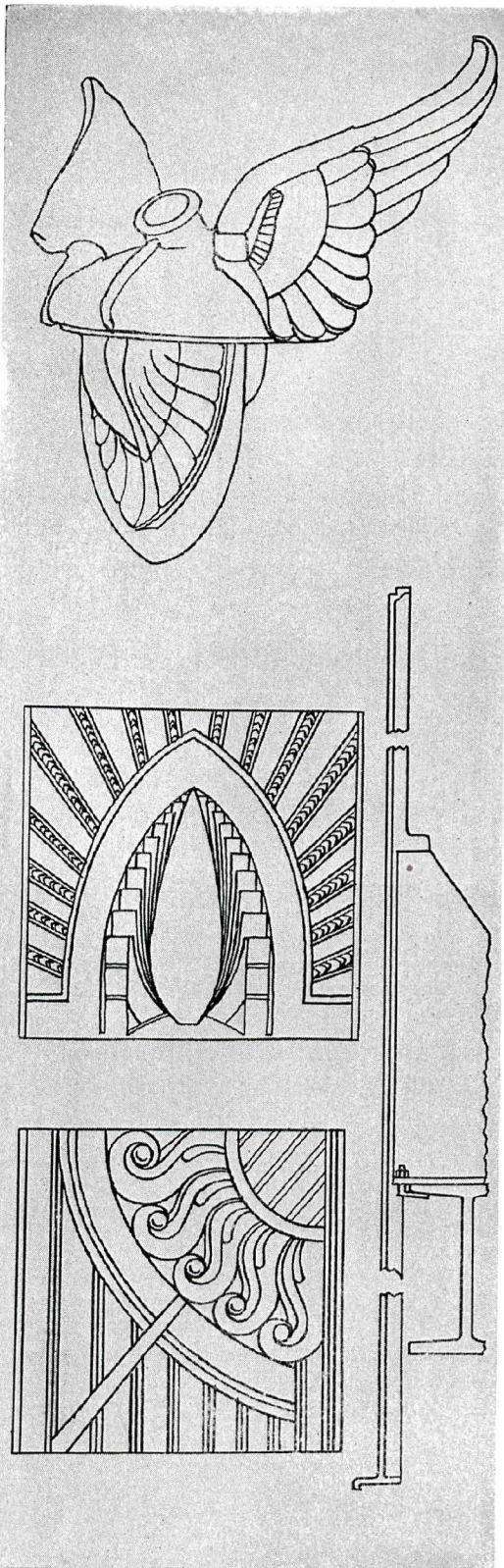
A booklet, "Architectural Aluminum," describes and visualizes many interesting uses of Aluminum in the architectural field. May we send you a copy?

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[[Design drawings and further details of the flagpole holder and spandrels used on the Chrysler Building will be found on the following page.]]

# ARCHITECTURAL ALUMINUM





[ This flagpole holder and the spandrels are described on the two preceding pages of this issue ]



THE winged holder, containing a flagpole socket, shown at the upper left in simple outline detail is 7' 9" wide, 7' 9" long, and 4' 10" high from base of wing to tip. It is finished in the natural metal and highly polished.

The two decorative spandrels shown just beneath (with working detail) are approximately 4' 10" square with a wall thickness of  $\frac{1}{4}$ ". They are sand cast, sand blasted and high lighted.

All of these fabrications (including the cast window sills) are made of No. 43 alloy, having a silicon content of 5%. The weight does not exceed .097 pounds per cubic inch and the average tensile strength is not less than 17,000 lbs. per square inch.

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Frank A. Moore, Architect

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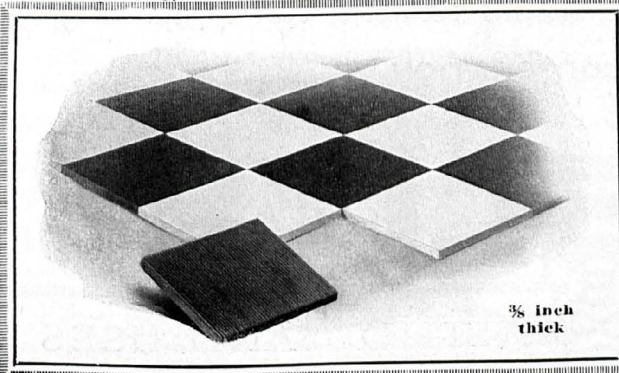
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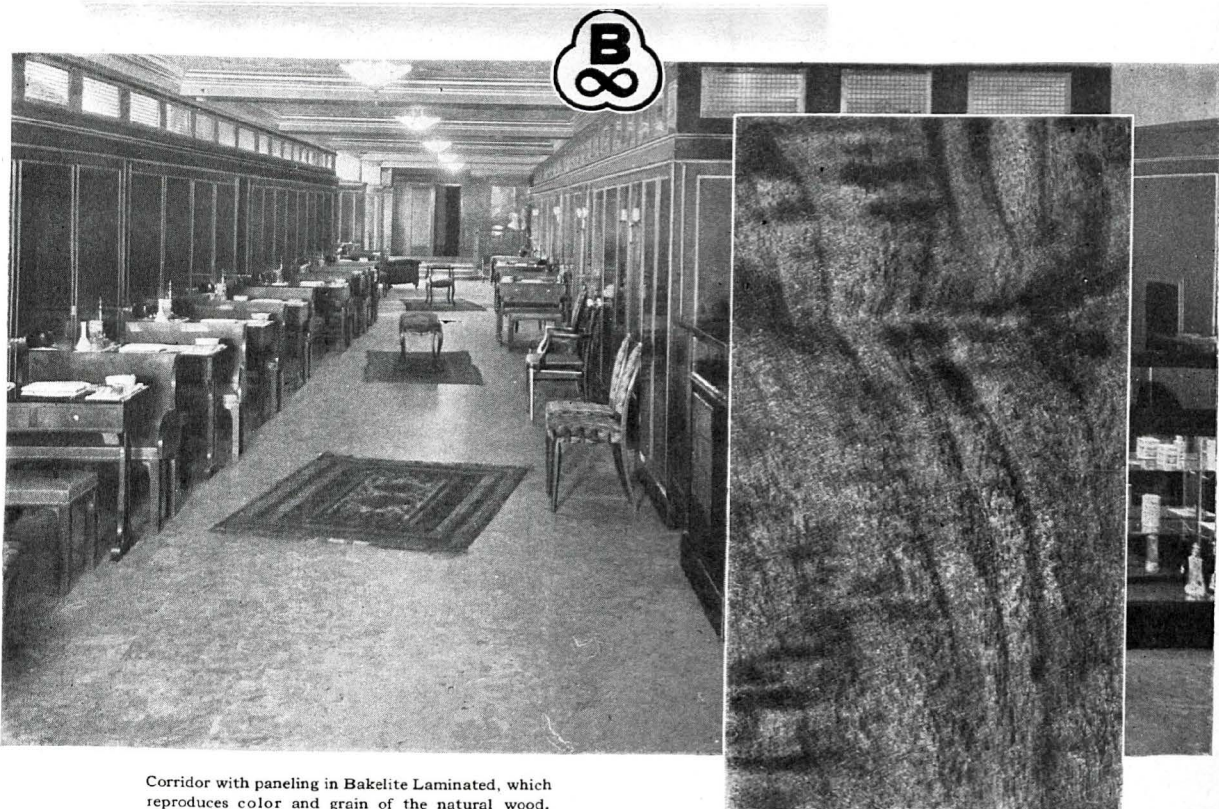
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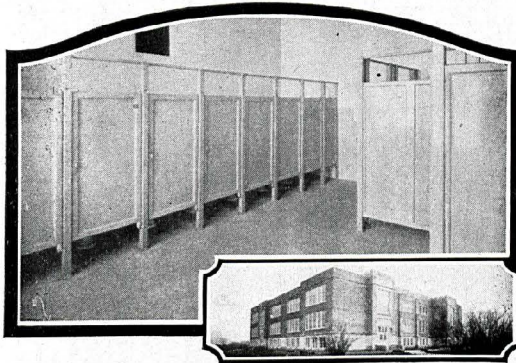
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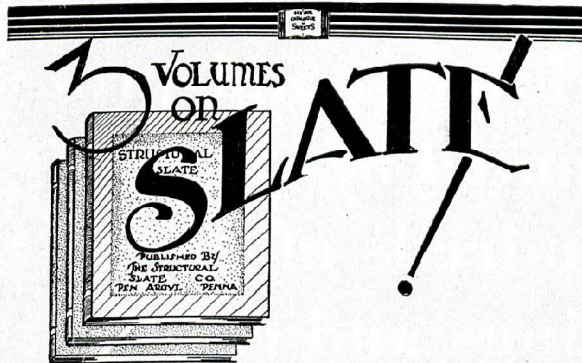
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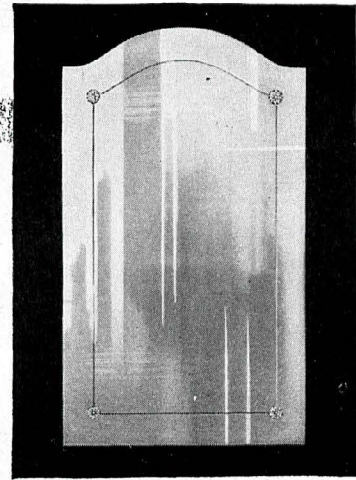
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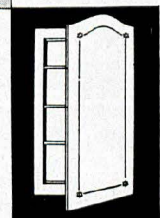
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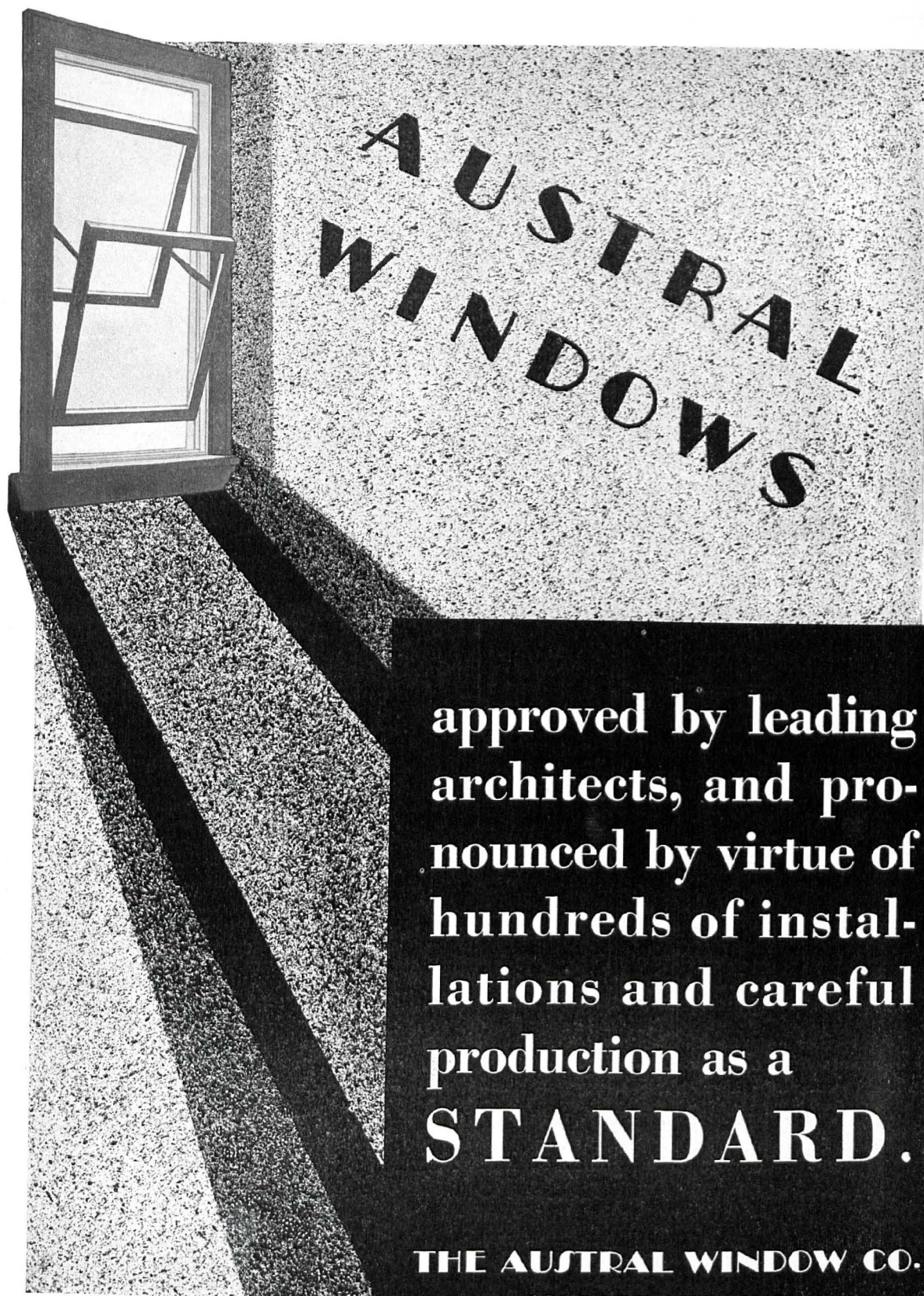
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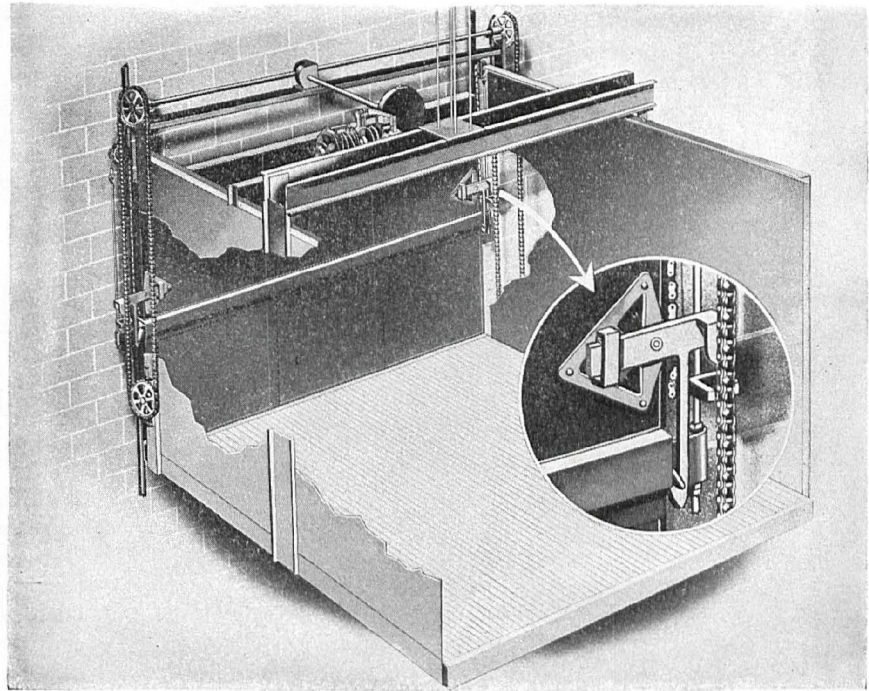
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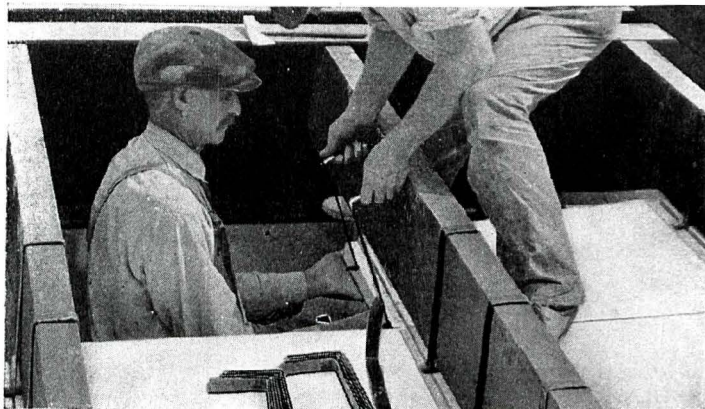
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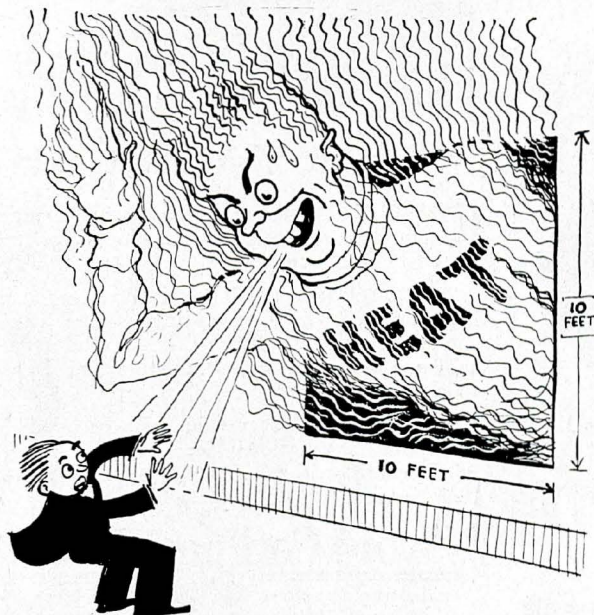
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What he said was; that by caulking a ten story apartment house with Vulcatex, a saving of ten times its cost was effected in a single year. Saved in the heat kept in the building.

