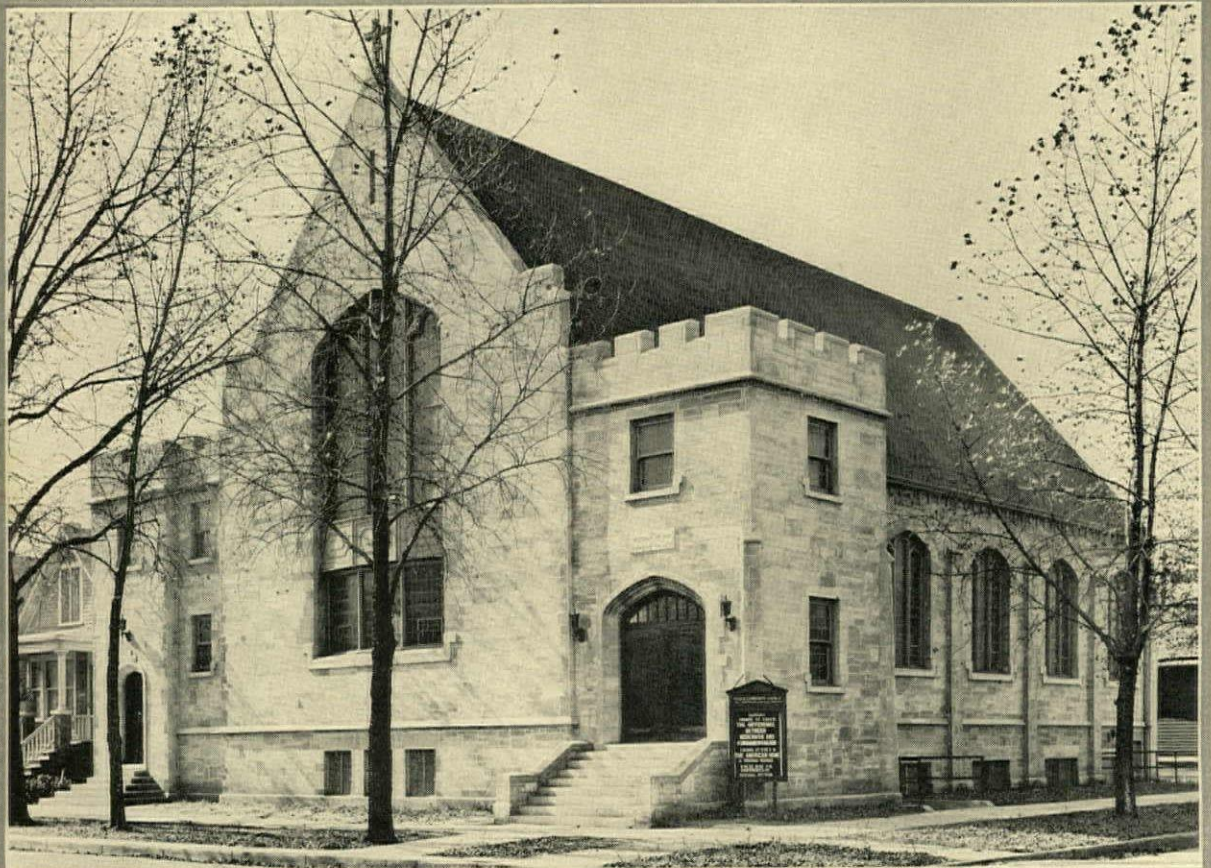


MAY 1930

PENCIL POINTS

A JOURNAL FOR
THE DRAFTING ROOM

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Essex Community Church, Chicago. Charles S. Frost, Architect. Erickson & Christianson Co., Builders.

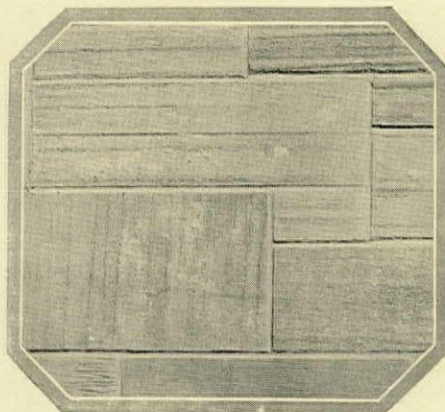
A NEW WAY OF USING INDIANA LIMESTONE

makes it economically practicable for the small building

ARE you familiar with Indiana Limestone as it was used in the church shown here? If not, we have a story that will interest you. The cost of using ILCO Ripstone is far less than when cut stone is used throughout.

Instead of each stone in the wall being cut in accordance with

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ILCO Ripstone is the name we've given to Indiana Limestone used as a sawed masonry facing. Detail view showing texture of ILCO Ripstone.

carefully prepared drawings, the stone is sawed into strips at our quarries by machinery. Pieces are carefully selected to make a wall of color, texture and pattern that will lend beauty to your design. On the building site, the strips of stone are broken to lengths by a simple operation and laid up in the wall by stone masons or bricklayers. Cut stone is limited to ornamental detail.

This modern development is rapidly coming into favor. In residence construction, the total cost of a house is only 5% to 6% more than when other facing material is used. Write for full information for your files. The coupon at left is for your convenience.

Box 784, Service Bureau,
Indiana Limestone Company,
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Please send for my files data on ILCO
Ripstone for residences, churches, etc.

Signed

Street

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

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

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Fred F. French Co., Archts.

A similar list could be made in the downtown business section, in the uptown apartment section, in the midtown theatre section.

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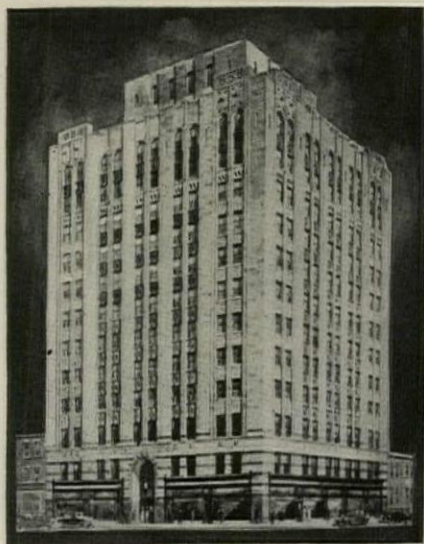
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No MATCH *for* ATP

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

ROOF



Roofed with ATP
AMERICAN BANKERS INSURANCE CO. BUILDING
Cass and Ohio Streets Chicago, Illinois
Architects: Childs and Smith
General Contractor: E. P. Strandberg Co., Inc.
Roofing Contr: Chicago Waterproofing & Roofing Co.

If there's a weak-spot in a roof, leave it to "little drops of water" to find and make it a leak-spot! Rain is the most relentless roof-wrecker known.

But there is one roof that laughs at rain, wind, fire, sun and other roof-destroying demons. It's the ATP Roof . . . made of materials that actually improve under conditions ruinous to ordinary roofs. Water preserves pitch—heat makes it self-welding, sealing all cuts and cracks. Fire, the elements and mechanical wear are helpless against ATP slag, tile or gravel armor. With or without bond, all ATP Roofs are made of exactly the same material. The bond is optional. Dollar for dollar, over periods of from 25 to 40 years, ATP-type roofs consistently outwear any other type of roofing known to man.

AMERICAN TAR PRODUCTS COMPANY

Division of The Koppers Company

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Plants at Chicago, St. Louis, Birmingham, Milwaukee, Kearny, N. J., Youngstown, O.
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The beautiful home of A. W. Wigglesworth in Kenilworth, Illinois. Exterior walls and second floor ceiling are insulated with Armstrong's Corkboard. Architect, Ralph Stoetzel. Contractor, Edward C. Anderson Co.



Like a Refrigerator this home is protected against outside temperatures

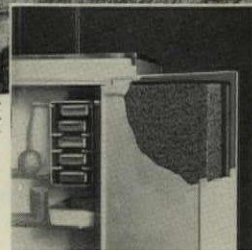
*Corkboard Insulation insures
permanent year 'round comfort*

JUST as in a well-built refrigerator . . . corkboard insulation protects the interior of this house on the hottest days. And in the evening, after the sun has beaten madly on the roof all day, second-floor sleeping rooms under cork lined roofs are as cool as those on the first floor.

Next winter too, when cold winds blow lustily, this house, insulated with Armstrong's Corkboard, will be warm and comfortable. In the same way that summer heat is kept out, the warmth of the heating plant is conserved for December comfort. By preventing loss of heat the house is kept warm with a minimum of fuel consumption. A saving, actually large enough to pay the entire cost of insulation, is accomplished in a few years.

This comfort and economy are permanent benefits in houses insulated with corkboard. Armstrong's Corkboard never decays or disintegrates. When you specify Armstrong's Corkboard you assure the full advantages of insulation throughout the life of the building.

Armstrong's Corkboard is made in the correct thickness to give full protection against outside temperatures, winter and summer. Be-



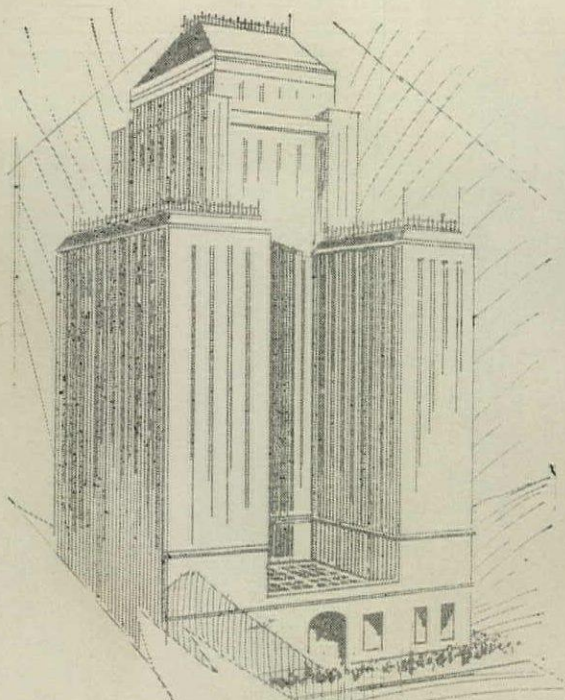
To keep foods at just the right temperature, the finest domestic refrigerator has a lining of cork in sides, bottom, and top.

cause it is adequate insulation, corkboard gives the greatest comfort and fuel saving for each dollar invested . . . effects the largest practicable saving of heat in proportion to the cost of the insulation.

You will find valuable information in our illustrated book, "Armstrong's Corkboard Insulation for Walls and Roofs of Buildings." Essential details of modern insulation and the structural strength and fire-retarding values of corkboard are thoroughly covered. We suggest that you write for this book. It will help you in making recommendations and cost estimates. Armstrong Cork & Insulation Company, 902 Concord St., Lancaster, Penna.

Armstrong's Corkboard Insulation

FOR THE WALLS AND ROOFS OF COMFORTABLE HOMES



3-WAY TRANSPARENT ROOFING
can be specified for any type of roof
regardless of construction.

20 Stories Down

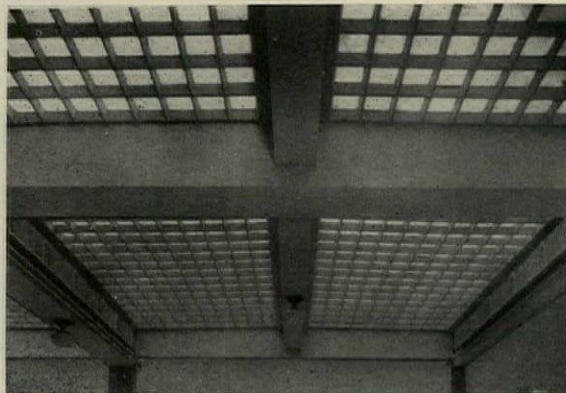
but always Plenty of daylight

BELOW the shadow line where high walls crowd out the daylight, 3-WAY TRANSPARENT ROOFING performs its greatest service. Bright cheerful offices, under courts and extension roofs flooded all day long with daylight, equal to that which enters the upper floors, are made possible by this 3-WAY construction.

3-WAY TRANSPARENT ROOFING obtains its light from the sky *directly* above, it does not depend on reflected light.

When considering any building where daylighting is an essential factor 3-WAY TRANSPARENT ROOFING should be given

most careful consideration. 3-WAY TRANSPARENT ROOFING can be made to cover an entire roof or any portion of a roof, whether flat, pitched or barrelled. Daylight enters through 75% of its surface. The construction is so made as to omit maintenance costs, such as leaks and broken glass. Another feature is the fact that the roof itself can be put to constant use.



Interior view of 3-WAY TRANSPARENT ROOFING

Why not let us send you the interesting set of Brochures telling many facts of importance which you will be glad to know, written and illustrated in a style that is pleasant to read. There is no obligation, write today.

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3-WAY TRANSPARENT ROOFING



This tells the story . . . a joint between concrete and timber that is a point of *strength* . . . a joint that insures perfect alignment of both driven sections . . . a joint that makes safe and economically sound the use of this form of extra-long piling . . . a product of Raymond engineering.

*"A Form for Every Pile—
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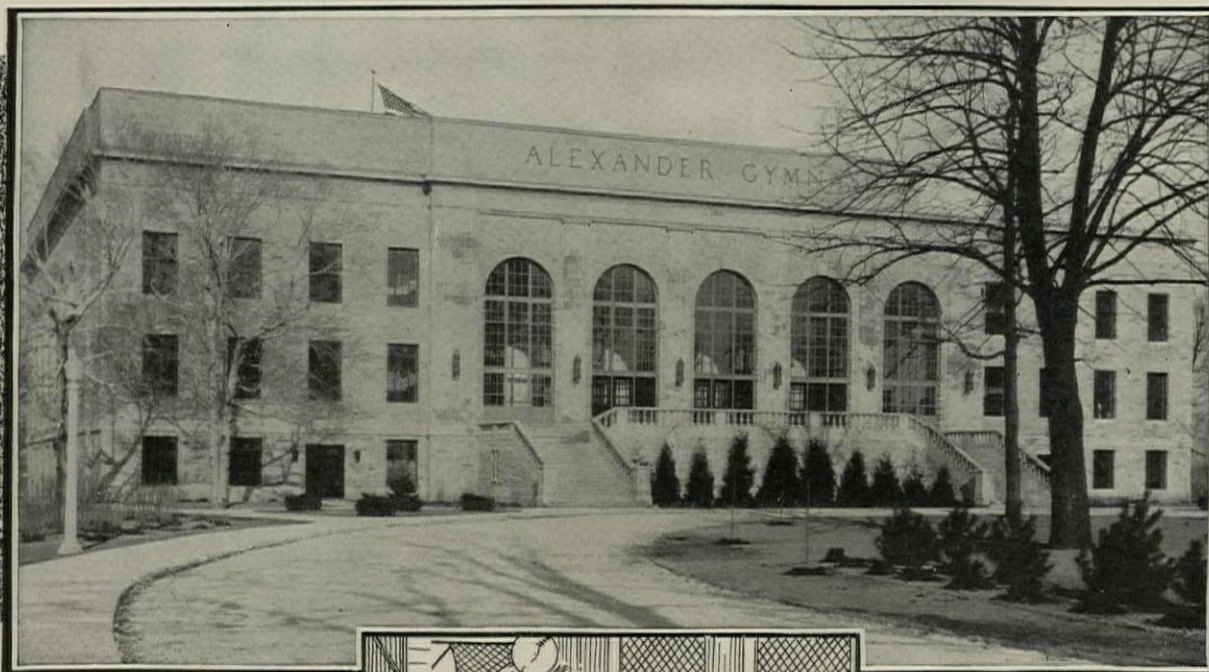
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ALEXANDER GYMNASIUM
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Protected With

Featherweight Concrete INSULATING ROOF SLABS

Worthy architecture should be perpetuated in worthy materials. Of what use are sturdy foundations and stone walls unless the roof too, is of equal permanence?

Modern fine buildings are roofed once and for all time with Featherweight Concrete slabs. These slabs are made of Haydite aggregate in place of sand and contain millions of trapped air cells. Result: a weight as low as 10 lbs. per sq. ft. and new insulating value.

Alexander Gymnasium above — Chicago's Adler Planetarium, Field Artillery and Naval Armories, Bernard Sunny Gymnasium, auditoriums at Flint and Shreveport, Joslyn Memorial at Omaha, and many schools, hangars and industrial and railroad buildings benefit by the permanent, fireproof, no-maintenance service of this roof. Send for new "Catalog and Roof Standards" — no obligation.

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FEDERAL CEMENT TILE COMPANY
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Make your own tests of NIAGARA at our expense. We are prepared to supply hotels, schools or hospitals with a free NIAGARA shade mounted on the improved *Columbia* roller for experimental installation. Get it through your regular channels or from the *Columbia* branch nearest you.