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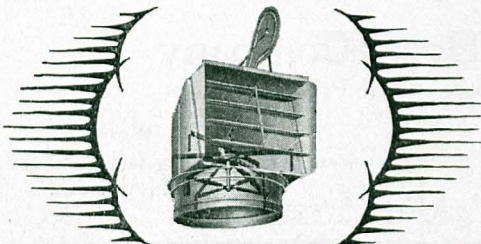
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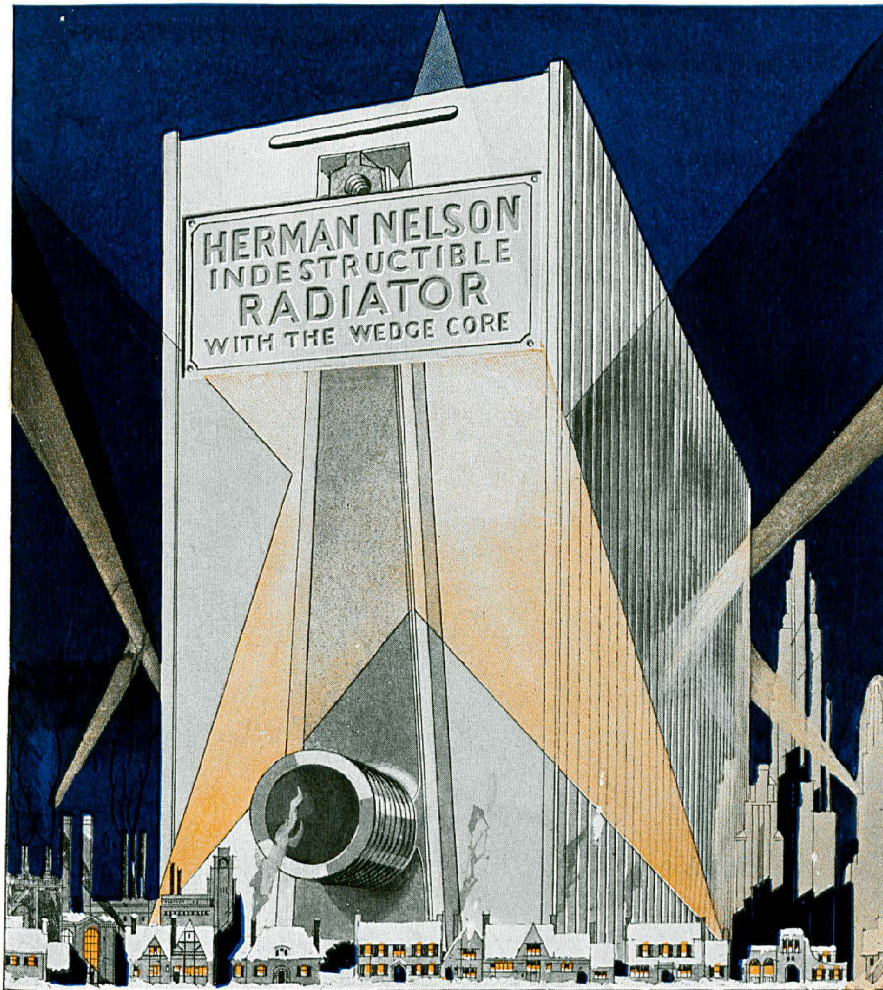
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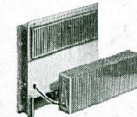


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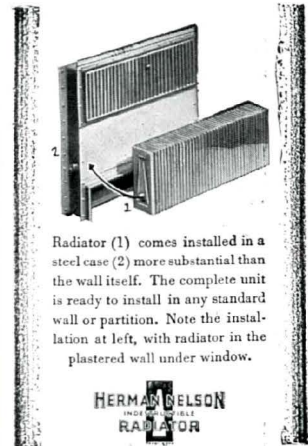
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INVISIBLE  
RADIATOR