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The window shades that you have known give you no standards of comparison to NIAGARA WINDOW SHADING, washable and waterproof, newly perfected by *Columbia*. Point for point...merit for merit...simple fact for simple fact...NIAGARA literally sets a new standard of what you may expect a shade to be.

NIAGARA is handsome...rich in colorings; translucent; fine and smooth in finish.

NIAGARA is washable...*really* washable...*repeatedly* washable. It absorbs no dirt, and hence retains none. A non-alkaline suds quickly restores its original beauty.

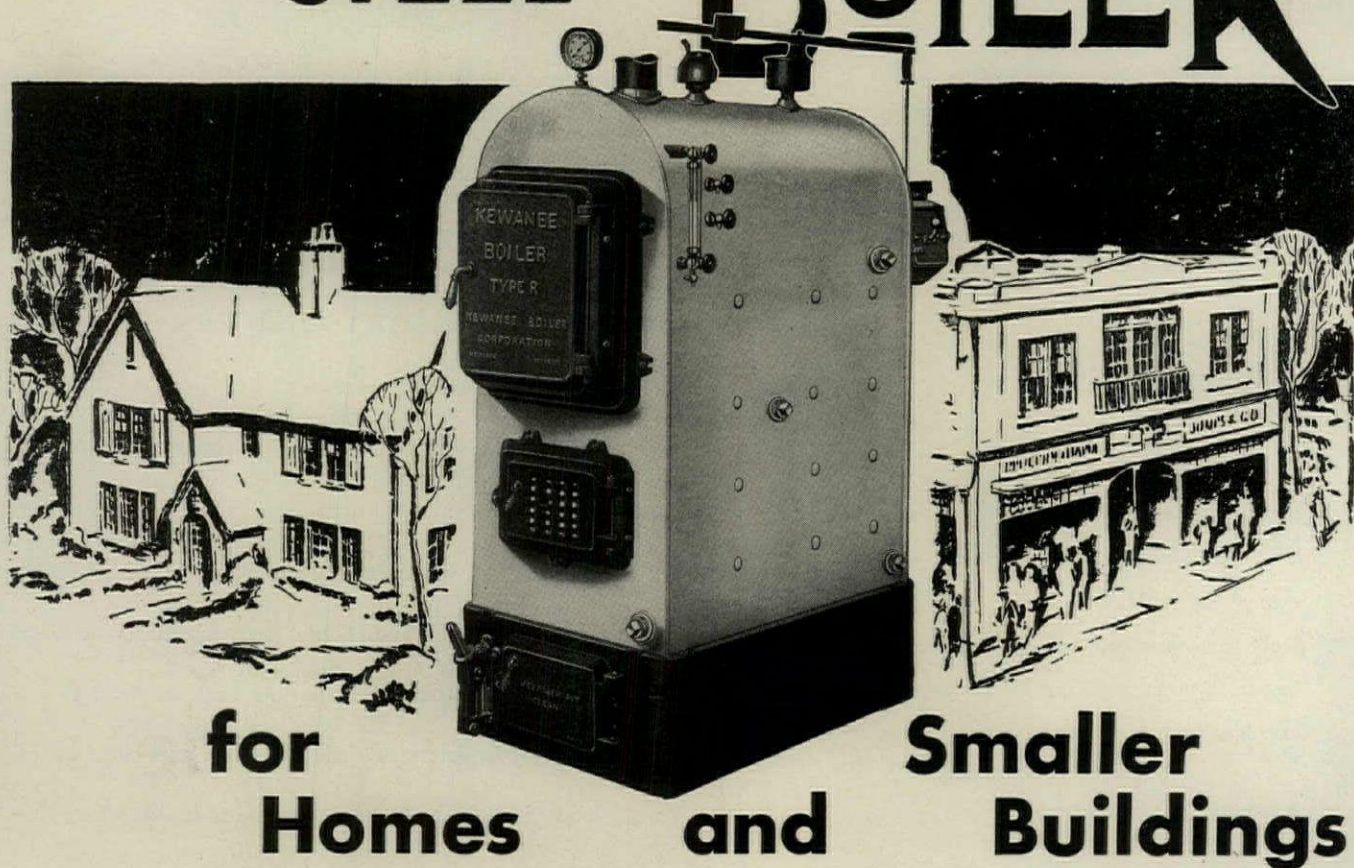
NIAGARA is splendidly made...even and clear in texture. No pains have been spared to make it altogether fine.

NIAGARA is durable...it will not stretch nor "go dead" with long exposure to the sun. Its washability feature affords unusual benefits, because the fabric itself is so long-lived.

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Don't judge the shades you're going to buy by those you *used* to buy. Expect more for your money than you've ever had. And *get* more with NIAGARA. We shall gladly arrange for you to see NIAGARA.

» » this NEW KEWANEE STEEL BOILER



Yes, NOW a steel boiler—a Kewanee Steel Boiler—for heating homes and smaller buildings, giving these, as well as large structures, the advantages of Kewanee design, engineering and sturdiness.

Here is a boiler which can be relied upon to give *extra years of service*.

These distinctive features mean more heat with less fuel:

1. A bigger, higher combustion chamber.
2. The right-side-up Crown Sheet.
3. Long two-pass travel of gases.
4. More generous steam space.

Actual tests prove the Kewanee Type "R" has an operating efficiency that is remarkably high for a small heating boiler.

For every fuel—Coal, Oil, or Gas. Sizes to heat 370 to 1960 square feet of radiation. Details in Catalog No. 88.

« KEWANEE BOILER CORPORATION »
 division of American Radiator and Standard Sanitary Corporation
 KEWANEE, ILLINOIS Branches in Principal Cities
 MEMBER OF STEEL HEATING
 BOILER INSTITUTE



Down the Death-Lined Streets a Tall, Gaunt Figure Strode

In 1879, a certain southern city was fighting its most desperate battle.

Throughout the town, unseen hosts of Yellow Fever germs made swift, silent raids, leaving grim trails of disease and death. Business stood still. Guardsmen patrolled the otherwise deserted streets.

Medical men fought desperately to stem the ever-swelling legions that marched against them.

Into this picture the first Clow Soldier of Sanitation was called. Down the death-lined streets he strode, a tall, gaunt figure—but the figure of vic-

tory. He cleaned up the sources from which the Yellow Fever armies drew replacements. And the medical men wiped out the enemy.

Today this man leads Clow's Soldiers of Sanitation in equally important battles against uncleanness, insanitation, pollution and disease.

Each of these men is a specialist in working out plumbing installations in the public places, where disease germs rally so readily. At his finger tips is the experience from a time long before the great battle in a southern city—to the

modern battles in the schools, hospitals, industrial plants and public buildings of today. At his back is the most complete line of specialized plumbing fixtures in the world, designed to help him as no other fixtures can.

CLOW

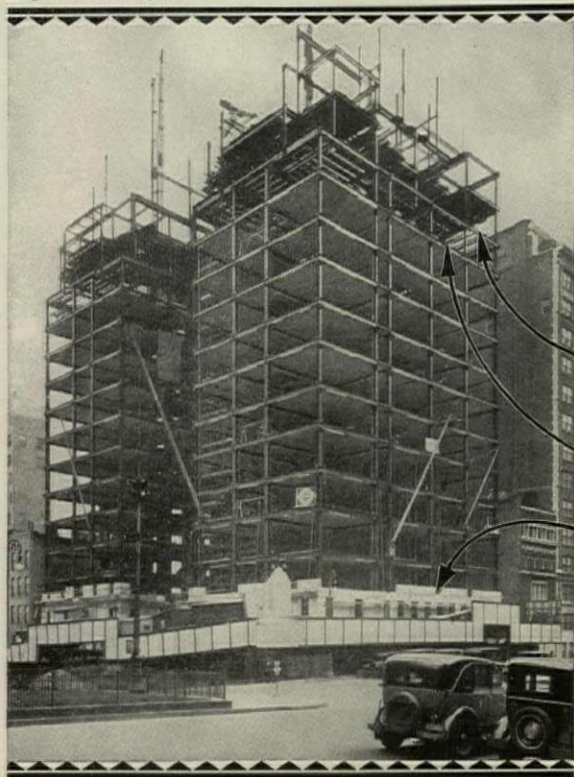
CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878



For 52 years, Mr. W. E. Clow, Sr., has led Clow's Soldiers of Sanitation by crowding into the heat of every fight where his years of skillful experience will turn the battle against insanitation, trouble and waste.

Lange & Noska, Engineers



Photograph of 895 Park Avenue,
New York, under construction by
Thomas O'Reilly & Son, Inc. with

GYPSTEEL

Pre-Cast Floors and Ceilings

- ① Steel being bolted.
- ② Steel riveted to here and
Gypsteel Floors installed.
- ③ Stone work started.

Right on the heels of the Steel came the GYPSTEEL Floors—

WHEN the 20-story apartment house at 895 Park Avenue, New York City, was built from plans by Sloan & Robertson, Gypsteel Pre-Cast Floor and Ceiling construction was used. Experienced architects and builders were deeply impressed with its remarkable speed of installation, which made it possible to complete each floor a day or so after the steel was riveted.

Note that in the above photograph of this building under construction, every floor has been completed right up to where the steel is ready for it. You see no forms because none are used. Just as soon as the steel was riveted, the Gypsteel

pre-cast gypsum floor and ceiling slabs went in. The ceiling and floor were grouted. The floor was ready for finish, and the ceiling for plastering. Any weather when men can work is Gypsteel weather. Not a day was lost on this job because of cold, even in freezing weather.

Compare this ease and speed of installing Gypsteel Floors with any other system you know of. Then let us come and show you how it can save time and labor in your office buildings, apartment houses, churches, schools, hospitals, etc. Consultation with our engineers involves no obligation.

Catalog?

If you'd rather have our new Floor Catalog, just off the press, we'll be glad to send that.

General Offices:
Linden, N. J.

STRUCTURAL GYPSUM CORPORATION

Sales Offices in
Principal Cities

Brasco

introduces a
complete system of

MONEL METAL Store Fronts

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

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

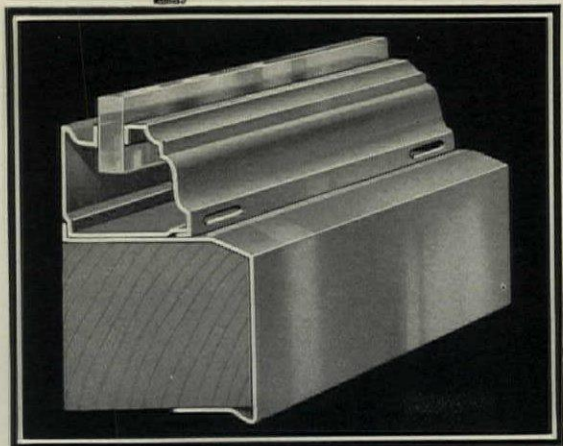
Lustrous silvery beauty in keeping with today's style in architecture—absolutely rust proof—non-ferrous yet with the strength of steel—retaining its original brightness under all atmospheric conditions with a minimum of care, Monel Metal adds a new touch of perfection to the time-proven Brasco principles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

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



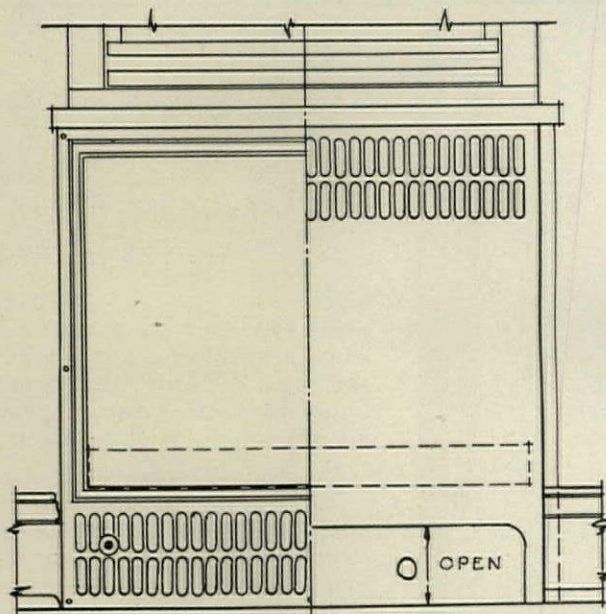
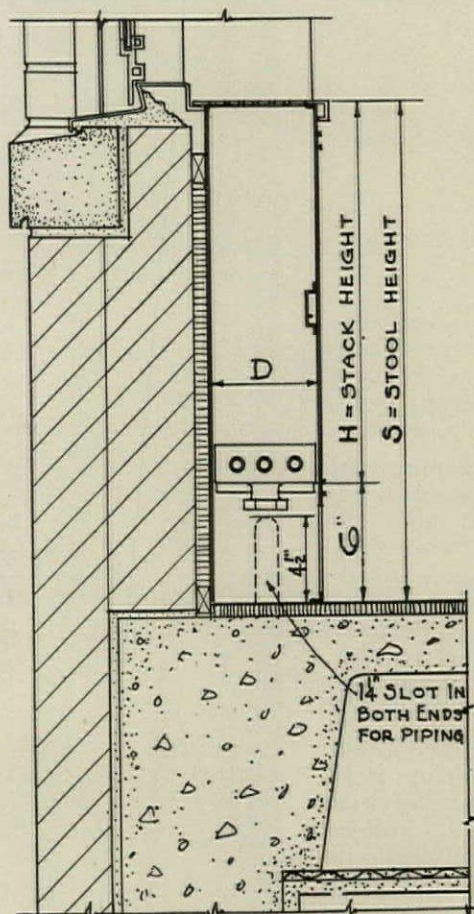
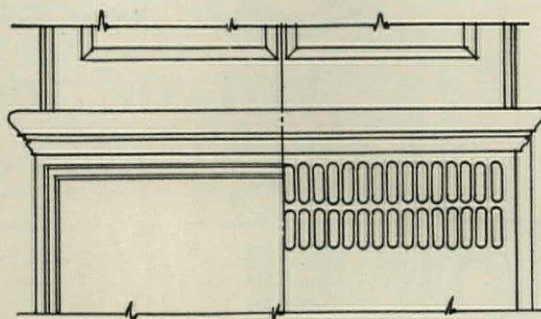
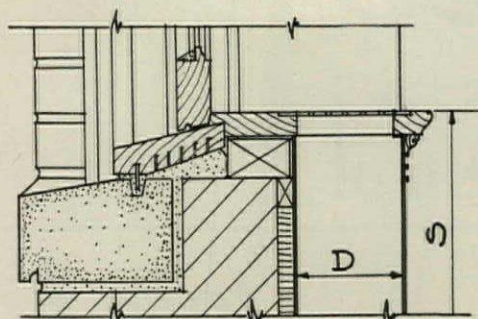
BRASCO MANUFACTURING COMPANY
HARVEY, ILLINOIS
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36-07 to 36-11 33rd Street, Long Island City
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DISTRIBUTORS EVERYWHERE

Brasco 806 Sash in Monel Metal. Illustration shows the self-supporting type used in conjunction with sill 840. Gauge of sash face and back members .040"; of sill, .031". All attaching screws also of Monel Metal.



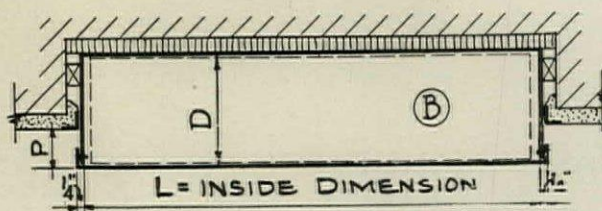
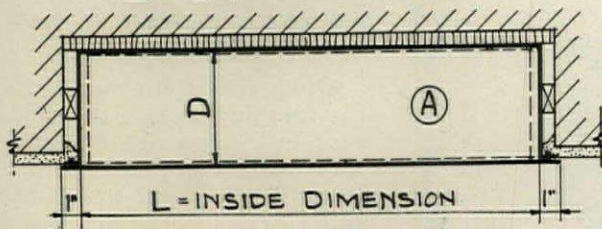
Brasco Store Fronts may be obtained in Monel Metal - Bronze - Copper - PermaWite - Davis Solid Bronze

DETAIL NUMBER ONE*



ELEVATIONS

SECTIONS



PLANS

(NOTES)

This detail shows cabinet completely or partially recessed.—It includes heater with complete cabinet, Plaster Stops and Fronts. — Either Wood or Metal Stools may be used.

PLANS—(A) and (B) Cabinets with back and ends spot welded together.

(C) and (D) Cabinets of separate pieces to be assembled at job.

(B) and (D) Angle plaster stop spot welded to ends.

ELEVATIONS — Fronts are removable and are fastened with sheet metal screws — May be plain or with metal mould, Grille or Open Inlet, Front or Stool Outlet Grille. — Channel Stiffener spot welded to fronts 3'-0" or over.