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## by DAHLSTROM

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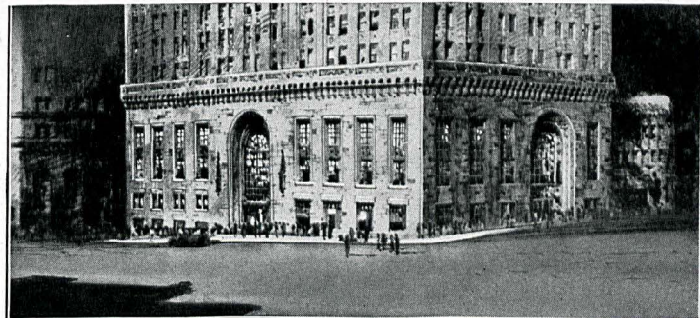
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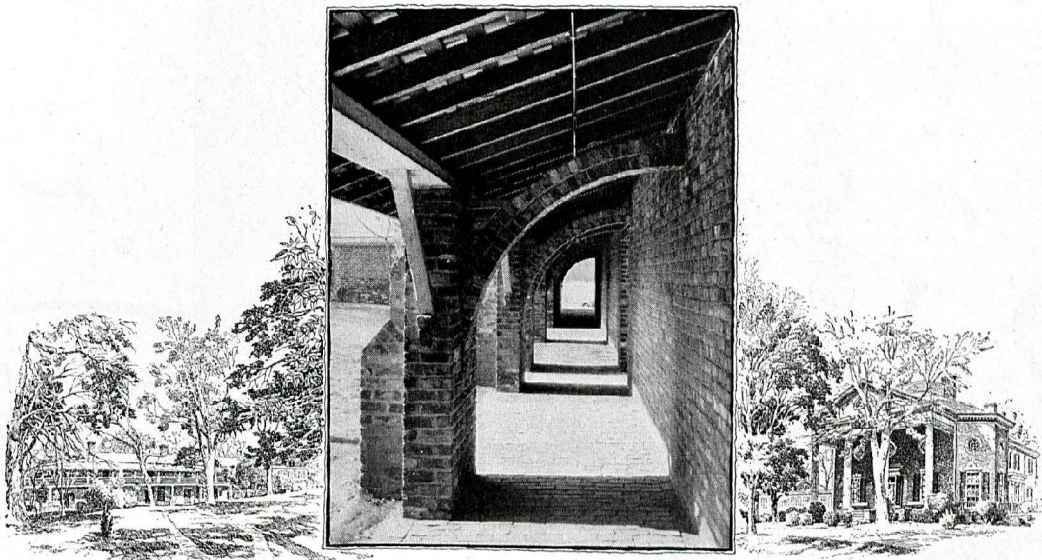
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One of Virginia's Rarest Gems

Being Brick Tale Telling  
Number XXVII

**Y**OU say, Farmington? Farmington? I don't seem to have heard of it among Virginia's notable early-time homes. No that's so. It's not one of the James River Romantic School, so to speak. It belongs rather to the Monticello School, as like it, it is located on a commanding hill top, and looks away to a long sweep of the Blue Ridge Mountains. Furthermore, it is located but a few miles out of Charlottesville, and Jefferson had a hand in designing the "Big House" portion.

It dates back to the pre-Revolutionary days. Up to a short time ago, it had been owned by a continuous line of the Wood family.

Tradition has it, that after several futile attempts at securing a satisfactory front, Jeffer-

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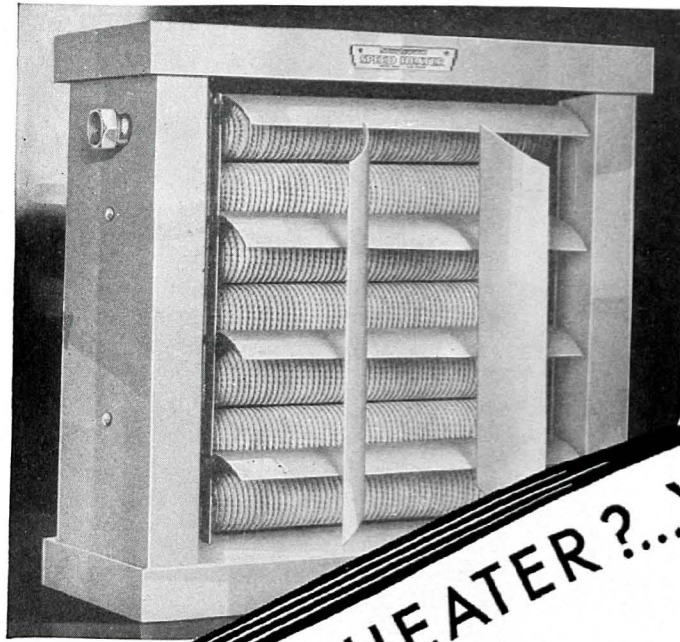
One of the interesting features of the guest quarters is their galleried treatment, reminiscent of, "down New Orleans way". The interesting brick buttressing, is a feature of the passage, leading from the guest galleries to the walled garden and the stables.

In the recent additions to the Big House, our Jefferson size, mould-made brick were used. When there's a bit more time-toning of the rest of the materials, it will take close scrutiny to tell which are the old, and which the new. For such is the yester-year effect, the bricks we are making way down here in old Virginy, so unfailingly give.

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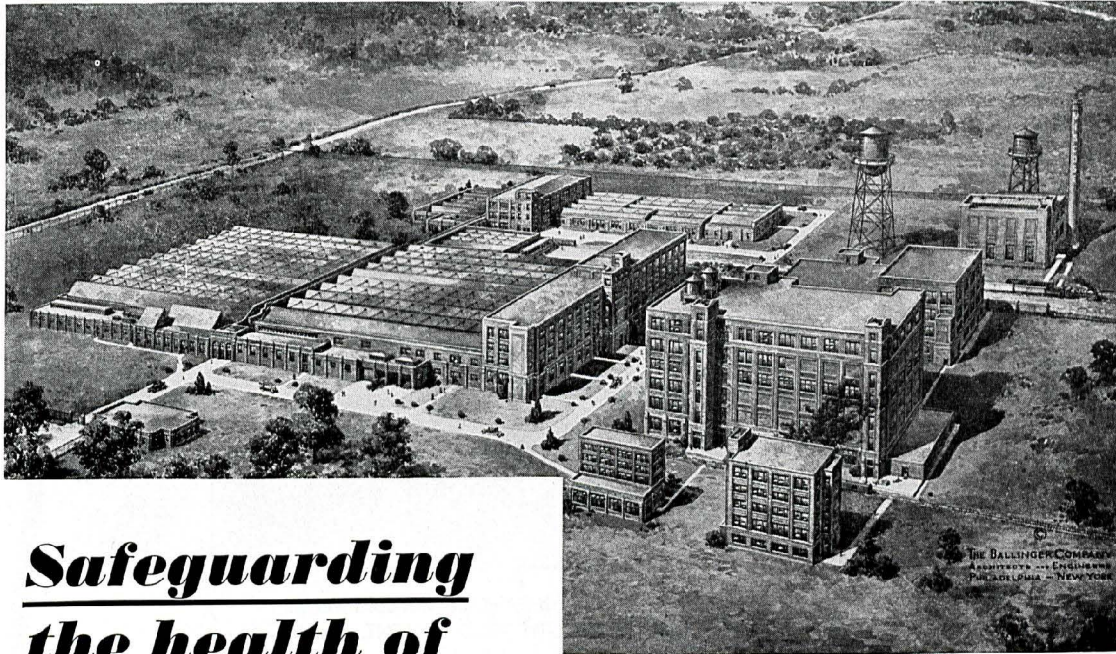
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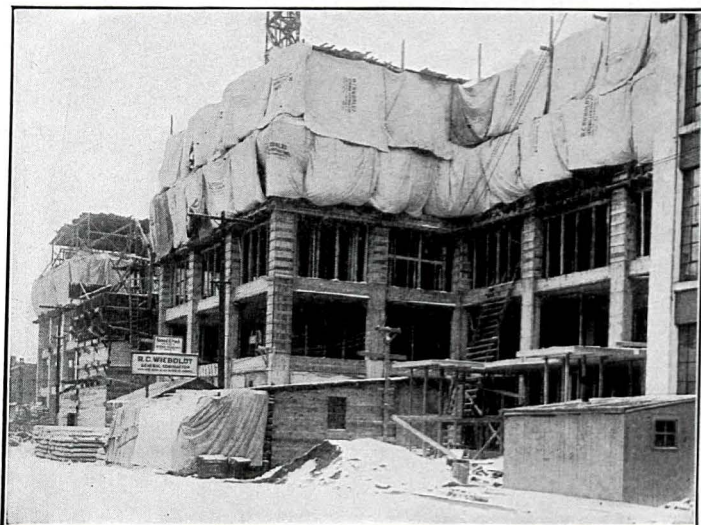
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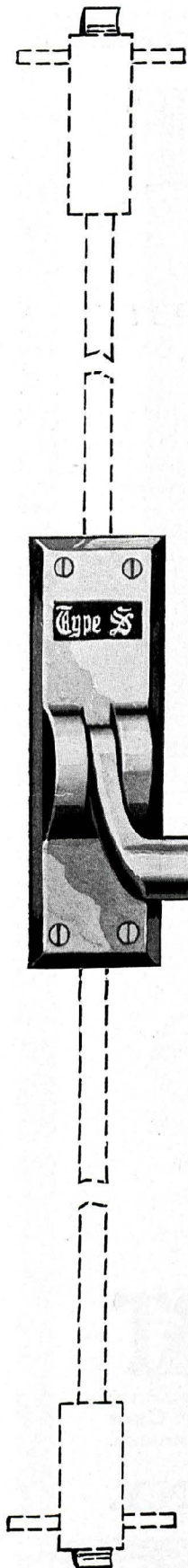
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FRANCIS A. NELSON, Architect

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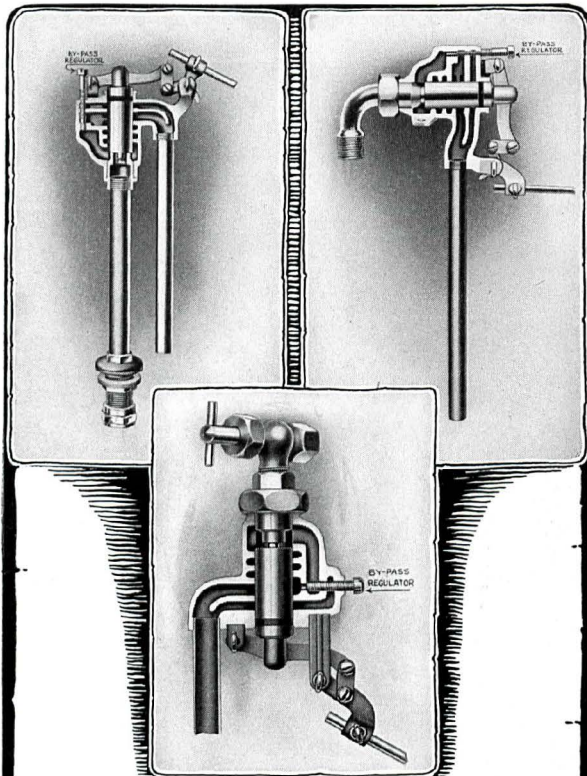
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The American Furniture Mart, Chicago  
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## On Big Buildings

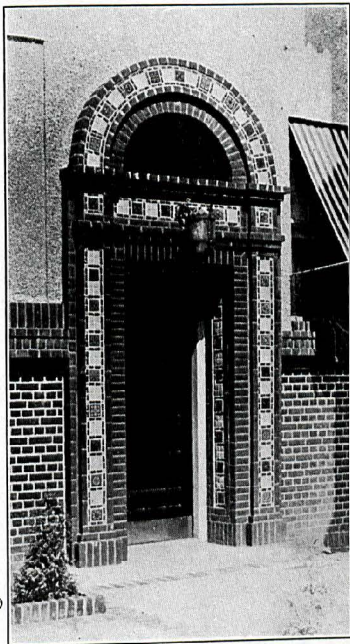
The ÆOLUS IMPROVED DOUBLE SYPHON Ventilator is quietly doing a good ventilating job on pent houses and lofts of many outstanding office buildings. Made in fourteen materials and of any desired capacity.