PIPING — Space of 6" allowed below heater for piping connections.

DIMENSIONS—S—Stool Height from Archt's or Eng's Drawgs.

H—Stack Height Top of Outlet Less 6".

D—3 1/2", 5 1/2", 7 1/2". Inside Dimension.

P—Projection from plaster line by Archt. or Engineer.

O—2 3/4" for 3 3/8" Heater.
3 1/2" for 5 3/8" Heater.
4" for 7 3/8" Heater.

L—Inside Dimension.

INSTALLATION — Recess of proper length and depth for cabinet and anchoring grounds to be called for on plans. — Allow space for insulation at back if desired. — Set before plastering.

TRANE CONCEALED HEATERS FOR LARGE BUILDINGS

—Installed at a cost no greater than for cast iron radiators

INSTALLATION DETAIL NUMBER ONE

Completely or partially recessed in wall. Panel front. Top or front outlet.

All the advantages of concealed convection heating—

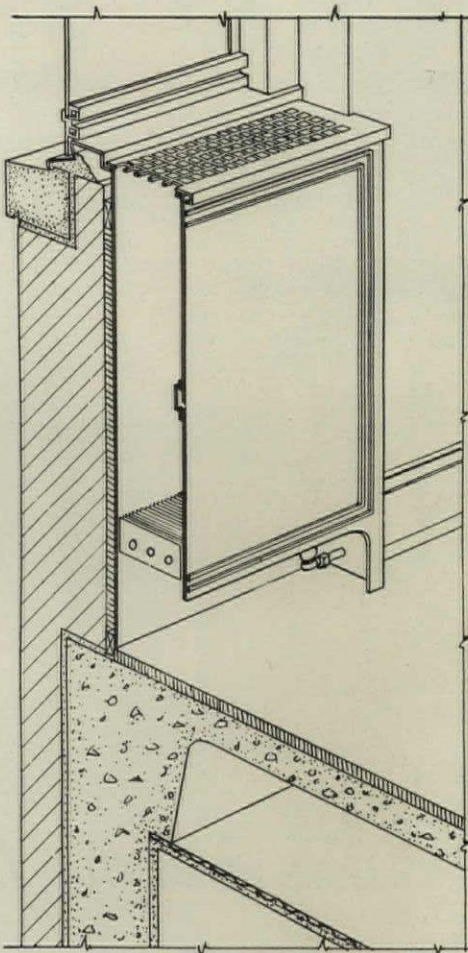
- 1 Easy, almost instantaneous control.
- 2 Increased comfort.
- 3 No stabbing radiant rays.
- 4 15 to 25% fuel saving.
- 5 Cleaner walls and drapes.
- 6 Greater beauty in every room.
- 7 An entirely free floor area.

Plus ease and economy in installation.

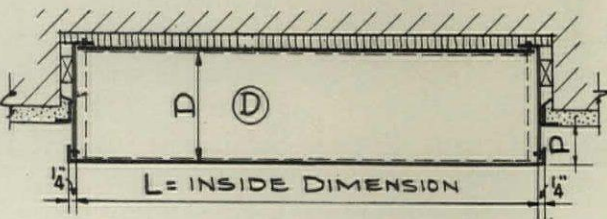
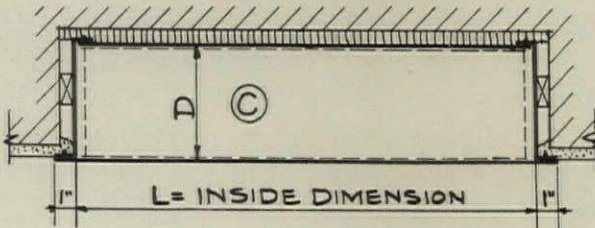
- 1 Extremely light in weight.
- 2 Requires fewer men, less time to install.
- 3 Minimum handling during building construction.
- 4 Heaters installed in final location supply temporary heat at extremely low cost.

Plus extremely low first cost.

**Architects, engineers and heating contractors are invited to write or mail the coupon for complete construction and installation details, and general architectural information about all three major types of the revolutionary low-priced Trane Concealed Heater for large buildings.*



PERSPECTIVE



PLANS

TRANE CONCEALED HEAT

THE TRANE COMPANY, Dept. 5

302 Cameron Ave., La Crosse, Wis.

Also Trane Company of Canada, Ltd., Toronto, Ontario.

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

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AMERICAN



The Original **COPPER STEEL** *Sheets for* **Building Construction**

Sheet Metal is an important factor in modern construction. AMERICAN Sheets are correctly produced both mechanically and metallurgically—and give service and satisfaction wherever employed. KEYSTONE quality (steel alloyed with copper) offers maximum rust-resistance for roofing, gutters, spouting, and similar uses. Our experienced engineers are ready to assist you in the selection of the proper sheets for your particular requirements, whether for galvanized work, metal lath, partitions,

doors, trim, ventilating systems, lockers,—in fact, for every use to which sheet metal is adapted in the building field.

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

Save with Steel

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American Sheet and Tin Plate Company

GENERAL OFFICES: Frick Building, PITTSBURGH, PA.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION



STEEL SHEETS

This versatile pencil gives an extra service . . .

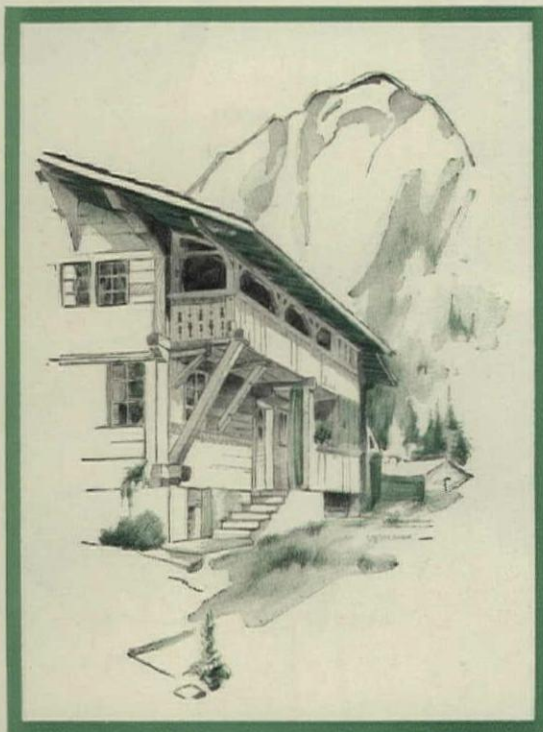
FINE . . . CLEAN WATER-COLOR WORK

Artists, Draftsmen,
Architects, Students, every-
where report amazing
success with the new
MONGOL
COLORED INDELIBLE PENCIL

THE thin lead of the new Eberhard Faber MONGOL Colored Indelible Pencil *will not break in normal use*, yet takes a needle-point in an ordinary pencil sharpener! This fact alone makes the MONGOL Colored Indelible an extraordinary improvement over the ordinary colored pencil.

But that's only half the story!

This remarkable pencil gives the extra service of water coloring, too! Beautiful water-color work like that shown in the illustration is not at all unusual to artists using the MONGOL. And it is easily done. The MONGOL Colored Pencil is used like an ordinary pencil, then the colors "washed" with a clean, wet brush. The result is a surprisingly smooth and even water-color finish.



*A Swiss Chalet by Elmer A. Stephan, Director
of Art, Pittsburgh (Pa.) Public Schools.*

Send for the Beautiful New Eberhard Faber Portfolio

Add our instructive and valuable new artists' portfolio to your collection of sketches and water colorings. It is now ready. The coupon with \$1.00 attached will bring you the portfolio together with 12 half-length MONGOL Colored Indelible Thin Lead Pencils in the following colors: pink, red, orange, yellow, dark green, light green, dark blue, brown, purple, heliotrope, black, and white.

EBERHARD FABER



The portfolio consists of six colored reproductions of originals done with the Mongol Colored Pencil and six black-and-white drawings done with Eberhard Faber drawing pencils.

EBERHARD FABER PENCIL COMPANY
Dept. PP-5, 37, Greenpoint Avenue, Brooklyn, N. Y.

Gentlemen: Enclosed is \$1.00 for which you will send me the New Eberhard Faber Artists' Portfolio of sketches and water-color work together with one dozen half-length Mongol Colored Indelible Pencils, Assortment No. 1832 in 12 different colors.

Name

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EBERHARD FABER MONGOL COLORED INDELIBLE 868
MADE IN U.S.A.

TEST *it and* SEE



TESTS—practical tests—prove Kemitex Window Shades capable of retaining their original beauty and utility thruout many years of service. Because every single fibre of the fabric used is thoroughly insulated with protective chemicals, Kemitex Window Shades are not affected by sunlight, heat, moisture, dirt and other destructive elements.

Thus also are Kemitex Window Shades easily cleanable by washing with sponge, soap and water. Scrubbing or brushing are unnecessary, because the dirt is ON—never IN the shade.

The next time you buy or specify window shades, investigate Kemitex. By actual comparison, it has, to a greater degree than any other window shade, those features which combine to provide satisfactory and economical window shade service.



WATER



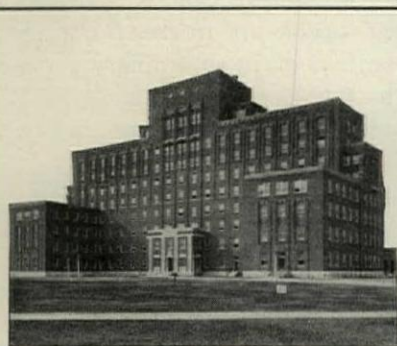
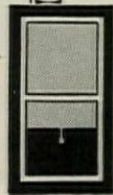
SOAP



SPONGE

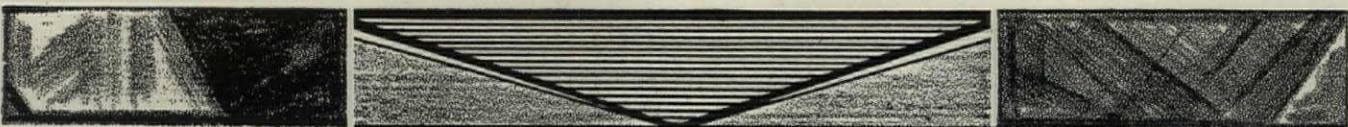
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WADSWORTH, OHIO

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A CHEMICALLY IMPREGNATED
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Because Kemitex Window Shades are ideal for use in hospitals, they were selected by the Toledo City Hospital pictured above. Architects: Schmidt, Garden & Erickson of Chicago.





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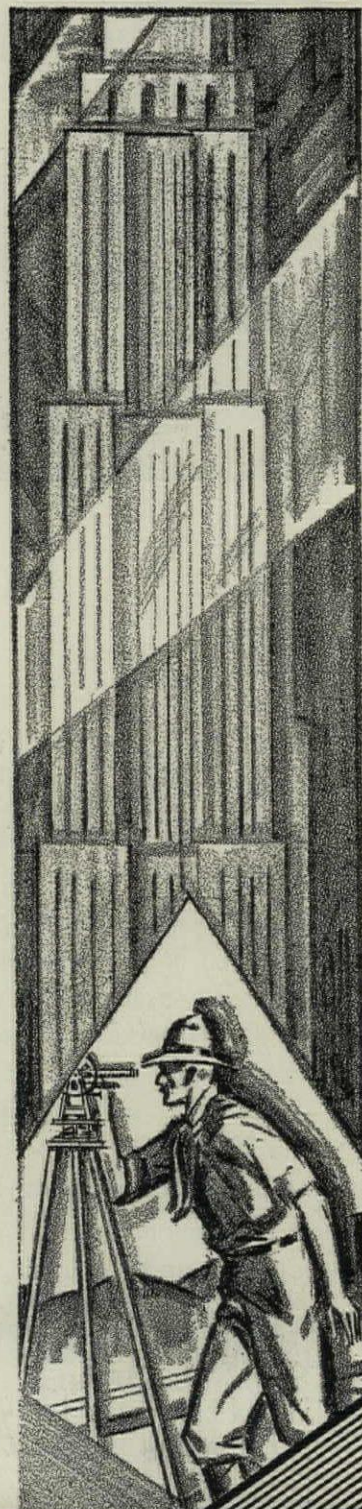
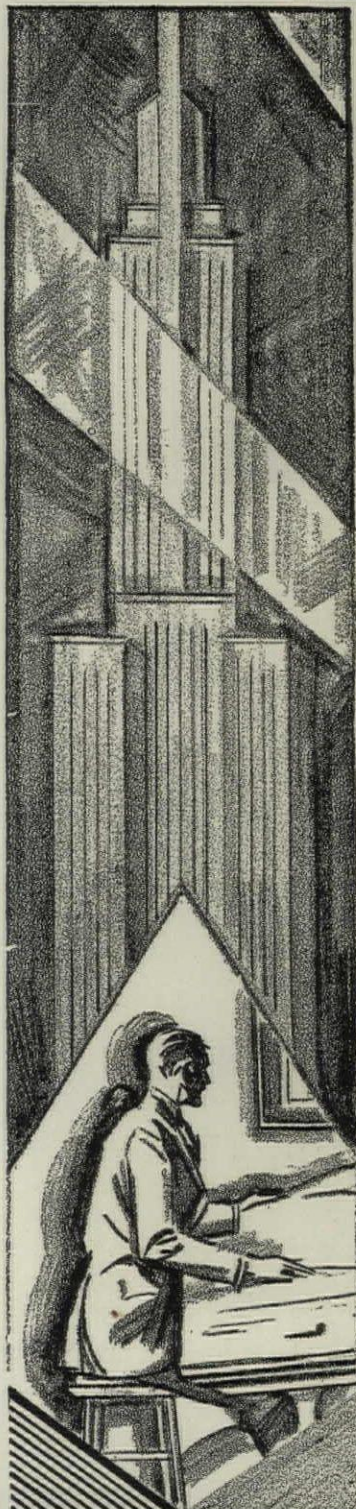
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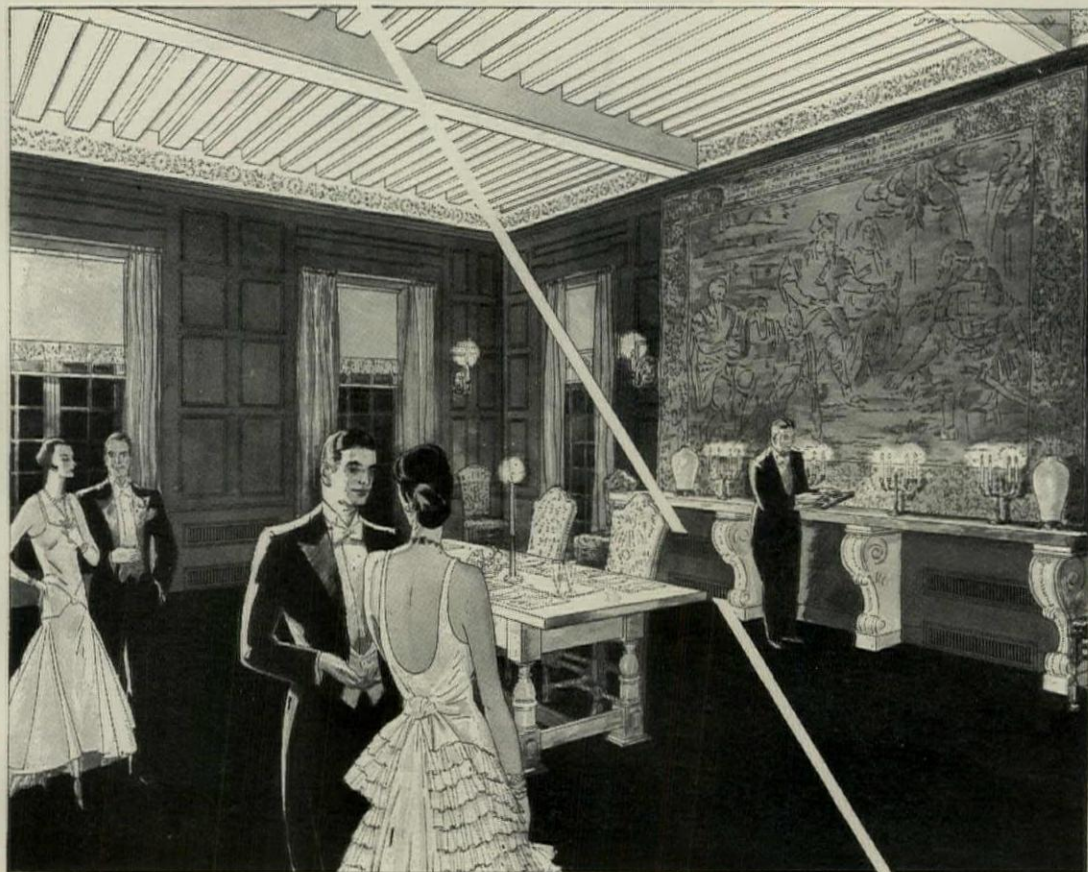
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MODERN



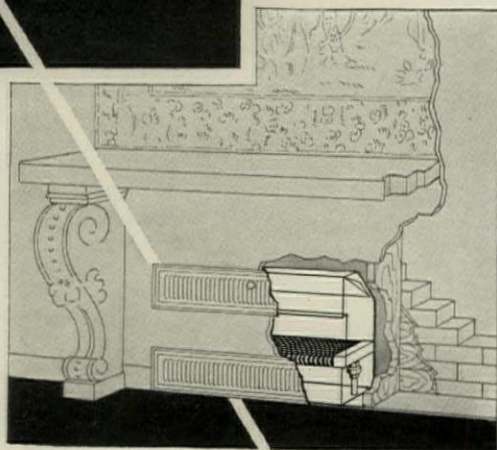
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The Josam 300-C, with the clamping device illustrated above is typical of the numerous double drainage drains installed in the showers of the Governor Clinton.

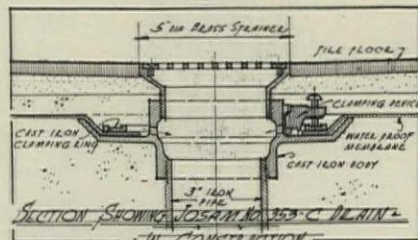
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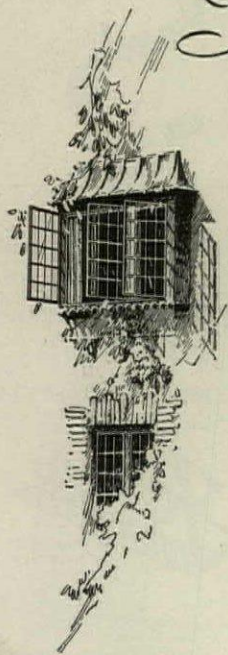
The Josam Line includes: Josam Drains for Floors, Roofs, Showers, Urinals, Garages and Hospitals; Josam Swimming Pool Equipment; Josam-Marsh Grease, Plaster, Dental and Surgical, Sediment and Hair Interceptors; Josam-Graver Floor-Fed, Gas-Fired Garbage and Rubbish Incinerators; Josam Open Seat Back Water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

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The World's Largest Manufacturer OF METAL CASEMENT WINDOWS...



Last year more Crittall Casements were manufactured than any other make of metal casement window. During 1929, over a million Stanwin type Casements—exclusive of Norman and Universal Casements—were sold throughout the world. In the Malay Archipelago and India, in Australia and Egypt, Kenya and Uganda, South Africa and Argentina, Japan and the British Isles—in every part of the civilized globe, countless homes and buildings gained in beauty, comfort and convenience by being equipped with Crittall Casements.

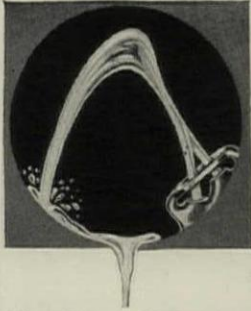
The Crittall Organization—of which the Crittall Casement Window Company of Detroit, is a part—is the world's largest manu-

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CRITTALL CASEMENT WINDOW COMPANY, 10959 HERN AVENUE, DETROIT, MICHIGAN
STANWIN CASEMENTS • NORMAN CASEMENTS • UNIVERSAL CASEMENTS

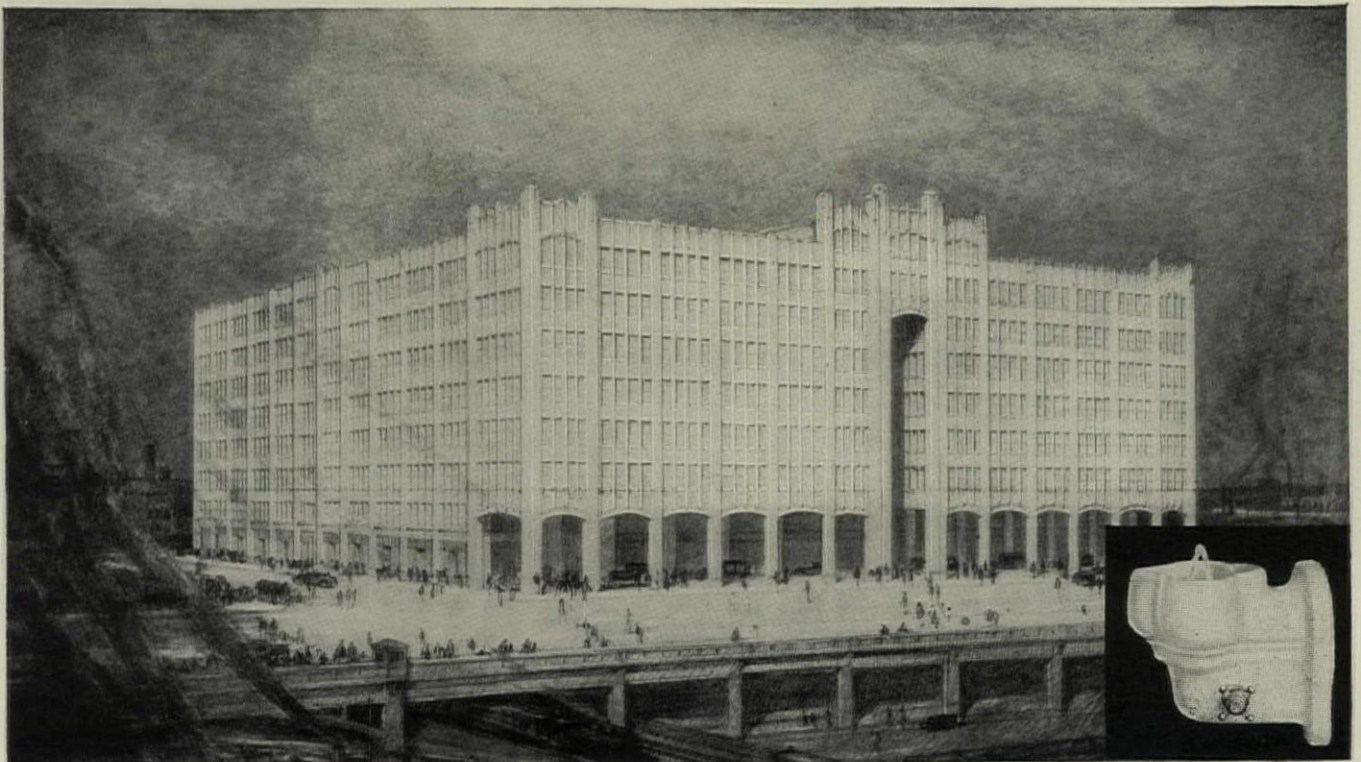


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Practical Automatic
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Water is never too high, never too low—and always in the bowl, not on the floor. A patented practical automatic control keeps height of stream unvarying regardless of pressure while two-stream projector makes it impractical for lips to touch.

AS DISTINGUISHED AS THE BUILDING , , THESE DISTINCTIVE MODERN FOUNTAINS

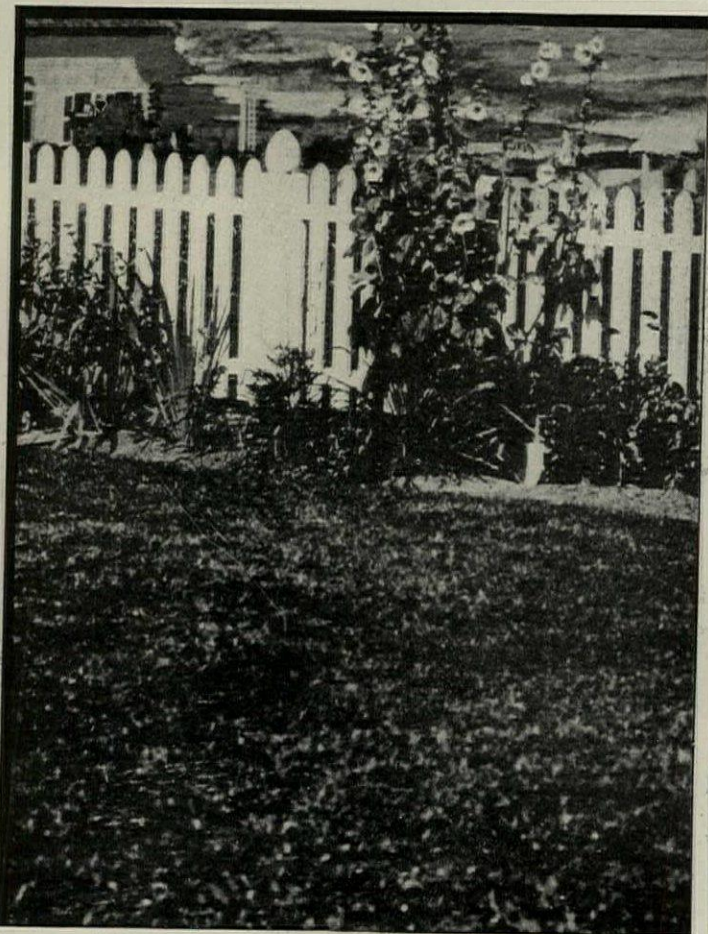
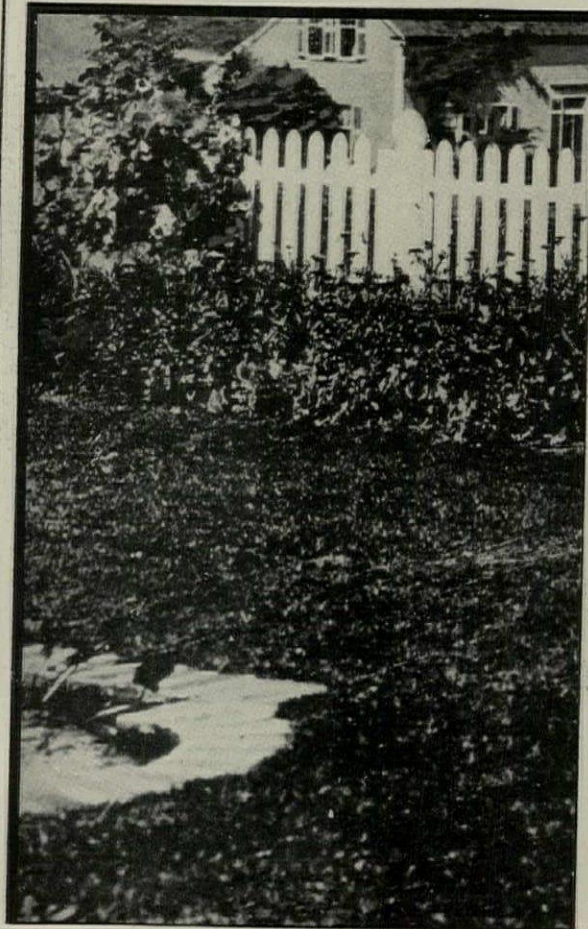
FOR this great new Houston (Texas) building, one of many noted structures in the growing Southwest planned by Giesecke & Harris, Architects, sixteen Halsey Taylor Drinking Fountains were installed. The illustration below shows the type used, No. 605 , , , with exclusive patented Halsey Taylor features providing maximum drinking sanitation and convenience as well as a pleasant freedom from servicing troubles , , , See Sweet's, 14 pages, or write us , , , The Halsey Taylor Co., Warren, Ohio.



*Merchants & Manufacturers
Building, Houston, Texas,
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Window Glass

New in Flatness— New in Lustre



New manufacturing methods give Pennvernon Window Glass extreme flatness...uniform thickness...clearer visibility...high lustre on both sides...and freedom from defects

A FAR better window glass is now ready for you to use . . . at no greater cost than ordinary glass.

A new manufacturing principle makes this possible. Pennvernon Window Glass is *flat drawn* by a new method that takes it from molten "metal" into finished sheets without curving or flattening. It is *born flat and kept flat*.

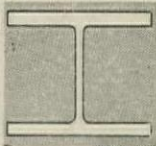
Pennvernon Window Glass has a flatness and brilliance heretofore not expected in window glass. Its uniform thickness and freedom from defects make it easier to handle, cut and glaze. Inside or out, its surface lustre is equally bright. For Pennvernon Window Glass has *no wrong side*.

All distributing warehouses of the Pittsburgh Plate Glass Company, as well as many leading glass jobbers, are now ready to supply immediate deliveries.

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In an amazing number of recent important buildings you find Carnegie Beams. The success of these wide, parallel-flanged sections has been remarkable. They bring to steel construction greater strength and a new efficiency. Carnegie Beams merit your investigation.

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CARNEGIE BEAMS

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This Sonneborn Product Renders Wooden Floors
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LIGNOPHOL puts youth into wooden floors. It penetrates and permeates the wood cells and fibres, fills them with natural oils and gums, resulting in a dust-free floor that defies time and traffic.

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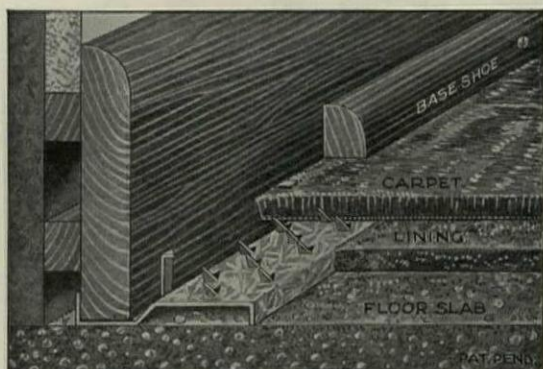
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TACKLESS CARPET STRIP



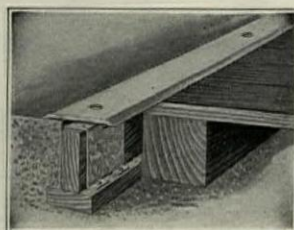
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The increasing use of carpets, particularly over concrete floors, has emphasized the importance of a dependable, enduring system of fastening that would reduce costs and at the same time furnish an improved installation. The Tackless Carpet Strip was developed to fill that need. It is the only method that eliminates tacking and produces a matchless, smooth carpet installation that is free from exposed tack heads and depressions to collect dirt. The genuine satisfaction and enthusiastic endorsement of architects, contractors and owners alike is proof of its efficiency and economy.

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ANKORTITE FLOOR JOINERS

Anchor assembly provides solid base. Any looseness of threshold plate is taken up by spacing collar and adjustable locknut.

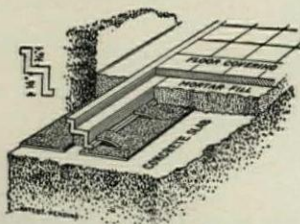


Furnished with arched or flat threshold plate in brass, bronze or galvanized steel, plain or grooved in all common widths—a very practical, economical and attractive joiner for abutting floors.

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RECESSED BRASS BINDING BAR

A brass bar that forms an offset for applied coverings when joined to concrete or terrazzo. Square or cove base extended a few inches from wall gives a neat, attractive and sanitary joint and protects both materials against chipping. An inexpensive method that gives highly satisfactory results.



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Smyser-Royer Display in Sweet's Catalogue

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TO SATISFY COMPLETELY THE DEMAND FOR MODERN RADIATION

Inconspicuous



Adaptable



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"RICHMOND" FLOORLINE RADIATOR

U. S. PATENT APPLIED FOR



THE RICHMOND FLOORLINE radiator has none of the objectionable features of the ordinary radiator—and it can be installed at a reasonable cost.

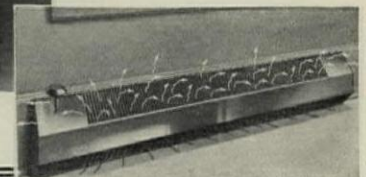
This modern and efficient heating unit may be attached to the baseboard—partially recessed—or completely concealed behind a grille. It does not interfere with furniture placement or decorative schemes. No exposed piping. No strong dust-laden air currents to smudge walls and draperies. And shields are not required.

The Floorline radiator is installed quickly and inexpensively in new homes or to replace present radiators. The entire house or a limited number of rooms may be favored with this finer heating unit. It measures but 8½" high, 3½" deep. Made in units of 18 and 36 inches and multiples thereof. This efficient radiator has been tested and rated by the Carnegie Institute of Technology and the Frost Laboratories according to the code of the American Society of Heating & Ventilating Engineers. Richmond Radiator Co. Inc., New York, N. Y.



Send the coupon below for illustrated catalog including installation drawings and other details.

Heated air currents projected from but 5" above the floor. Insures warm floors, even heat.