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## Only the trees can whisper the age of these beautiful homes

SCATTERED throughout New England are homes so time-honored, so much a part of another age, that in many cases no definite record of their construction date remains. Yet written deeper than pen can write, is the patience and care of the men who labored to build them. For like all the early colonists, their work was their pride. And like all the early colonists, too, they chose White Pine to work with.

In this good wood they found a quick response to hammer and chisel. The joints stayed tight, the surface remained unmarred by cracks or craze. The pine responded with a beautiful finish to oils, paints and enamels and held its beauty even after long years of exposure. It was the perfect building lumber.

It was . . . and is today. For in the Inland Empire of the Great Northwest stand virgin forests of genuine White Pine. The qualities that recommended it to early craftsmen are inherent in this pine. Inside or outside—for porch columns, siding, entrances, cornice work, for all interior and exterior trim, Idaho White Pine fits the requirements exactly. And for your protection, Idaho White Pine is trade-marked. Look for that imprint. Western Pine Manufacturers Association, Portland, Oregon.

IWP

*This trade-mark is imprinted on Idaho White Pine at the mills—and is a definite protection for home owner, builder, architect and lumber dealer*



Main entrance of the Webb House, Wethersfield, Conn.  
Built of White Pine in 1753, and still standing

Idaho  
GENUINE  
White Pine

THE PINE WITHOUT A PEER

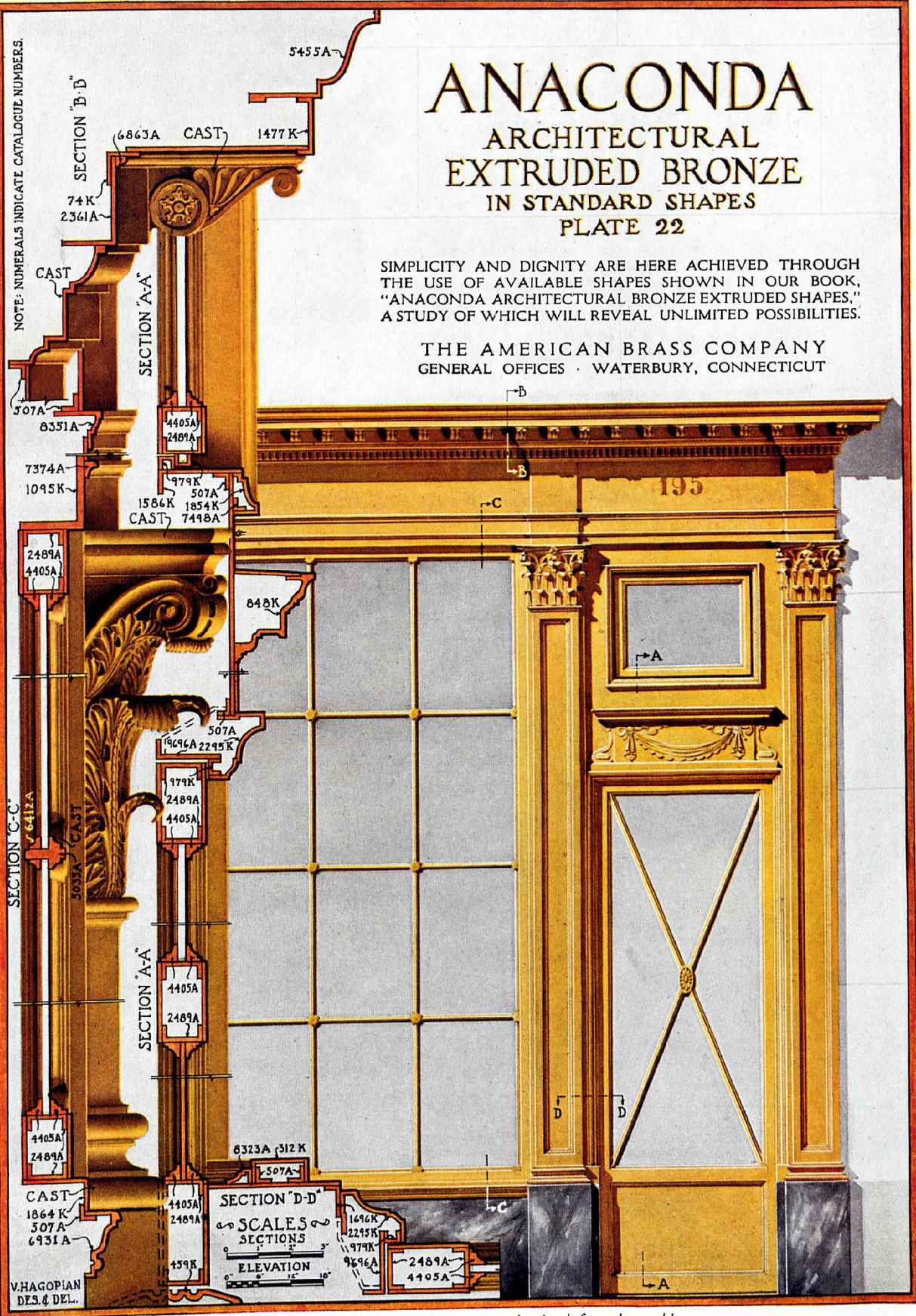


# ANACONDA

## ARCHITECTURAL EXTRUDED BRONZE IN STANDARD SHAPES PLATE 22

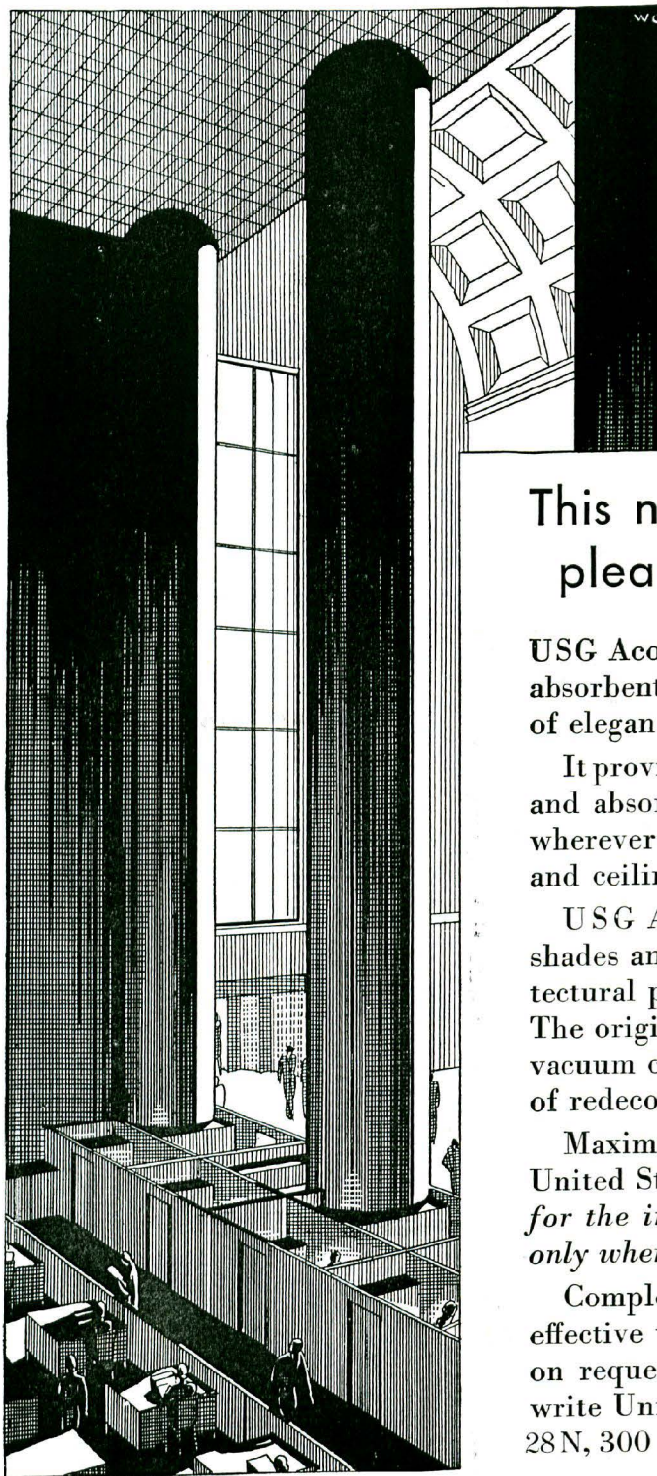
SIMPLICITY AND DIGNITY ARE HERE ACHIEVED THROUGH THE USE OF AVAILABLE SHAPES SHOWN IN OUR BOOK, "ANACONDA ARCHITECTURAL BRONZE EXTRUDED SHAPES," A STUDY OF WHICH WILL REVEAL UNLIMITED POSSIBILITIES.

THE AMERICAN BRASS COMPANY  
GENERAL OFFICES · WATERBURY, CONNECTICUT



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pleases both eye and ear

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# USG ACOUSTICAL TILE

A product of UNITED STATES GYPSUM COMPANY





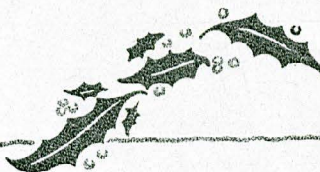
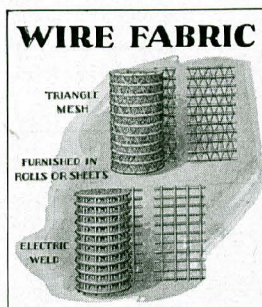


# Greetings

from  
**American Steel & Wire Company**

**H**ow pleasant it has been to serve you during the past year — how good to know you and do business with you. « Again the Yuletide, with its inspirations of good cheer is almost with us — the New Year approaches — and we sincerely extend to

you our best wishes for a very  
**MERRY CHRISTMAS AND A  
HAPPY, PROSPEROUS  
NINETEEN THIRTY**



## American Steel & Wire Company

SUBSIDIARY UNITED STATES STEEL CORPORATION

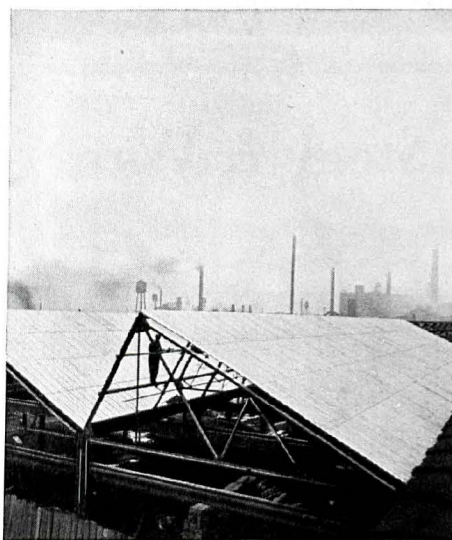
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# The Decisions of These Industrial Leaders are Based on Facts

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*Mahon Steel Roof Deck installed on a new building for the Bohn Aluminum and Brass Corporation, Detroit, Mich.*

new plants in the past year, are shrewd buyers who immediately realized the structural advantages and the economy of this type of roof construction. ¶ In the design of new structures, where long span trusses are employed, architects and engineers can effect savings amounting to as much as 25% in the supporting steel through the use of this light-weight, permanent roof deck. Write for our folder "Facts and Figures" . . . it shows at a glance the remarkable economy of Mahon Steel Roof Deck construction.

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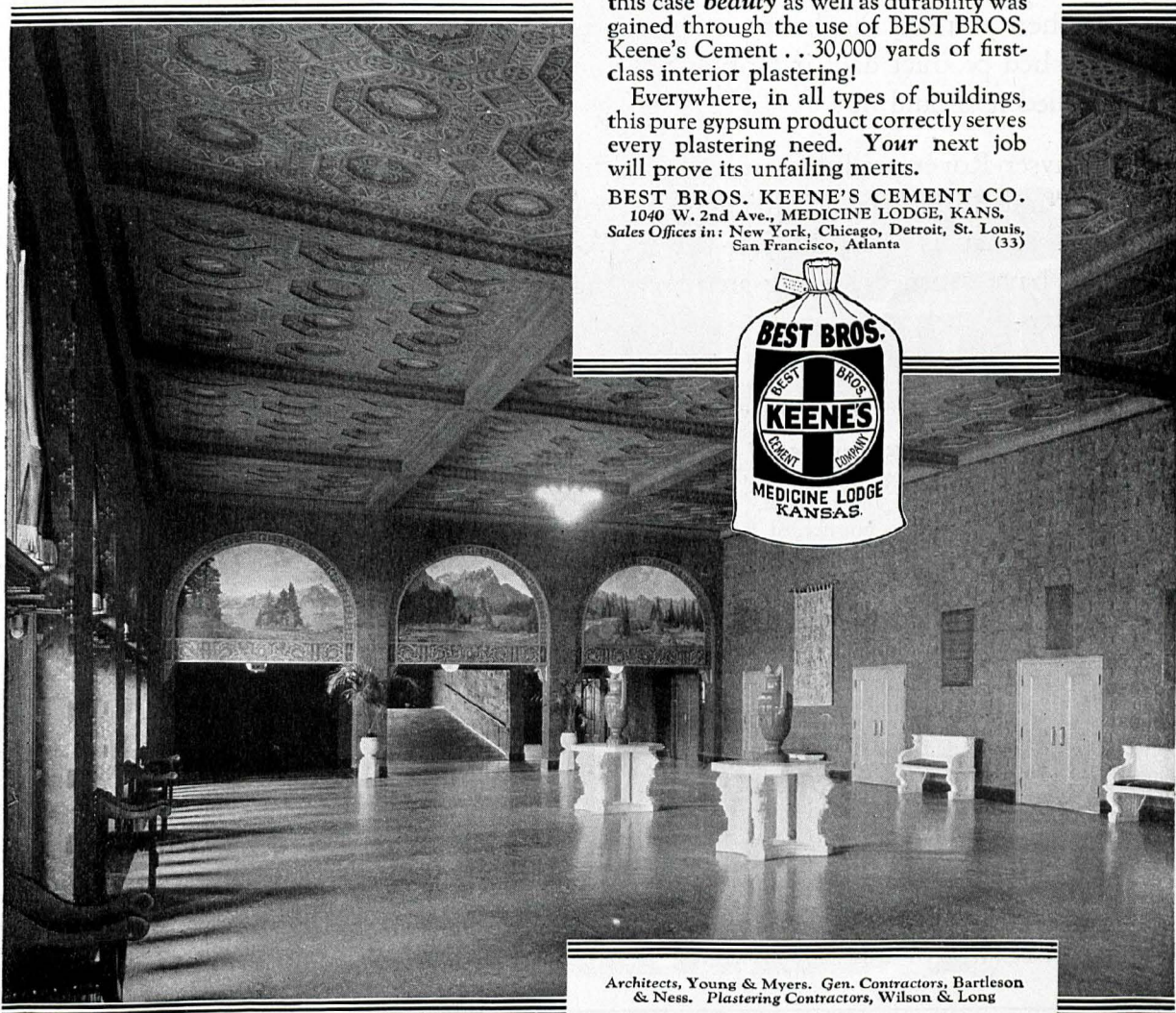
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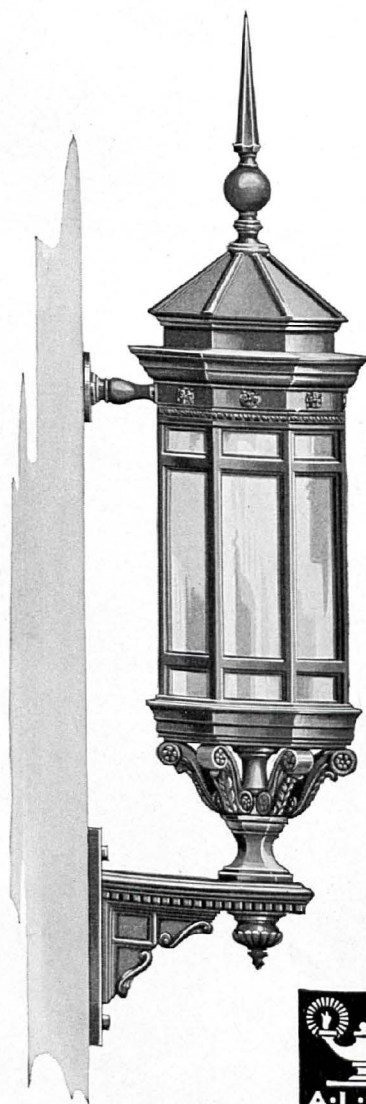
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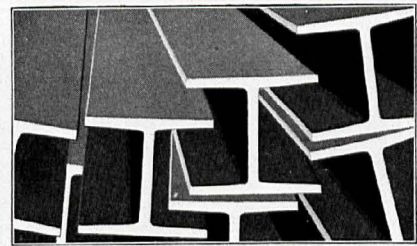
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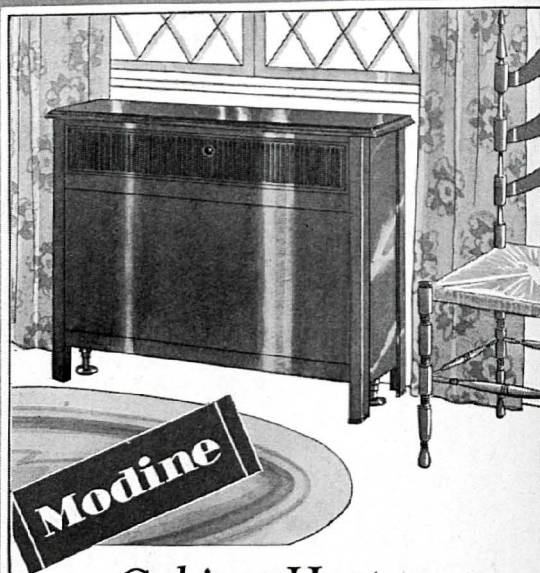
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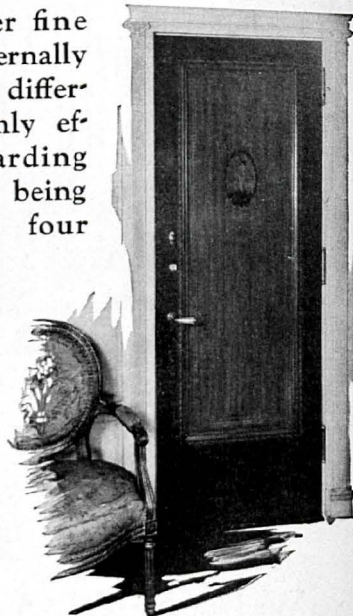
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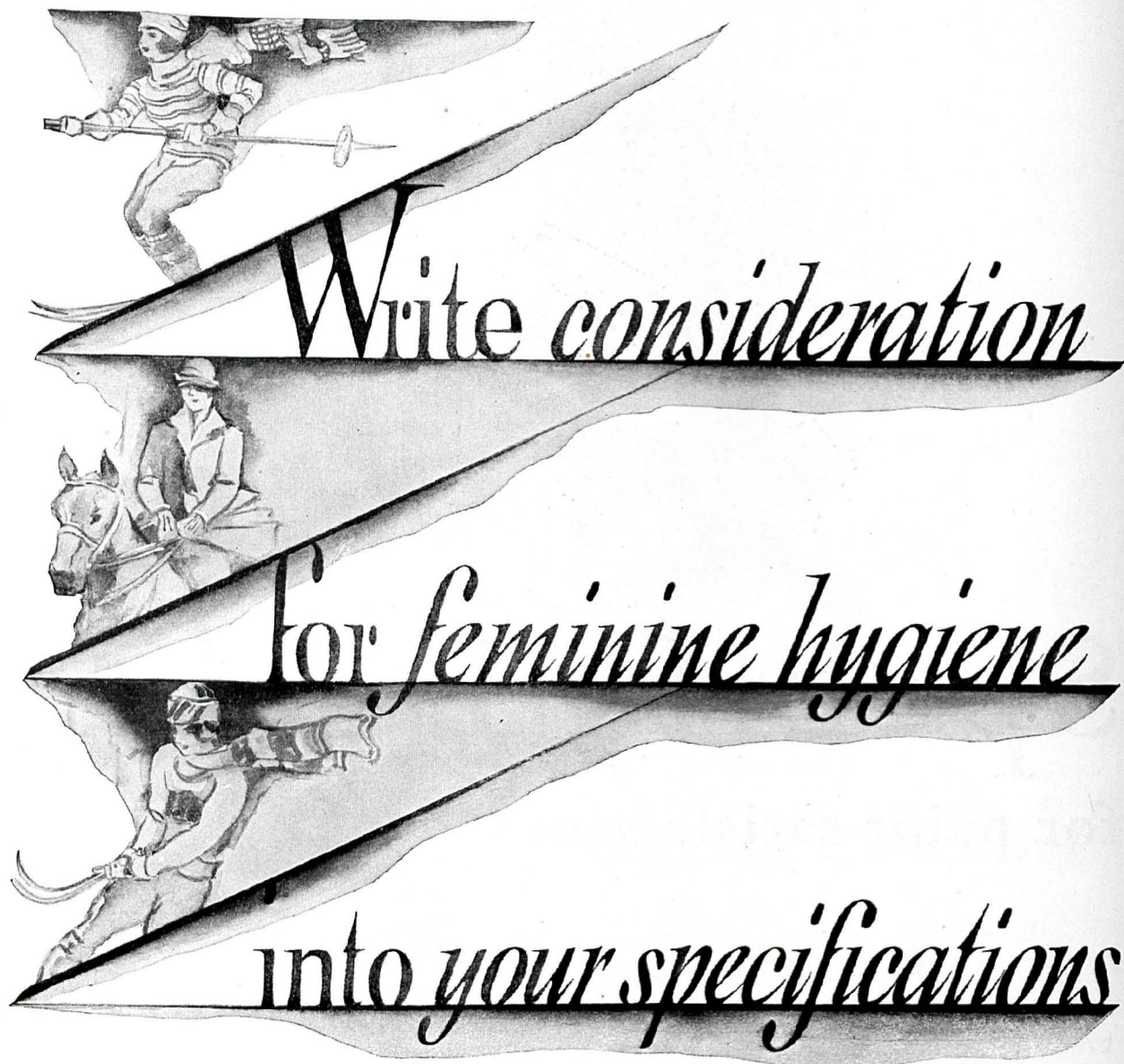


Reg. U. S. Pat. Off.