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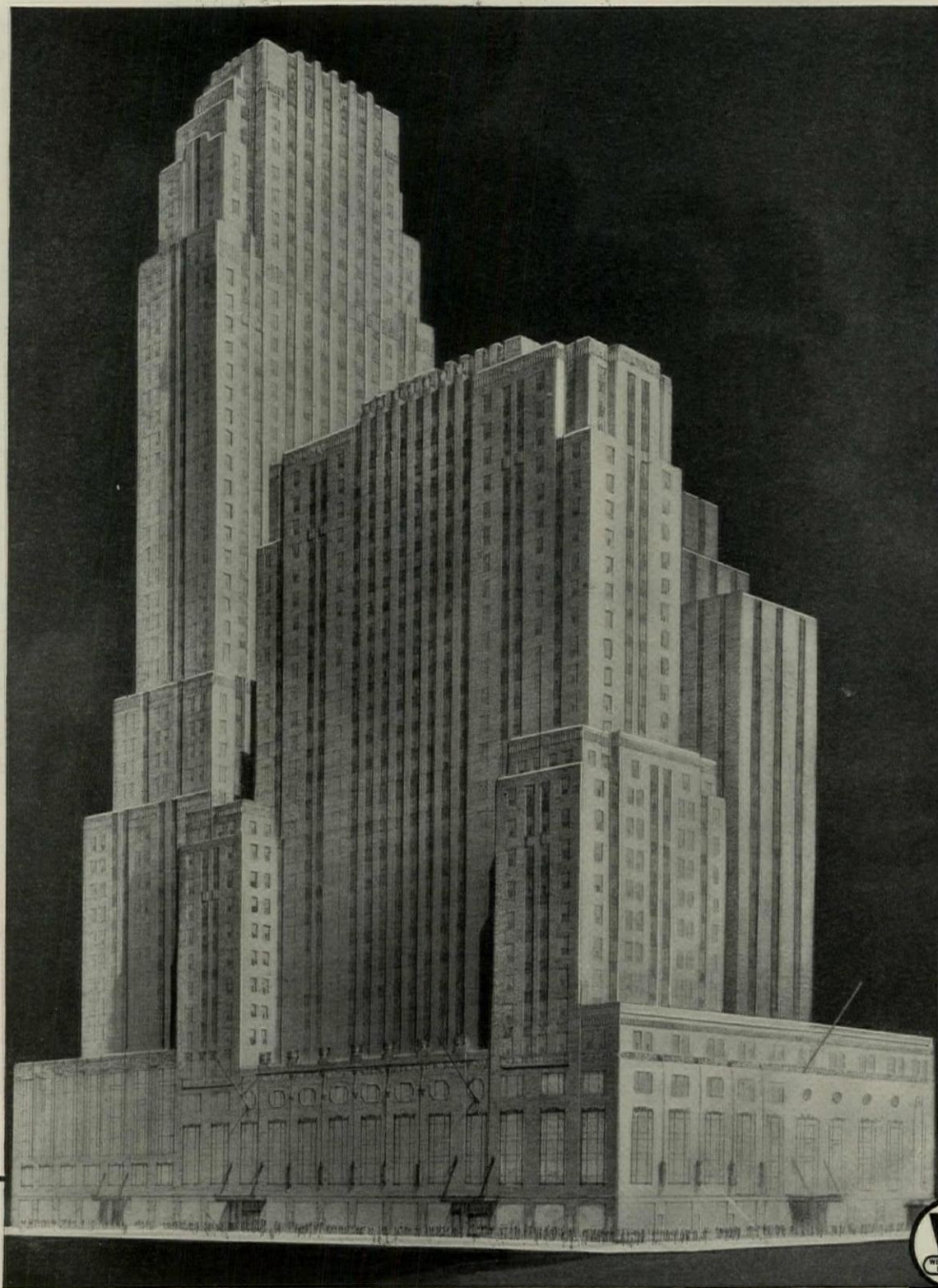
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*Westinghouse Elevators are the logical highways
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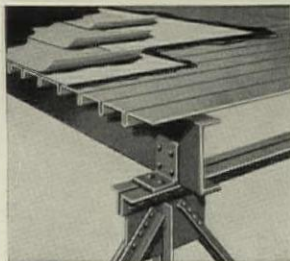
This Industrial Acceptance Indicates Preference

Listed here are a few outstanding Mahon Steel Roof Deck installations.

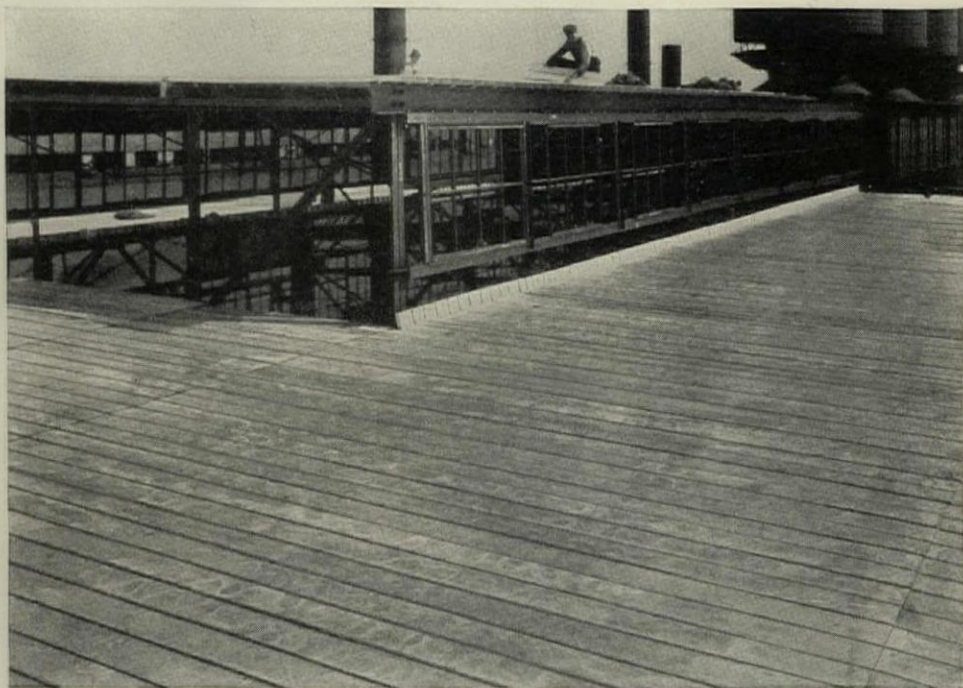


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Below is a cross section of Mahon Steel Roof Deck showing application of insulation and roofing material.



Mahon Steel Roof Deck, manufactured from special tight coated galvanized copper bearing steel, requires no painting or maintenance whatsoever . . . it provides a smooth rigid surface for the application of insulation and roofing material.



Mahon Steel Roof Deck installed on a new plant for the Latrobe Electric Steel Company, Latrobe, Pa.

THE broad acceptance of Mahon Steel Roof Deck among the outstanding industrials of the country is significant of two things: First, that Mahon Steel Roof Deck is thoroughly practical in every respect . . . and that the ease of installation, and the principle of load distribution through lateral continuity, has gained for it a decided preference among architects and builders; Second, that architects, builders and manufacturers are availing themselves of the economies and the firesafety and permanence provided by this modern type of roof. Mahon Steel Roof Deck is less than

half the weight of the lightest roof in other types of permanent, firesafe construction. It is rolled from special tight coated galvanized copper bearing steel . . . it will not disintegrate, and it requires no painting or maintenance whatsoever. In buildings designed to carry this extremely light roof load, savings amounting to as much as 25% can be effected in the supporting steel alone. Let us show you the economies and the structural advantages of Mahon Steel Roof Deck. Write for our complete data book and our folder, "Facts and Figures."

THE R. C. MAHON COMPANY
DETROIT, MICHIGAN

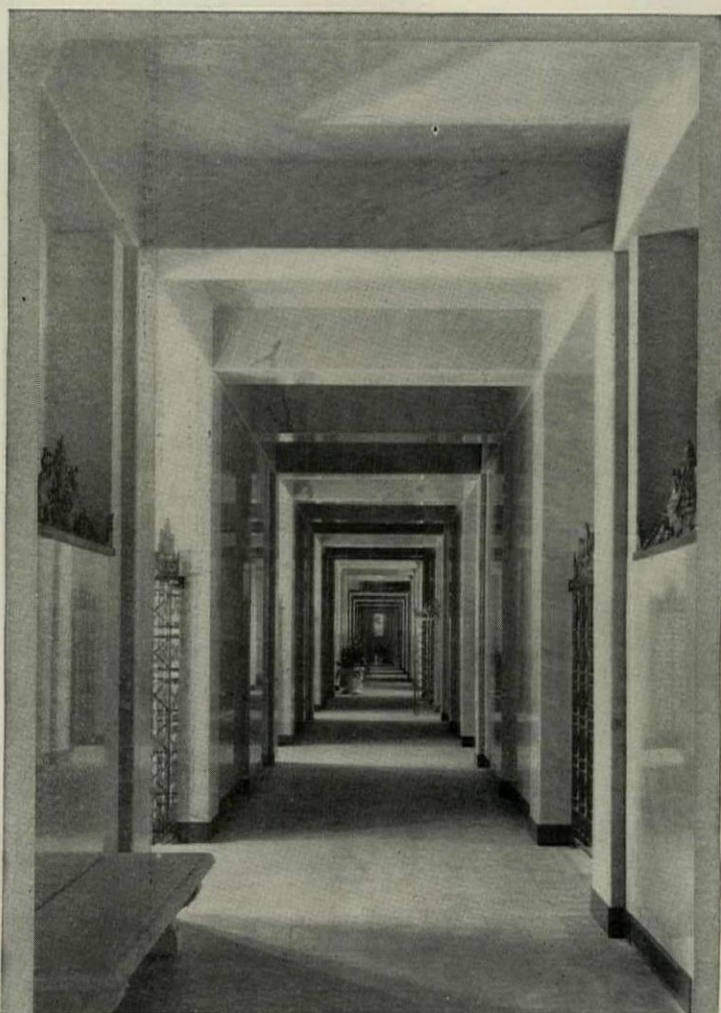
Representatives in Principal Cities

MAHON
STEEL ROOF DECK

Manufactured in Galvanized Copper Bearing Steel in either 18 or 20 Gauge



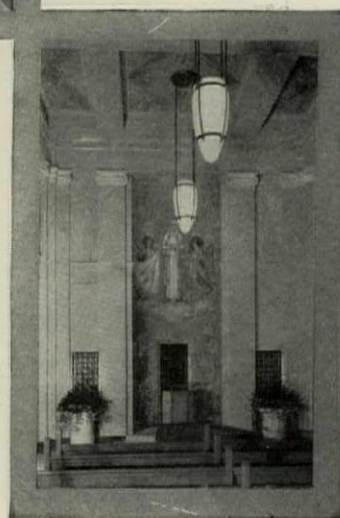
GEORGIA MARBLE



INTERIORS

The Fairmount Mausoleum, Newark, N. J., is four stories high, contains over three thousand crypts. The interior is of Georgia Marble—floors, walls, ceilings, and crypt fronts. While Georgia Marble, due to its superior weathering qualities is widely used for exteriors, there are many fine interiors in Georgia Marble. The architect, Mr. William H. Deacy, was highly pleased with the results

obtained here—the efficient handling of the work, and the unusual and careful matching of adjacent slabs. Its hardness, and impervious nature make it very easy to keep clean, no stains from “mop water”—no damp walls—a crystalline marble that retains its brilliance with the passing years.



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A New
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AR-KE-TEX TILE

**Combined Exclusive
Features of This Latest
Creation**

Light Color — Close Shading
Heavy Glaze—Permanent Face
No Glaze on Bearing Beds
Greatest Crushing Strength
Reasonable First Cost and
Utmost Economy of Upkeep

Clay Products Company, Inc. of Indiana now announces another development in Textured Tile—a new Insul-Glaz. Here is a structural wall unit that combines all of the qualities that have ever been demanded of a salt glazed tile—a smooth surface, heavily glazed face, impervious to moisture, acids, or alkalis, AND A LIGHT TAN COLOR RANGE THAT IS EXTRAORDINARILY UNIFORM, so frequently desired but never before consistently practical. Truly an innovation in clay tile manufacture. And all at a reasonable cost.

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THE STANDARD OF TEXTURED TILES

"Better Walls"—a monthly brochure, brings to you up-to-the-minute facts on future new developments in AR-KE-TEX Tile for permanent filing. Be sure that you are on the mailing list.



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

*A new and remarkable
product—*

MURPHY

AIRPLANE SUPER SPAR VARNISH

A quick-dry, fine all-purpose varnish

WE HEREBY announce to architects this quick-drying all-purpose varnish.

The original demonstration of the remarkable qualities of Murphy Airplane Super-Spar Varnish was made in the air and on the water. Subjected to the merciless beating of the sun and the flexing surfaces of aircraft, this product has stood up with astonishing success. For the past year it has also been used by the painting trade—for floors, interiors, and outside application.

For all these uses it has proved eminently satisfactory.

For durability, it is equal to the best—even the slower-drying varnishes. Thoroughly waterproof of course, and resistant to acids and alkalis.

For refinement of finish, it surpasses

any other spar varnish we have ever seen, including our own.

For quick-dry, Airplane Spar dries out of dust in 2 to 2½ hours, and dries tough and hard ready for recoating in 4 to 6 hours, according to climatic conditions. Same-day recoating is thus definitely assured.

Murphy Airplane Spar can be specified for all uses of varnish—from fine interior woodwork to the severest outdoor requirements. It is truly a fine varnish. The quick-dry has brought no sacrifice of any of the qualities you have a right to expect from a fine and durable finish.

We shall be glad to explain and demonstrate this unique product upon request.

Specifications for Murphy Products may be found in Sweets' Catalogue, Volume C, or write us for Specification Manual.

Murphy Varnish Company

Members of the Producers' Council

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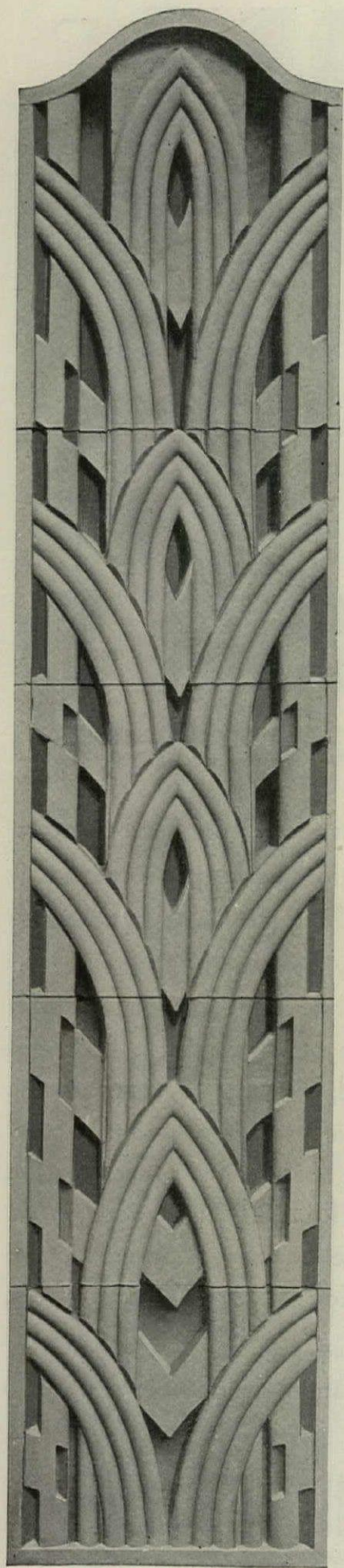
Graded—selected—inspected raw material rolled by standard association methods produce uniform quality rail steel bars certified by these mills: Buffalo Steel Company, Tonawanda, N. Y.; Burlington Steel Company, Hamilton, Canada; Calumet Steel Company, Chicago, Ill.; Canadian Tube and Steel Products Limited, Montreal, Canada; Connors Steel Company, Birmingham, Ala.; Franklin Steel Works, Franklin, Pa.; Laclede Steel Company, St. Louis, Mo.; Missouri Rolling Mill Corporation, St. Louis, Mo.; Pollak Steel Company, Cincinnati, Ohio; West Virginia Rail Company, Huntington, W. Va.