# EAGLE White Lead

made by The Eagle-Picher Lead Company, 134 North La Salle Street, Chicago. Producers of lead, zinc and allied products.





**W**ITHIN the last few years false modesty has given way to a new frankness regarding women's hygienic problems.

The need of the modern fastidious woman for adequate sanitation in her home or office is one which demands the serious consideration of every practicing architect.

The trapway of the average toilet is so small as to scarcely permit the passage of a golf ball. Such a toilet,

when used for the disposal of sanitary pads, eventually clogs, stops up and causes repeated annoyance and embarrassment.

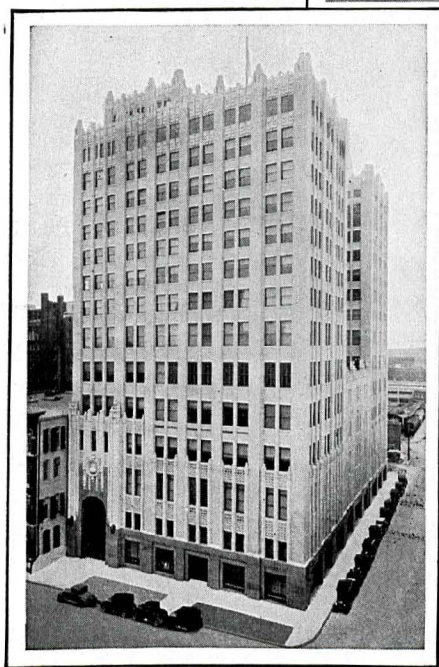
But there is one fine modern toilet particularly designed to meet this difficult problem. It is The Improved Madera, with large over-size trapway and powerful, yet silent, twin-jet siphonic flushing. The Madera passes sanitary pads easily and safely.

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*The Southwestern Bell Telephone Company Building at Dallas, Texas. Architects: Lang & Wutchell  
Floored throughout with W. & J. Sloane double-waxed Battleship Linoleum.*

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### *This Service Free to Architects*

If you wish practical suggestions in planning linoleum floors, do not hesitate to call upon our Architects Service Department. There is no charge or obligation involved. You may also have for the asking a copy of the Linoleum Data Book illustrated above. It will help you in preparing specifications. Address: Architects Service Department, W. & J. Sloane, 577 Fifth Avenue, New York City.

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You will insure your clients a plus value by specifying W. & J. Sloane *double-waxed* Linoleum. May we send you a quality sample for your inspection?

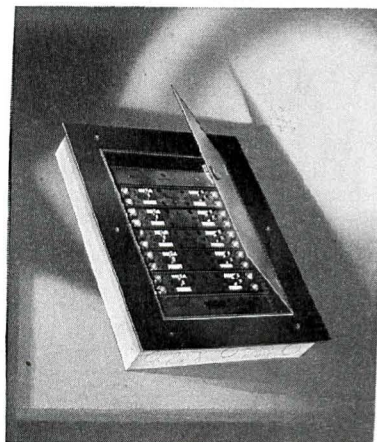
## W. & J. SLOANE *Double-Waxed* LINOLEUM



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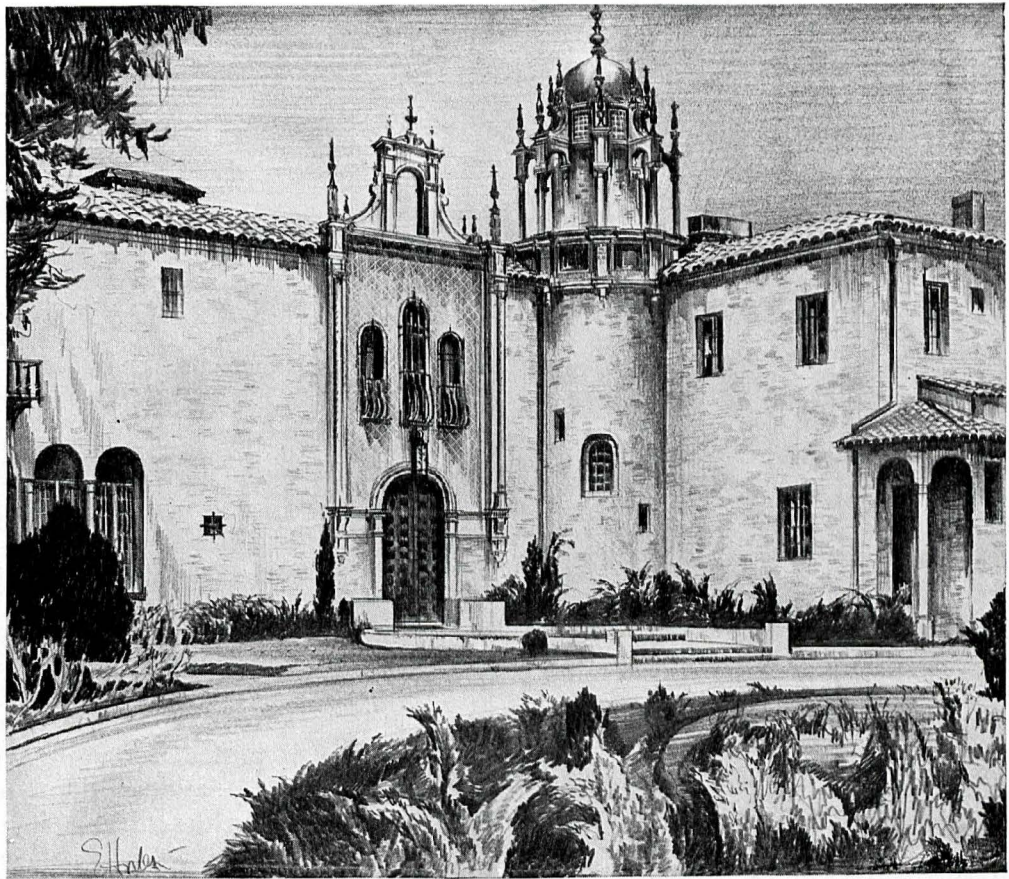
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MI SUEÑO, sixteenth century Spanish and Italian Renaissance home of S. W. King, Dallas, Texas. Allan Boyle, Architect. Walter Whitley, Builder. M. Jacques Carlu, critic, interior decorator, and painter of the fine mural in the dining room, a room praised as unrivalled in its conception and inspired by the Davanzati Palace of Florence.



The grandeur  
of Old Spain relives in  
this Estancia of today

"ONE of the finest Spanish Renaissance homes in America." Thus critics pay tribute to *Mi Sueño*, Dallas residence of S. W. King.

The beauty of its sixteenth century Spanish and Italian architecture is outlined against the Texas sky whose varying hues are reflected in the soft Mediterranean pink of its stucco exterior. Above the entrance, flanked by sculptured stone columns, the facade rises in blue and

gold tiling. Stone flying buttresses surround a dome, capped in blue.

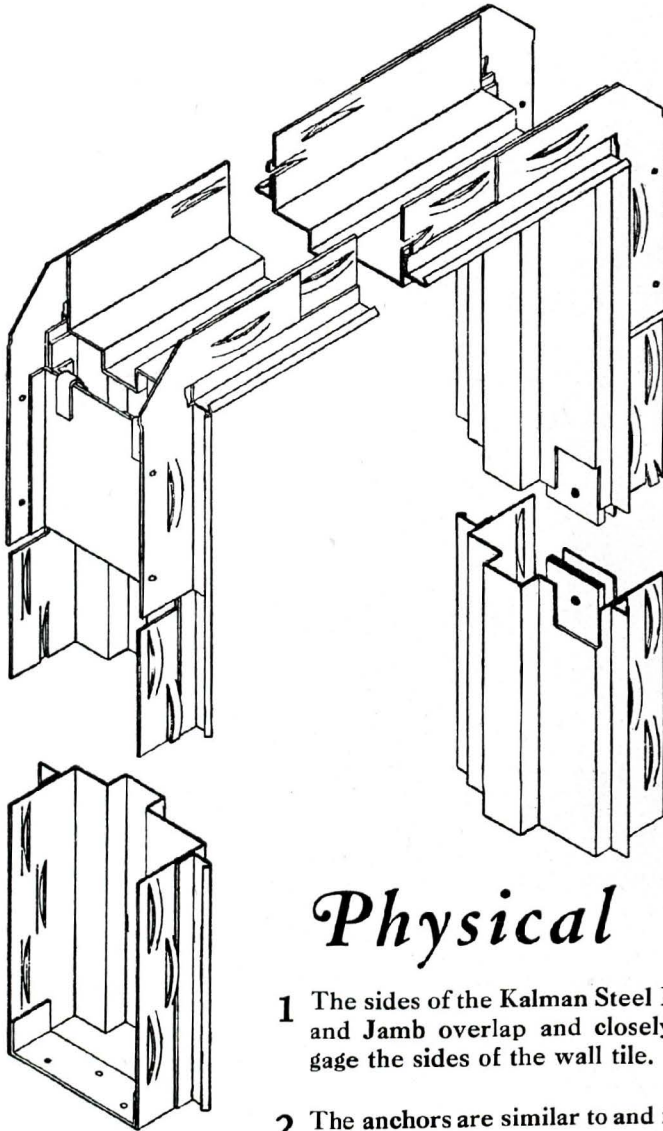
No effort was spared, no detail omitted, that might contribute to perfection. Architect Allan Boyle was sent to Spain where he studied for months refining his plans. Then to Fontainebleau where the criticism of the great M. Carlu, Directeur of the Ecole des Beaux Arts, was secured.

Equally painstaking care extended to the choice of materials. It is significant that Atlas White Portland Cement was selected for the stucco. Only with its pure white base could such exquisite shading of color have been obtained. In even the most modest cottage architects may achieve the charm, the dependability, and the fire-safeness of Atlas White stucco, so eloquently recommended by *Mi Sueño*.

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	St. Paul	Youngstown



# GEORGIA MARBLE

## 22 Canadian Winters



Detail of facade of the old building of The Royal Bank of Canada, Montreal. Now occupied by the Banque Provinciale du Canada; Howard Colton Stone, Architect.

This photograph, taken in the winter, shows a deposit of snow on the carved figures.

### The Royal Bank of Canada

INCORPORATED 1869

*Head Office*

*Montreal,* August 13, 1929

S. M. Gross, Esq.,

C/o The May Company,

Cleveland, Ohio.