For information write

Rail Steel Bar Association, Builders Bldg., Chicago



RAIL STEEL
for concrete reinforcing

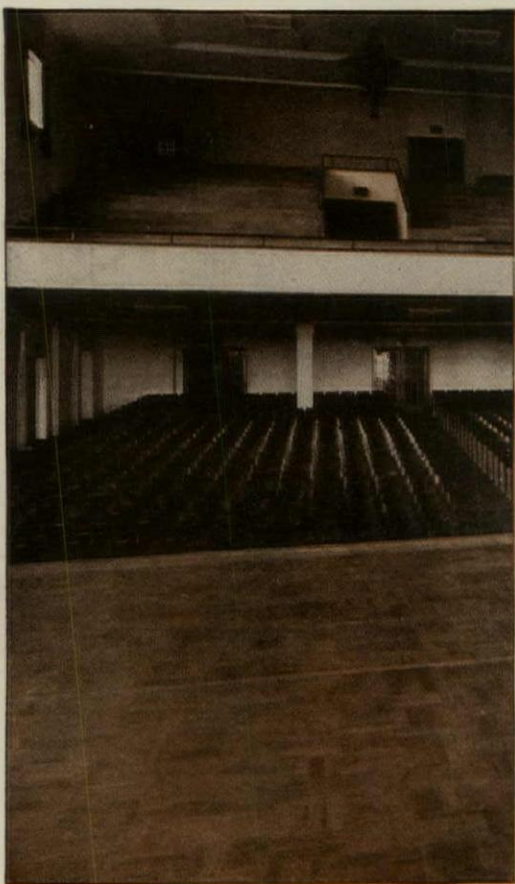


TERRA COTTA enrichment on Medical Arts Building, Oak Park, Ill. 10-story office building faced entirely with Northwestern Terra Cotta. This design is unique in that it is flexible and can be used, without remodeling, for spandrels of different heights. Roy J. Hotchkiss, Architect.

Buildings faced with Northwestern Terra Cotta are outstanding and easily recognized on America's streets of destiny. White as winter's snow or colorful as an autumn forest, terra cotta buildings not only catch the eye, but are retained indelibly in the memory. Northwestern Terra Cotta meets most adequately ALL the requirements of modern architecture, as proved by fine skyscrapers, hotels, apartment houses, theaters, banks, schools and hospitals throughout the land.

**THE NORTHWESTERN
TERRA COTTA COMPANY**

DENVER • CHICAGO • ST. LOUIS



40,000 square feet of 9-inch *CELLized oak blocks in the North Little Rock, Arkansas, High School. Architects: Mann, Wagner & King, Little Rock, Ark.

A very material saving in finishing cost

*is effected by Maple and Beech blocks, factory-sanded, and then *CELLized*

Where durability of the floor is the first consideration, as in schools, department stores, chain stores, high class factories, etc., pre-sanded *CELLized wood floor blocks meet every requirement.

The unit block floor needs only to be laid in plastic cement, EVERBOND, over concrete or any level sub-floor, before use. The appearance is highly pleasing.

Cleaning, if necessary, and polishing may be accomplished in one operation by the application of hard paste-wax.

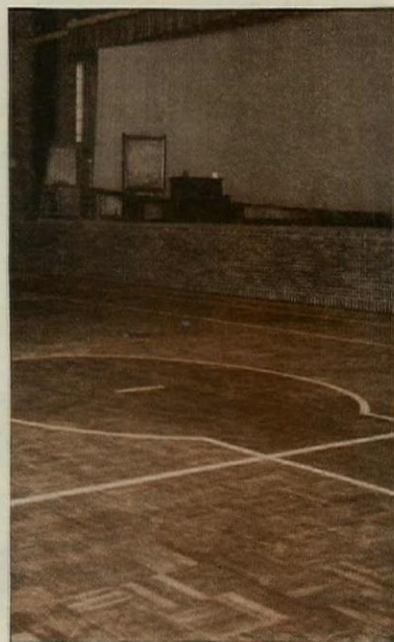


*CELLized wood blocks in the Eastern Outfitting Company Store, Los Angeles, Calif. A. Godfrey Bailey, Architect.



Newcomb College, New Orleans, La. Blocks laid by *CELLized Block Flooring Company of New Orleans.

Gymnasium floor of 4,500 square feet 9-inch *CELLized oak blocks in the Father Ryan High School, Nashville, Tenn. R. J. Regan, Memphis, Architect. Laid by Nashville Floor Laying Co. Also an attractive floor when the room is used as an auditorium.



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



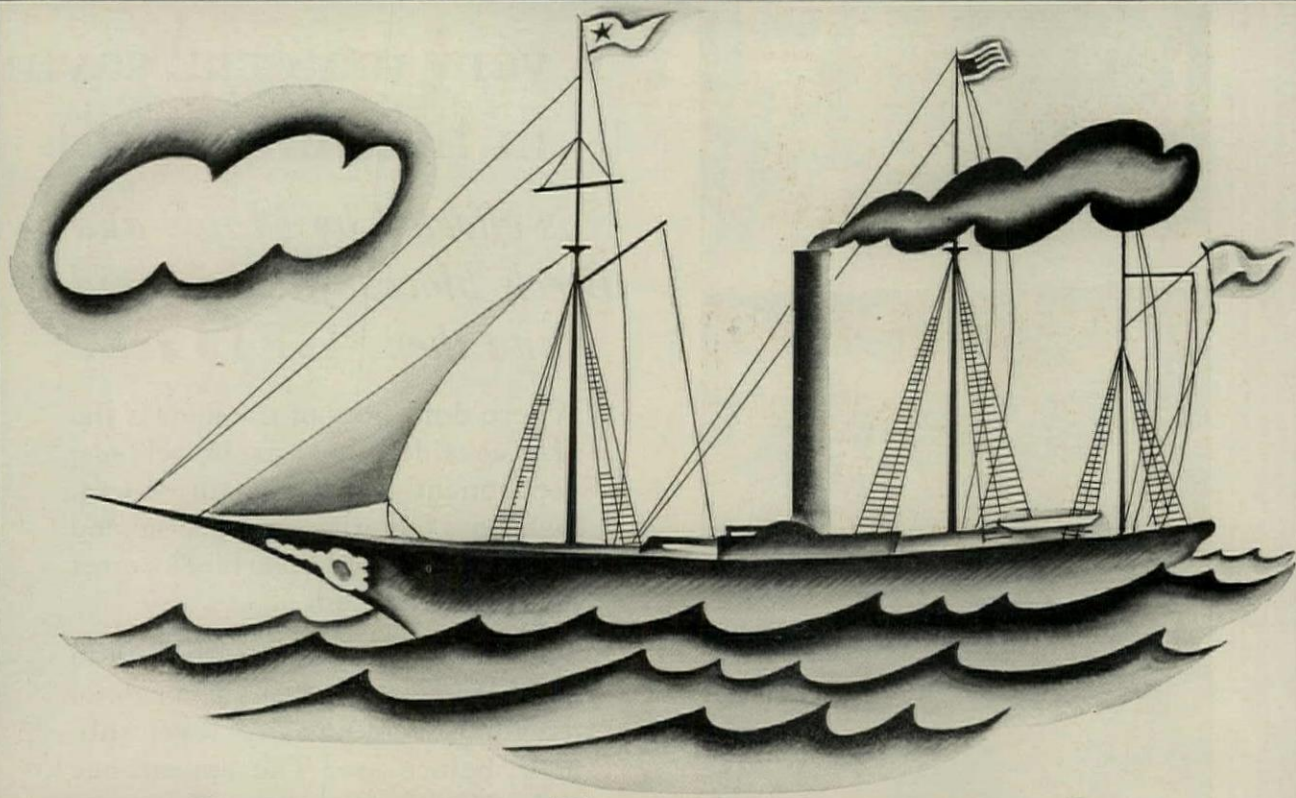
*CELLized Wood Floor Blocks are guaranteed. Laid only by Licensed Flooring Contractors.

The unit block is rapidly laid and the floor is inexpensive in both original and upkeep costs

Laid directly over concrete in EVERBOND, a plastic cement, providing a sound-deadening, resilient base.

Sold through lumber dealers everywhere; manufactured by
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***CELLized Oak Flooring Inc.**
MEMPHIS — TENNESSEE



not very long ago!

Almost as great as the improvements in transportation have been the changes in building methods. For example, note how rapidly wood joists and wood cross bridging are giving way to the Improved Firesafe Floor and Roof Construction.

It provides unsurpassed strength and rigidity, firesafe construction and a minimum vibration under load.

The Kalmantruss Joist has no bolts, rivets or welds in tension. One-piece

joints make it unusually dependable.

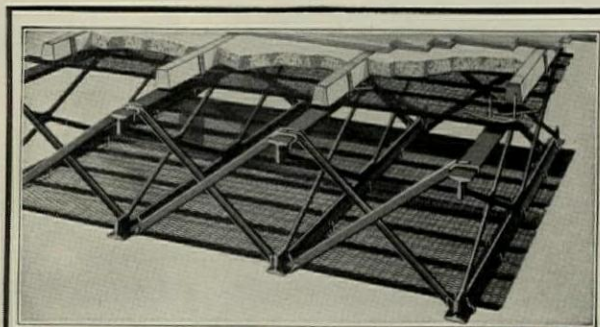
Kalman Rigid Bridging acts both in compression and tension. Accurate spacing of joists and distribution of load are obtained in such a way that the entire construction acts as a unit. Erection is faster, more economical.

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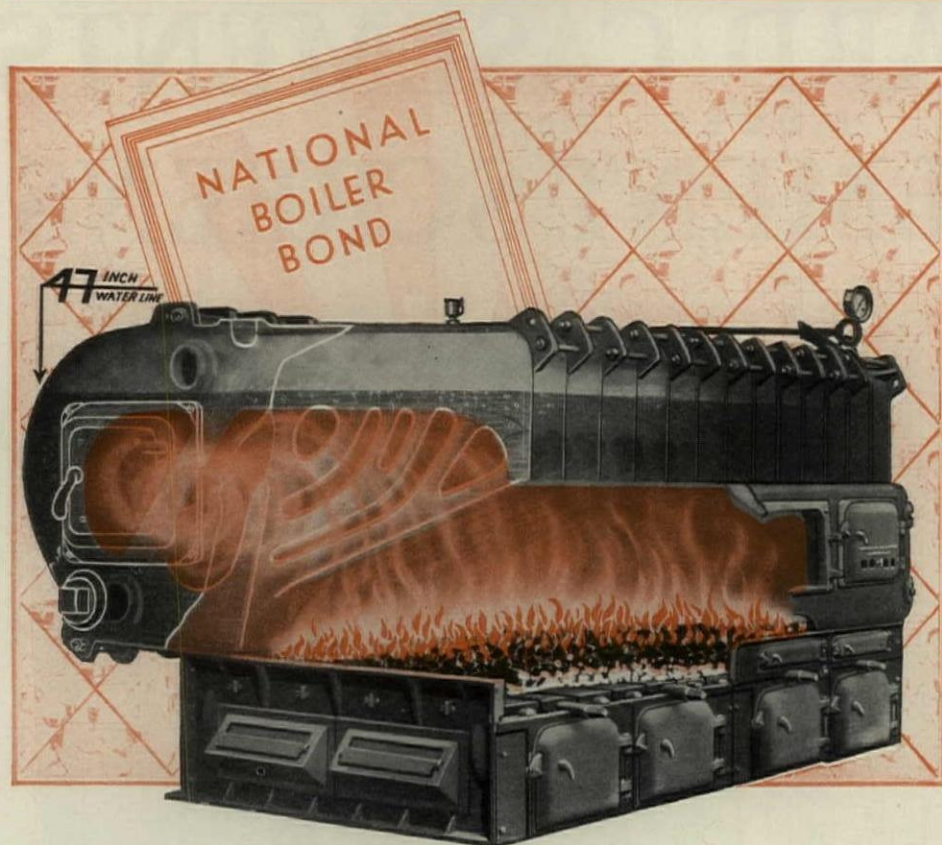


Improved Firesafe Floor and Roof Construction composed of:

Kalmantruss Steel Joists. Rigid Bridging. $\frac{3}{8}$ -inch Rib Kalmanlath. Kalman Lath Clips and Accessory Products

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THERE'S A NATIONAL HEATING SYSTEM FOR EVERY BUILDING NEED



Cutaway View National Low Water Line Boiler No. 413-S. One of 118 types and sizes.



National Novus Boiler

NATIONAL BONDED LOW WATER LINE BOILER *The Hottest Gases Contact with the Hottest Water*

Ingenuously contrived sections bring the hottest water in these boilers in contact with the hottest gases, the return water in contact with the gases after they have cooled. Thus welcome efficiency is attained, combined with a low water line that makes this boiler save thousands of dollars yearly in excavation costs. Where lack of head room is the problem, the Low Water Line is always the best, often the only solution.

This boiler is designed to perform efficiently with all leading types of fuel; coal, coke, oil and gas. It can

be converted on the ground to meet the individual requirements of the fuel selected. Engineering design scientifically coordinates every part to produce economical combustion and thoroughly satisfactory heating. The National Boiler Bond, furnished with each boiler, not only guarantees workmanship, materials, and design, BUT

MOST IMPORTANT OF ALL SPECIFIES AND GUARANTEES BOILER PERFORMANCE.

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National Low Water Line Boiler



National Super-Smokeless Boiler

NATIONAL

Made-to-Measure

HEATING SYSTEMS

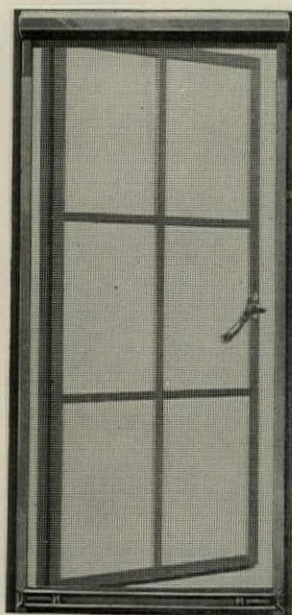
TRUSCON

STANDARD CASEMENTS

MODEL No. 5

with CASEMENT SCREENS

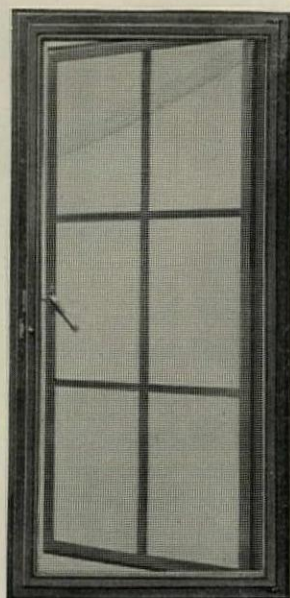
CASEMENT
Rol-up
SCREENS



Truscon Casement with Rol-up Screen

	1'0"	1'2"	1'4"	1'6"	1'8"	2'0"
1'0"	1212LR	2214LR	4214VCLR	4224	6224	6224VC
1'2"	1212LR	2214LR	4214VCLR	4224	6224	6224VC
1'4"	1413LR	2416LR	4416VCLR	4426	6426	6426VC
1'6"	1413LR	2416LR	4416VCLR	4426	6426	6426VC
1'8"	1414LR	2416LR	4416VCLR	4426	6426	6426VC
2'0"	1614LR	2618LR	4618VCLR	4628	6628	6628VC
2'2"	1614LR	2618LR	4618VCLR	4628	6628	6628VC
2'4"	1614LR	2618LR	4618VCLR	4628	6628	6628VC
2'6"	1614LR	2618LR	4618VCLR	4628	6628	6628VC
2'8"	1614LR	2618LR	4618VCLR	4628	6628	6628VC
3'0"	1614LR	2618LR	4618VCLR	4628	6628	6628VC

FLAT TYPE
CASEMENT
SIDE HINGED
SCREENS



Truscon Casement with Side Hinged Screen

Standard Units of Screened Casements

The recognized high quality of Truscon Steel Casements in design and utility is further supplemented by screens of equal efficiency and economy. The screens of special Truscon design are quickly installed on any Standard Truscon Casement, Model No. 5. The Rol-up Screens are particularly desirable, because they are a permanent part of the casement, always instantly available and rolled up out of the way when not in use. The Side Hinged Screens are also a superior product and somewhat lower in cost. For a complete window service, specify Truscon Casements with Screens. *Full information and catalog on request.*

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STEEL WINDOW DIVISION *Warehouses and Offices in Principal Cities*
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Build NOW While COSTS Are LOW



EFFLORESCENCE is due to the presence of soluble salts in masonry materials.

Brixment never causes efflorescence because it contains less than $\frac{1}{2}$ of 1% of these salts.

Even if salts are present in other materials used, Brixment's water-repellent quality helps to prevent their coming to the surface.

Send today for book describing other advantages of Brixment for masonry and stucco. Louisville Cement Company, Incorporated, Louisville, Kentucky.

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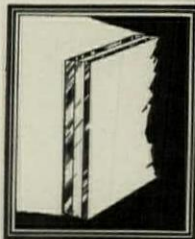
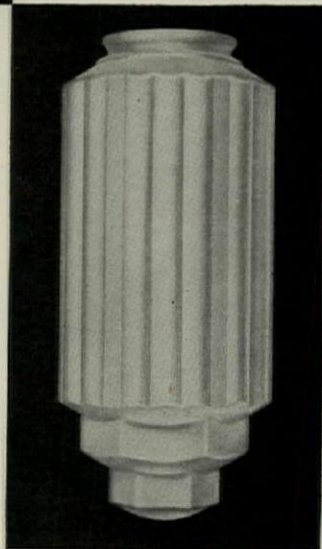
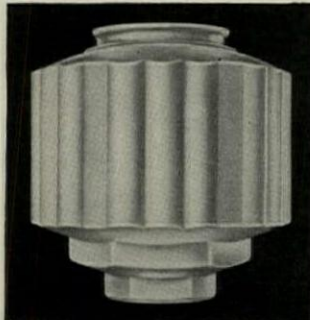
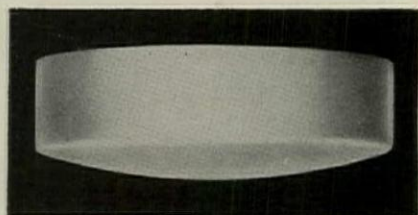
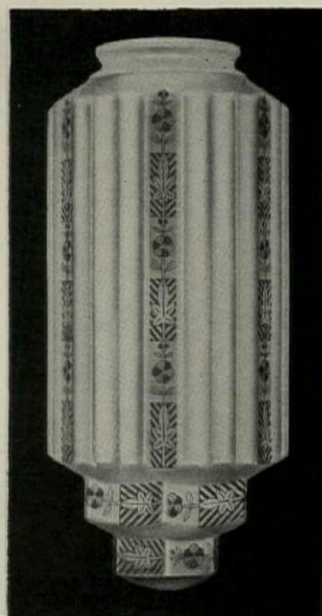
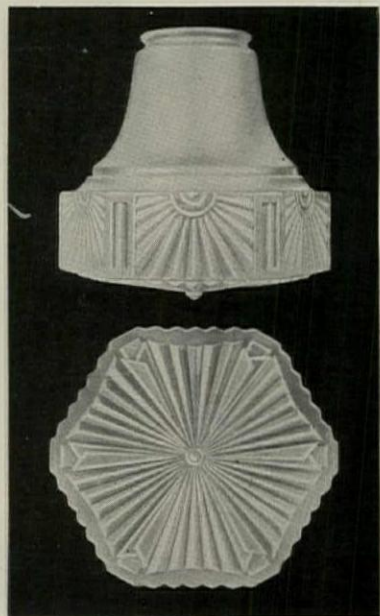


Superior Lighting in Modern Designs

CELESTIALITE

Three Layer Lighting Glass

Modern not only in the smart interpretation of the new mode for interiors, Celestialite also is eminently modern in the efficient production of soft, white, next-to-daylight illumination! The almost endless variety of applications of these designs is alone an extraordinary tribute to their classic beauty. Mail today the coupon below for a fully illustrated catalogue describing these and other distinctive Celestialite designs.



CELESTIALITE'S THREE LAYERS

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

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Gleason-Tiebout Glass Co.
200 Fifth Ave., New York

Please send me free, illustrated,
catalogue showing your full line of
Celestialite globes in modern designs.

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NEXT TO DAYLIGHT

GLEASON-TIEBOUT GLASS COMPANY

WATERPROOFINGS

HORN
PRODUCT

FLOOR-TREATMENTS

COLORUNDUM

For Coloring

Armor Plating

Cement Floors

When the Floor Is Laid

How It Colors

It colors them lastingly. Colorundum is a powder composed of powerful non-fading colors and fused aggregates. It unites integrally with the cement giving a tile-like finish. Beautiful mottlings or blended duotones can be obtained by using different colors of Colorundum in trowelling the second coat. The tile-like effect can be further enhanced by scoring with Horn's rubber-carborundum grinding wheel.

Made in 4 Colors

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



JOINTER

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



NON-SLIP

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

How It Armor Plates

In addition to the non-fading colors and cementitious binder, Colorundum contains fused aggregates. Crystals so shaped that they clinch themselves into the surface. The particles are so small that the surface is perfectly smooth. In fact almost glass-like. Still the myriad points of the aggregates stand so free from the surface as to give a non-slip grip. It gives a grip, without the least feeling of grit. Colorundum colors, waterproofs, hardens and slippproofs cement floors.

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Von Duprin

Self-Releasing Fire and Panic Exit Latches

The Keys To Safety

In panic latches, or any other devices on which the lives of human beings may depend, the one requisite of vital importance is sure operation at all times. Without this quality, the safety device is merely a hollow sham.

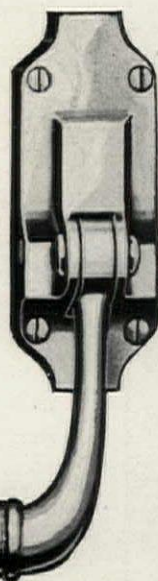
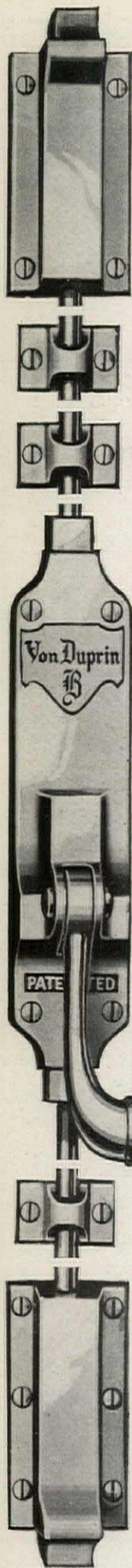
The genuine Type "B" Von Duprin devices are, in our opinion, the best devices to specify for all important buildings because they have in superlative degree this quality of sure operation. Their exceedingly simple construction, their great strength, their precision assembly, all assure it.

Specifying the genuine Type "B" Von Duprin de-

vices, and insisting upon getting what you specify, are the keys to the ideal solution of the problem of giving the occupants of a building the surest possible protection from exit door disasters.

VONNEGUT HARDWARE CO.
Indianapolis, Ind.

Listed as Standard by Underwriters Laboratories



Q U I E T . . . *please . . .*



A MERICAN business men have long realized the extravagance of noise. Now they are doing something about it. Their demand for quiet offices makes sound correction a renting asset no architect or owner can afford to overlook.

Acoustex does more than take care of the noise. It provides an attractive ceiling finish which never wearies the eye. Its textured surface invites the closest inspection with confidence. It has been tested by years of successful installations.

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of HOUSING COMPANY
40 CENTRAL STREET, BOSTON, MASS.

Acoustex erectors are located in principal cities . . . Ask for specifications and details on the use and application of Acoustex . . . or write us direct.

ACOUSTEX

The 'Decorative Sound Absorbent

ACOUSTEX offers you . . .

An acoustic material which is a finish beautiful in itself . . . tinted to your specifications . . . unusually high coefficient of sound absorption . . . easily vacuum cleaned and redecorated . . . made of incombustible wood fibre . . . tested through years of successful installations . . . furnished in tiles from 6" x 12" to 12" x 24" and large sheets two feet wide and up to ten feet in length . . . three thicknesses available to meet all absorption requirements:



ACOUSTEX 60—1 inch thick

*Absorbs more than 60% of the incident sound

ACOUSTEX 70—1½ inches thick

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ACOUSTEX 80—2 inches thick

*Absorbs more than 80% of the incident sound
*1024 vibrations per second.

Boston Acoustical Engineering Division of Housing Company, 40 Central St., Boston, Mass. P-5

Please send Specifications and Details on the Use and Application of Acoustex for our acoustic file.

Name

Address

The COWING JOINT

Insures These Great Towers
of La Salle Street
Against Cracks and Spalls~



ONE LA SALLE STREET
K. M. Vitzthum & Co., Arch.
FOREMAN BANK BUILDING
Graham, Anderson, Probst
and White, Architects

The value added to a building by the Cowing Joint is recognized by architects generally.

The Cowing Joint preserves the beauty by preventing cracks and spalls. It saves maintenance cost, reduces tuck-pointing, is neat, will not squeeze out, it endures.

See "SWEETS"

Cowing Pressure Relieving Joint Co.

226 W. Superior St.

Chicago, Illinois



The choice of OAK is indisputable

ARE YOU planning a room like this one — cordial and pleasant, a room you like to sit in? Or perhaps a Dutch Colonial — where you expect to hear Stuyvesant's silver leg stump across the floor. Or maybe a room rich with the quiet dignity of severely white Georgian. But whatever the design and decorative scheme, the choice of oak floors cannot be questioned. Because oak, adaptable and expressive of character, is a unit of every architectural type.

Oak is also an index of sound construction. It is the standard of flooring materials. Yet oak is not expensive. Compare it in cost with other floorings. Generally, you will find oak lower priced. And though it costs less, oak lasts longer than most other floorings. Each year, it grows more beautiful — aging and mellowing like fine, old furniture.

If you would be interested in studying some outstanding oak installations, we shall be glad to send them to you. And if you are ever confronted with a flooring problem, feel free to consult our engineers. Oak Flooring Manufacturers Association of the United States, 1887 Sterick Bldg., Memphis, Tennessee.

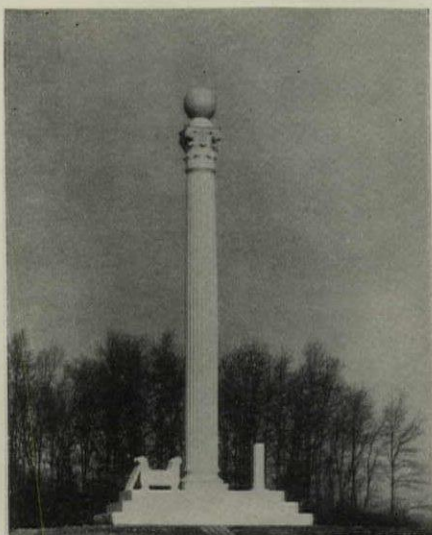


OAK FLOORING advertising is being continued on an increased scale during advertisements in *House and Garden*, *House Beautiful*, *Good Housekeeping*, *Better Homes and Gardens*, *The Literary Digest*, *Ladies' Home Journal* and *Small Home*.

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



MOUNT AIRY GRANITE



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

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

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

615 Witherspoon Bldg., Philadelphia
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A JAR of iridescent turquoise blue,
beautifully proportioned, 37 x 18
inches—\$87.50 f. o. b. Philadelphia.

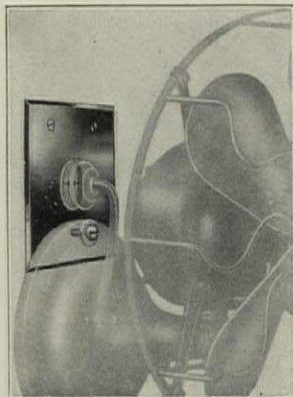
Ask for catalog illustrating Garden
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Established 1810

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Also on Display at 509 Madison Ave., New York

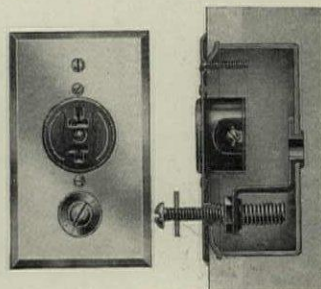


Fan Hangers

Think of them Now

Dispose of the fan equipment problems now. Install, as part of the permanent wiring job, FA Fan Hanger Outlets. They provide a safe, attractive, unobtrusive and efficient outlet for fan service and eliminate the unsightly and dangerous wall brackets, shelves, standards and other makeshift arrangements.

When fans are in use they are securely supported by a heavy steel bolt, with a universal T type outlet for current. Out of use, out of sight practically, and ready at all times.



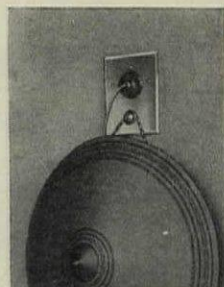
Anticipate the Need



FA Fan Hangers belong in nearly every electrical specifications. In addition to Fans they are being widely used for picture lights, bowl type heaters, and show window spotlights. Radio finds use for them for loud speakers in various locations and many public address systems are so served.

Wherever you need a support and an outlet combined here is the answer. Made also in a type that fits a standard outlet box.

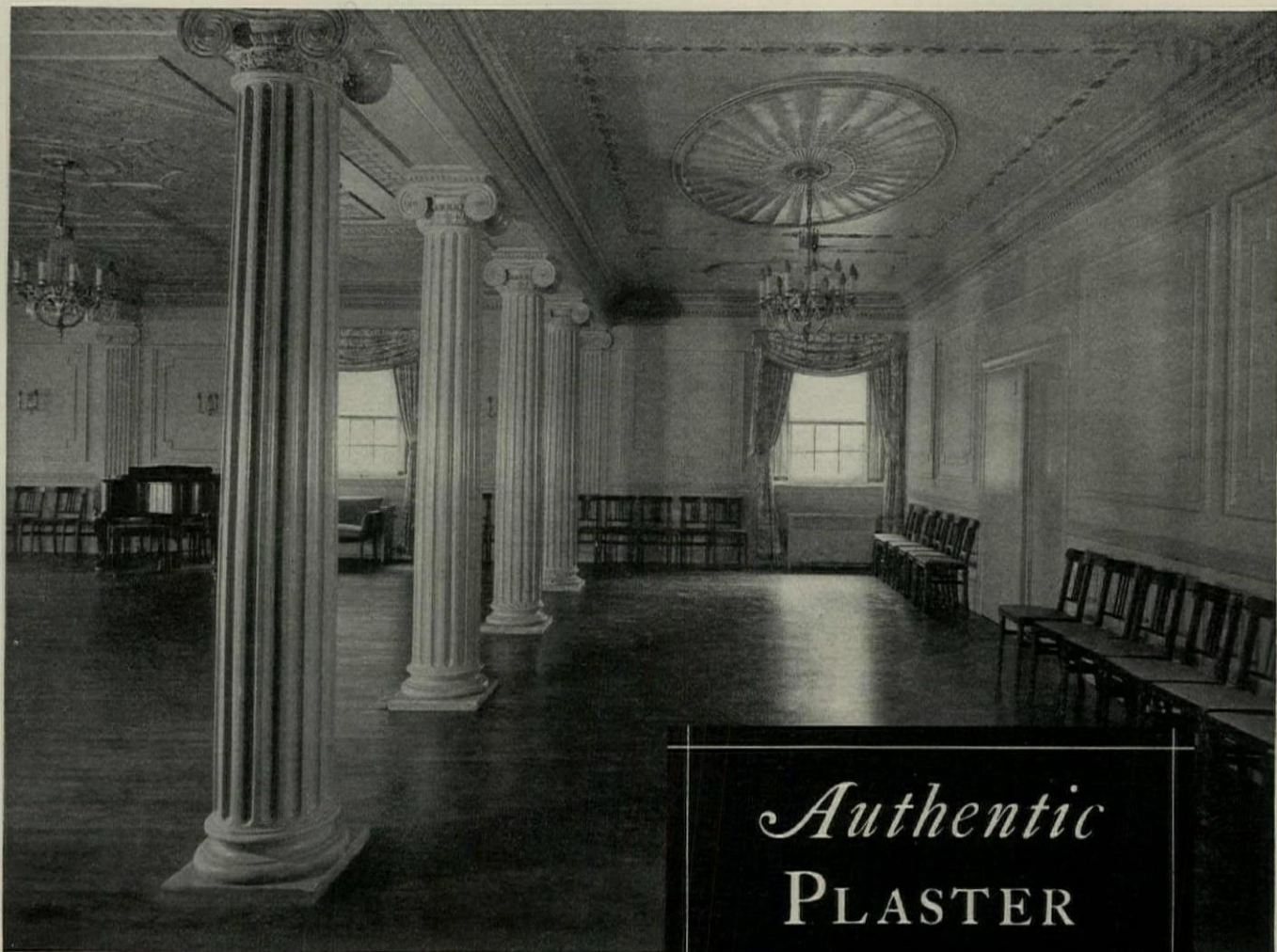
Ask your nearest FA man about them. Look in Sweets or send for descriptive literature. Easy to use, highly pleasing to owners and one thing less to worry about.



Frank Adam
ELECTRIC COMPANY
ST. LOUIS



District Offices
in all Principal
Cities



HARRIS and SOHN, Architects

PHOTO BY AMEMYA

Authentic PLASTER ORNAMENT

The Genuine Spirit of Adam Design, Circa 1770

BECAUSE of their intricate delicacy, the designs of the Adam Brothers are considered by many to be the culmination of the Georgian Period. And the execution of Adam designs in plaster is perhaps the severest test of the modeler's craft. Careful attention to detail is imperative if the spirit of the original is to be preserved.

The ceiling pictured above, in the ballroom of the Molly Pitcher Hotel, Red Bank, New Jersey, was adapted from old Adam

ceilings in the residences of the Countess of Derby and Lady Wynn. Fluted columns and column caps are also in plaster, carefully scaled to harmonize with the Adam ornament.