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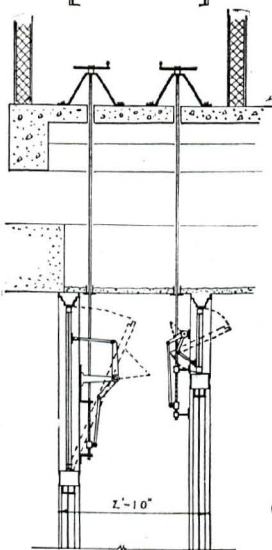
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PROBLEM  
No. 11  
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Section showing  
top part of window,  
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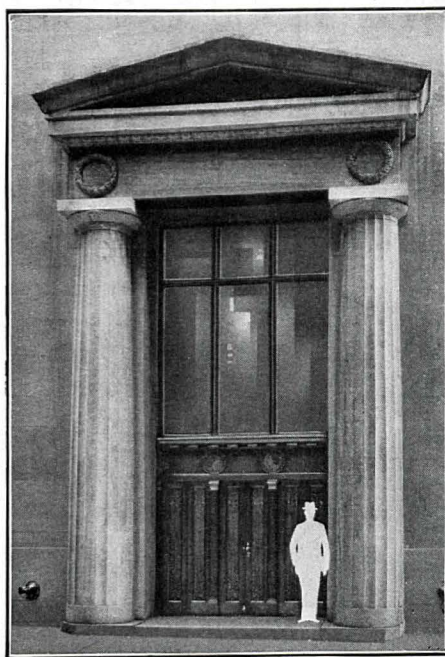
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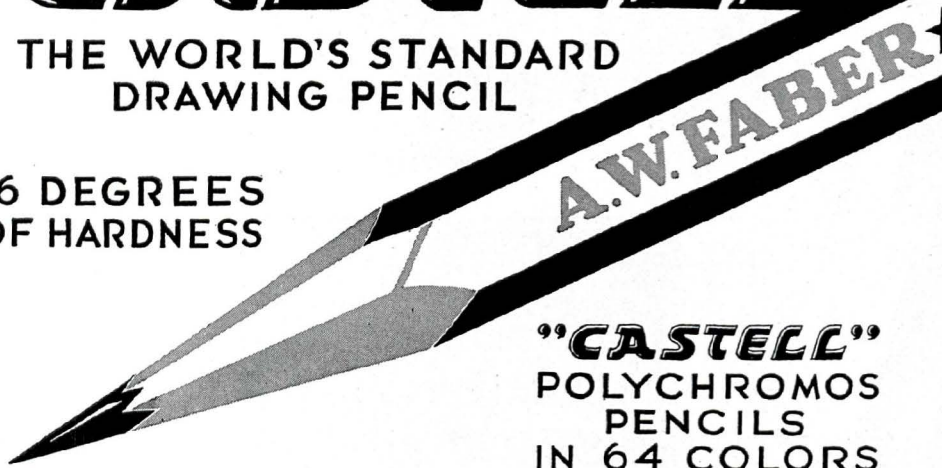




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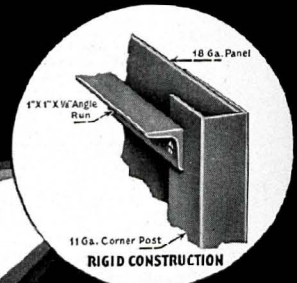
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**I**ONIC 197A will not turn yellow with age and cannot leak oil, because its impregnating medium is unchanged by time or atmospheric conditions and remains completely absorbed.

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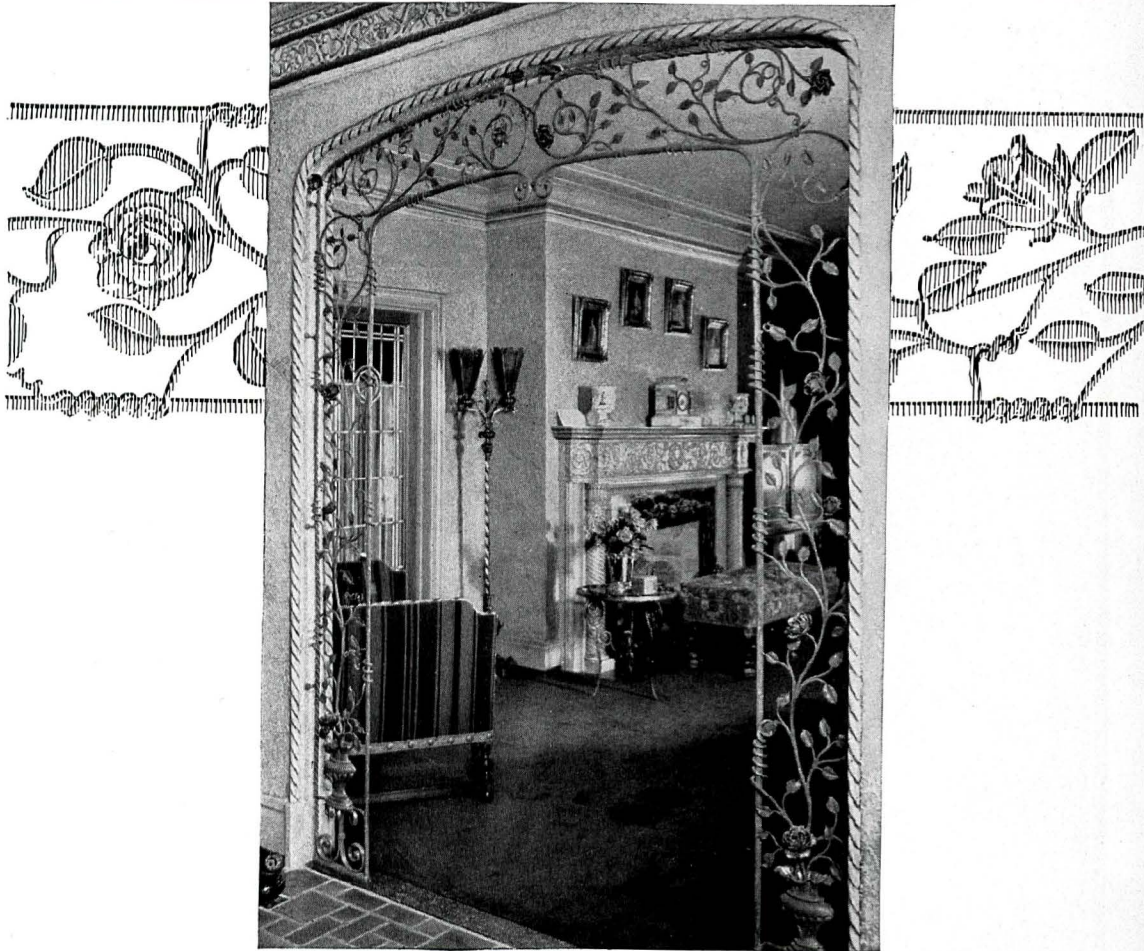
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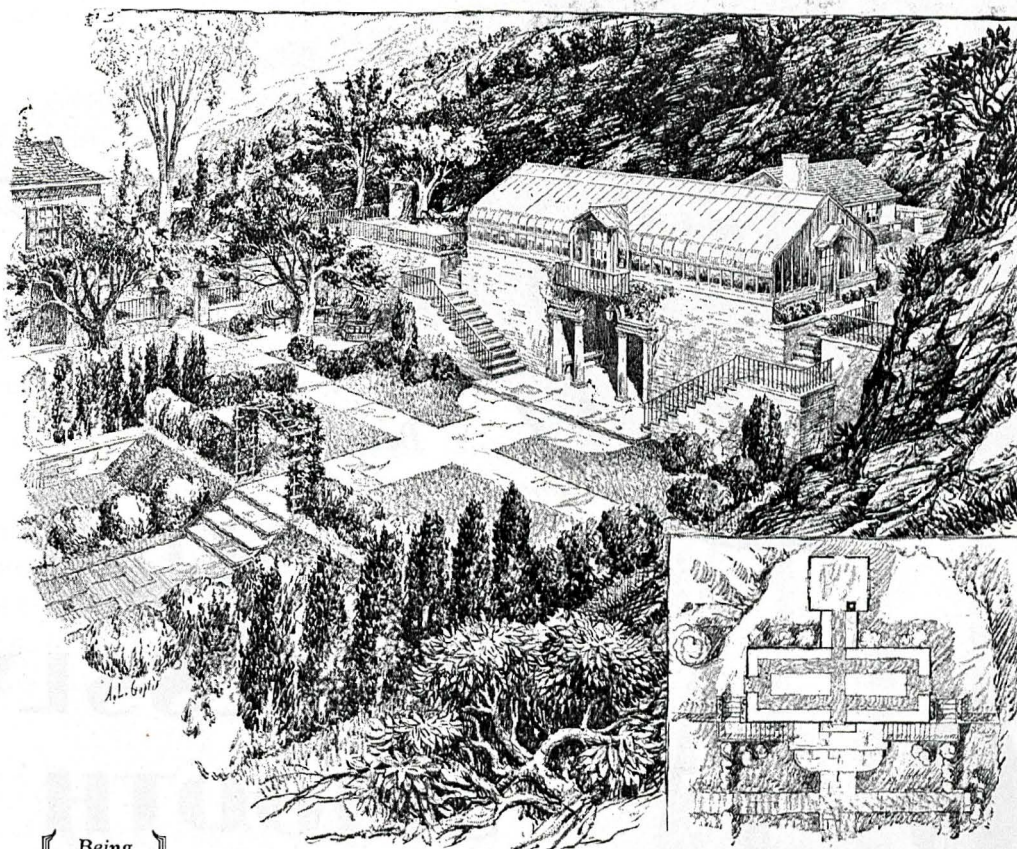
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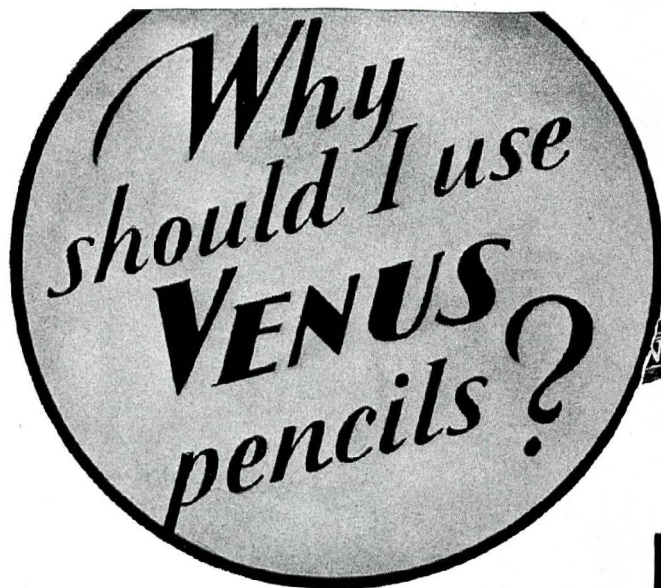
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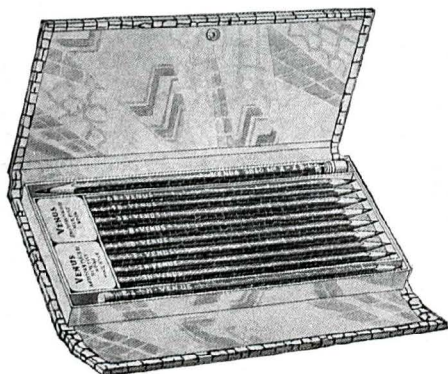
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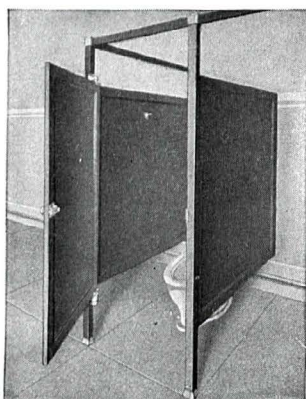
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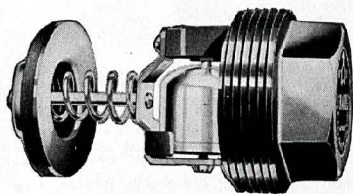
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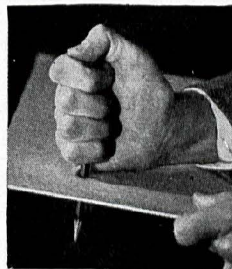
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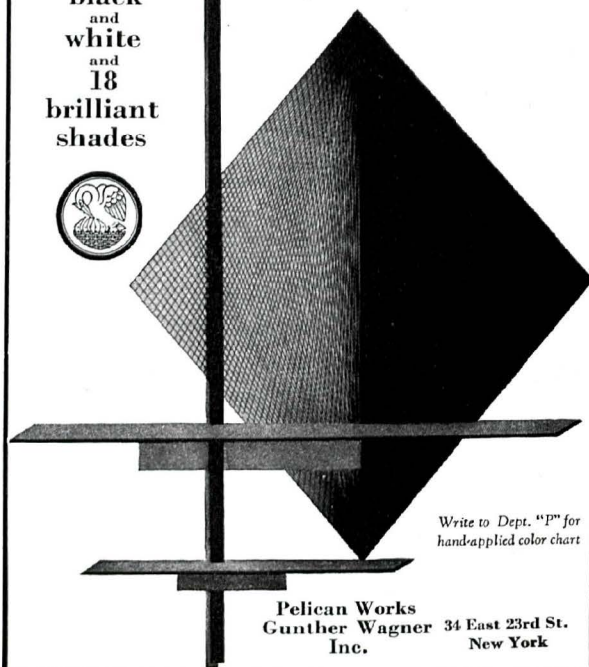


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# MILCOR Stay-Rib Metal Lath

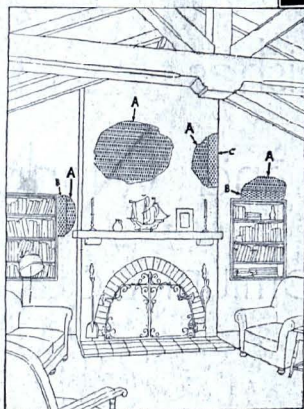
## Provides the Reinforcement That Protects Plastered Walls and Ceilings

IT is an accepted fact that the plaster base plays the most important part in the protection of beautiful walls and ceilings . . . and it follows logically that the more perfect the plaster base, the greater is the assurance of permanence.

*Milcor* Stay-Rib Metal Lath is a definite advance in the design of expanded metal plaster bases. It has unusually strong reinforcing longitudinal ribs. It has a mesh design that firmly imbeds the plaster with slight pressure. It provides an adequate key without waste . . . and lastly; it is given additional strength through a special *Milcor* reannealing process.

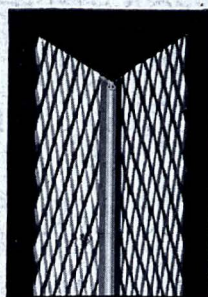
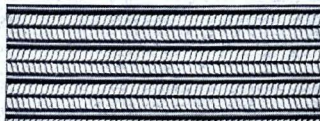
These combined features have made *Milcor* Stay-Rib metal lath the accepted assurance of permanently reinforced walls and ceilings. Architects specify it with utmost confidence. It is one of the famous *Milcor* Fireproof Products which also include *Milcor* Expansion Casing and Corner Bead. Complete information is contained in the *Milcor* Manual.

MILWAUKEE  
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1403 Burnham St. Milwaukee



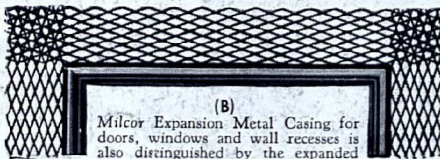
(A)

*Milcor* Stay-Rib Metal Lath has unusual strength and rigidity. Its design . . . a *Milcor* patent . . . affords the maximum protection against plaster cracks.



(C)

*Milcor* Expansion Corner Bead is distinguished by its expanded metal wings . . . This feature . . . a *Milcor* patent . . . permits a perfect grip upon the plaster and prevents chipping off from unavoidable abuse.



(B)

*Milcor* Expansion Metal Casing for doors, windows and wall recesses is also distinguished by the expanded metal wings. It cannot pull away during settlement and will not leave cleavage cracks.

MILCOR  
Expanded Metal  
Building Products  
are Available in



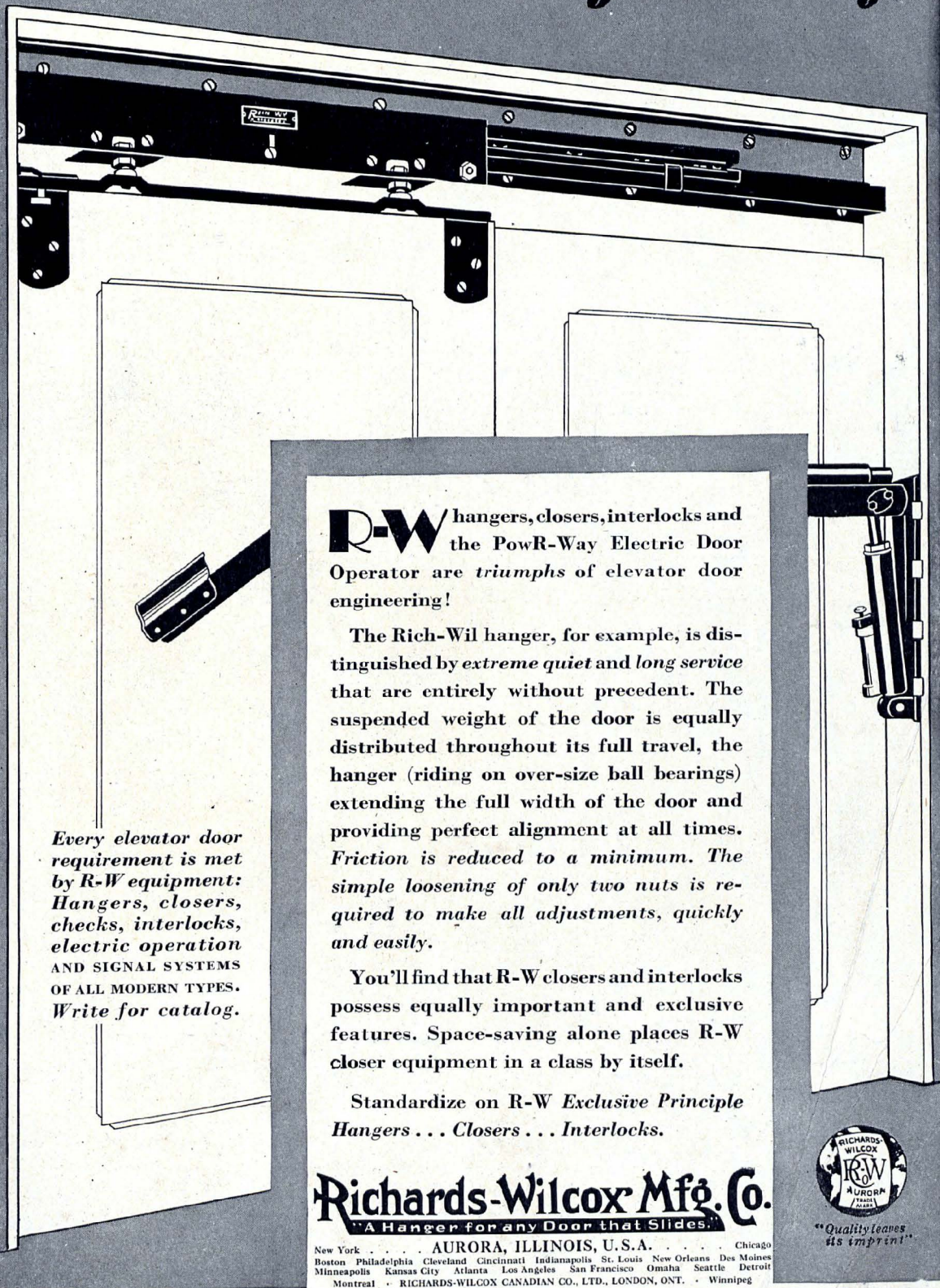
Copper Alloy  
Steel

## MILCOR PRODUCTS

Branches: Chicago, Ill., Kansas City, Mo., La Crosse, Wis.  
Sales Offices: Boston, Mass., Detroit, Mich., Atlanta, Ga., Little Rock, Ark., Minneapolis, Minn., Los Angeles, Calif.  
Eastern Plant: THE ELLER MANUFACTURING CO., Canton, Ohio



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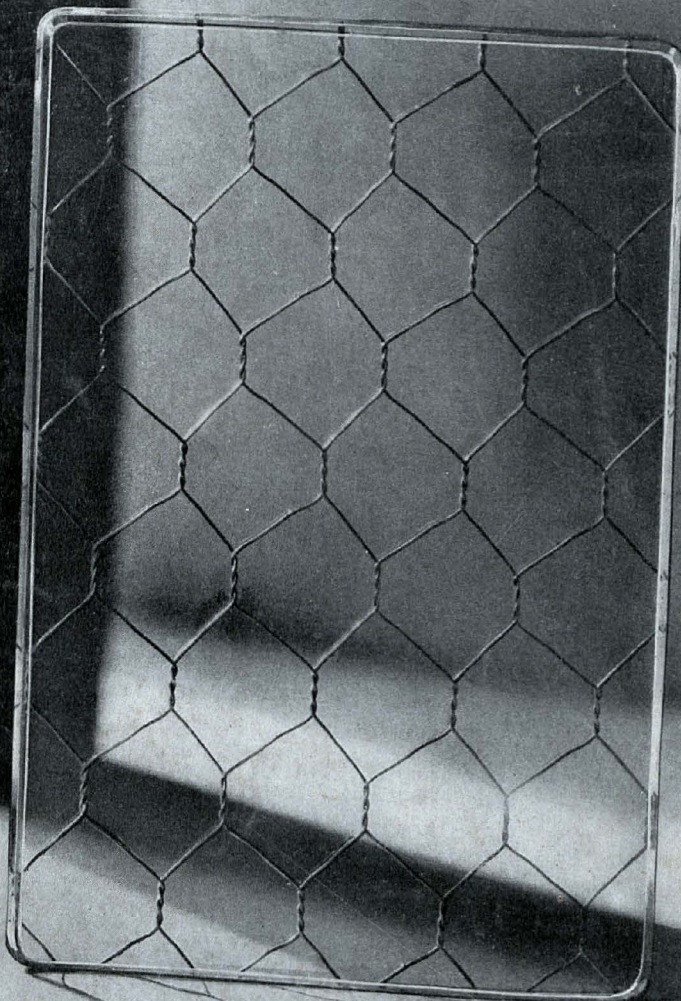


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