This room was created by Jacobson & Company entirely from ornament listed in their several catalogues which are available to recognized architects and decorators. The new catalogue, comprising 3109 new designs never before published, is now ready for distribution. If you have not already done so, please write to make sure that your copy is forwarded promptly.

JACOBSON & COMPANY

239-241 East 44th Street
New York

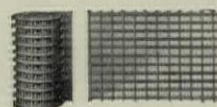
ACHIEVEMENT

TYPIFYING the spirit of achievement in modern architecture, the new Chrysler Building also exemplifies the important part being played by wire fabric in every type of structural development.

Here — where cinder concrete floor arch reinforcement is called for, American Steel & Wire Company Wire Fabric is recognized as standard. Its definite factors of safety, its great strength and permanency, win for it the enthusiastic approval of architects and contractors.

Information, including engineering data on Wire Fabric for concrete reinforcement, will be furnished on request.

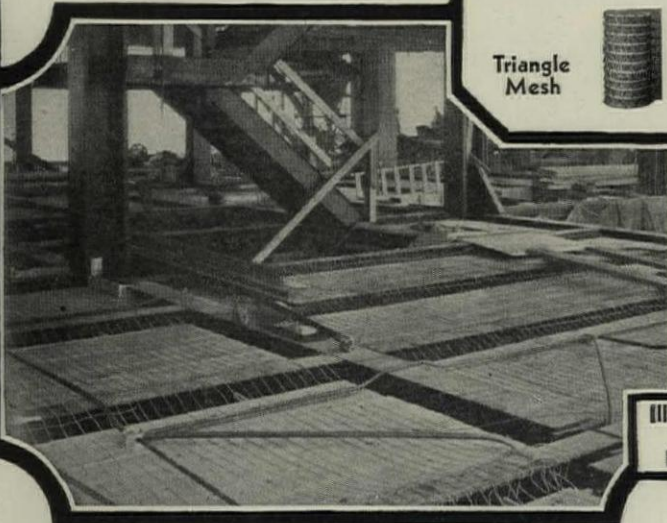
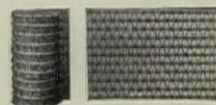
Wire Fabric *The Steel Backbone of Concrete*



Electric
Weld

Furnished in Rolls or Sheets

Triangle
Mesh



Illustrating Wire Fabric
used as
floor reinforcement.

WILLIAM VAN ALLEN, Architect
FRED T. LEY & CO., Inc., Contractors
KNICKERBOCKER FIREPROOFING CO.
Fireproofers

AMERICAN STEEL & WIRE COMPANY

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MAYO CLINIC BUILDING
Rochester, Minnesota

Architect and Engineer:
Ellerbe & Company, St. Paul, Minnesota
Plumbing and Heating Contractor:
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STRIKINGLY beautiful . . . enduring in structure . . . typifying in every way the great cause which it represents—service to mankind!

Here, famed architects, engineers and renowned medical scientists planned in perfect coordination, with one object constantly in view . . . *service*. In every detail that factor ruled supreme. All angles of construction were carefully scrutinized to eliminate any possible chance of interruption to that ideal.

And comparable with other important considerations of construction was the tubular material. Again, as in many of America's finest buildings, NATIONAL Pipe was the choice for the major tonnage . . . a choice consistent with its reputation as—

America's Standard Wrought Pipe



NATIONAL TUBE COMPANY

Frick Building, Pittsburgh, Pa.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

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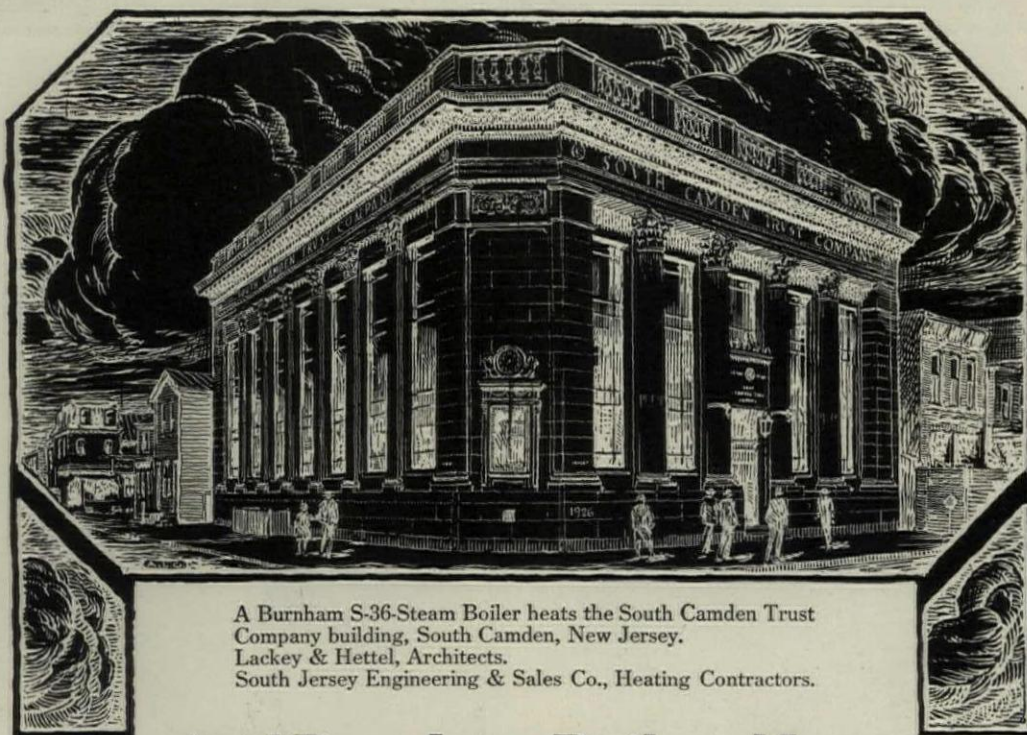
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A Burnham S-36-Steam Boiler heats the South Camden Trust Company building, South Camden, New Jersey.
Lackey & Hettel, Architects.
South Jersey Engineering & Sales Co., Heating Contractors.

And Burnham Boilers Meet This Grim Challenge

MODERN bank buildings, with their many large windows and frequently opened doors, are a grim challenge to boiler capacity and performance.

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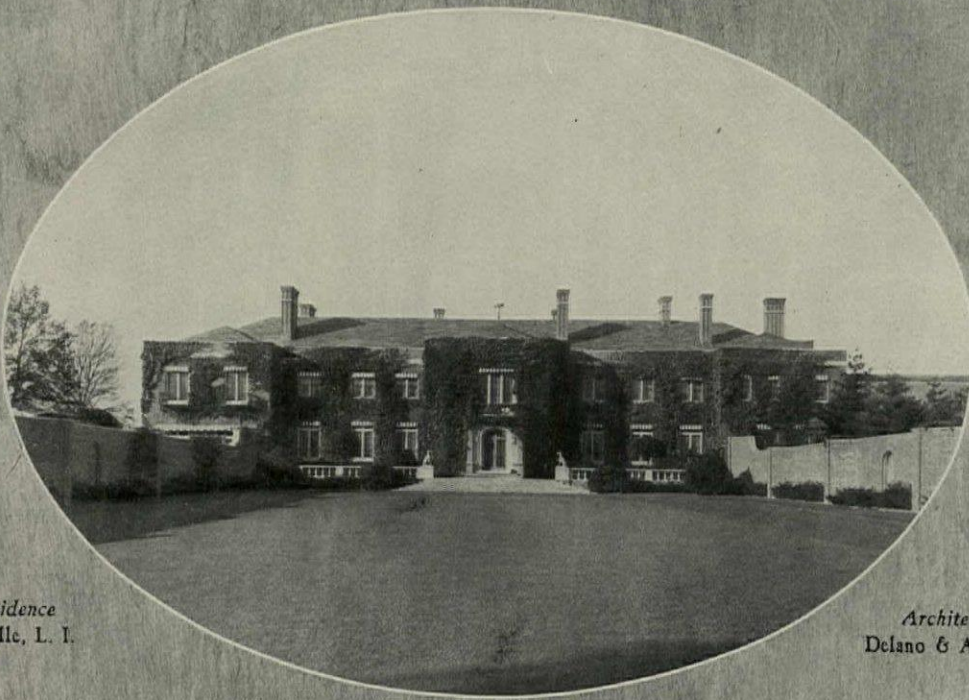
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Variegated Vermont Slate, in softly blended colors and graduated thicknesses, following a carefully worked-out design, give this Tudor Stone Roof a dignity and restraint in perfect harmony with the architecture of this stately Georgian residence.

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

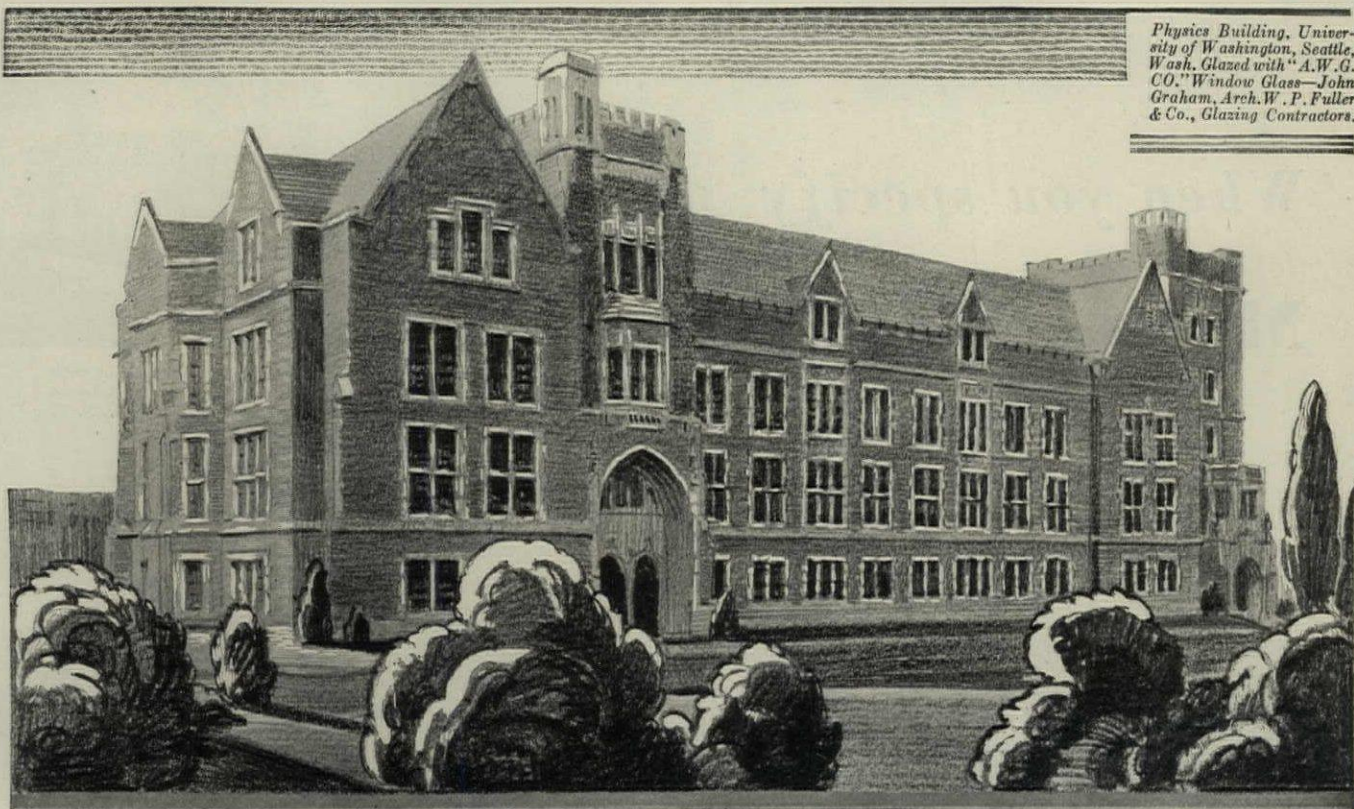
CHICAGO

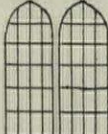
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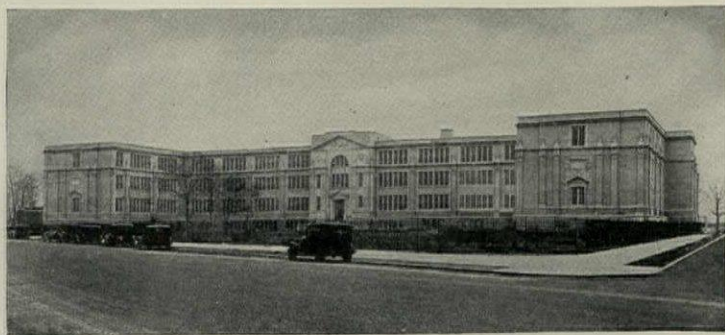
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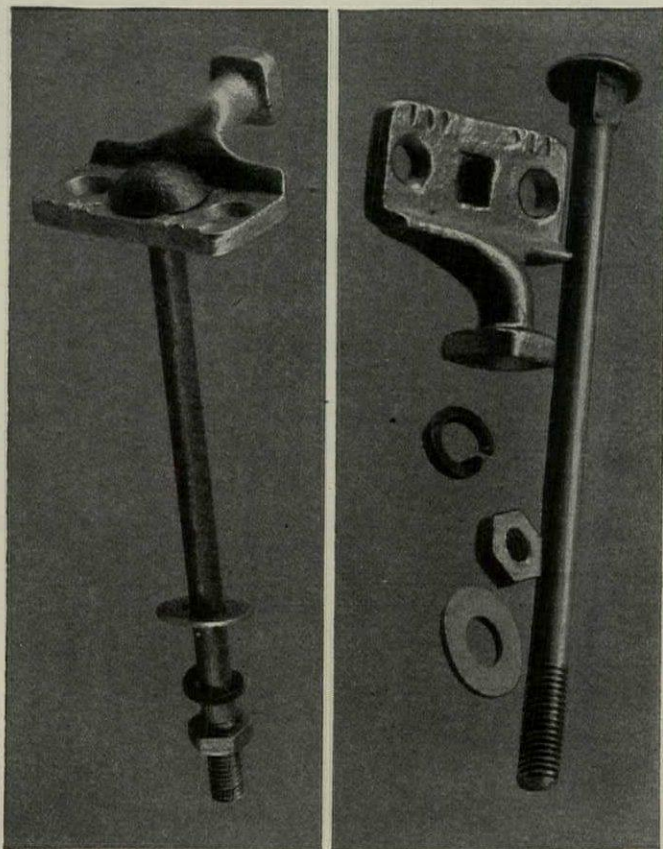
Farmers Bank Building, PITTSBURGH, PENNA.

When you specify MONEL METAL



John Adams High School, Woodhaven, N. Y. equipped throughout with Monel Metal Window Cleaner Safety Hooks, installed by Ackman Window Safety Devices, Inc. Architect: W. C. Martin, New York, N. Y.

you specify SAFETY, too!



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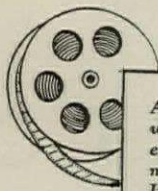
The purely utilitarian aspect of this application bears a significance of more than ordinary interest to architects. It focuses attention on the practical advantages of this high Nickel alloy—on its outstanding dependability under the most arduous service conditions.

In this instance, the choice of Monel Metal was prompted by the prime consideration of safety—protection to life. The job demanded a material of unvarying rugged strength and durability. Immunity to rust and resistance to corrosion were other important factors.

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Added security over suction or plaster keys	✓
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Ribbed STEELTEX is more . . . does more than ordinary lath

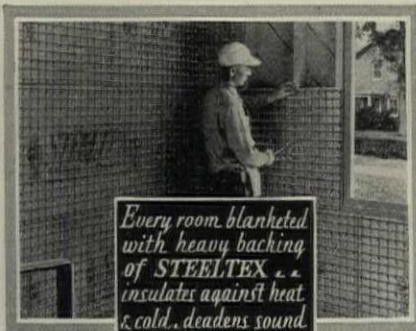
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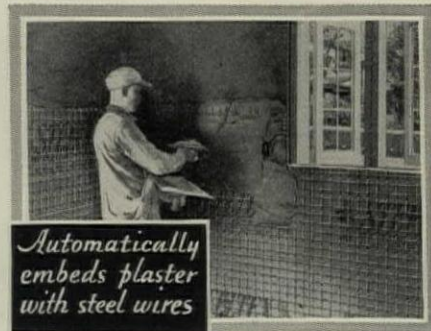
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Every room blanketed with heavy backing of STEELTEX . . . insulates against heat & cold, deadens sound

Application of Ribbed STEELTEX is rapid



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for interior plaster ☐ for stucco ☐ for brick and stone veneer ☐
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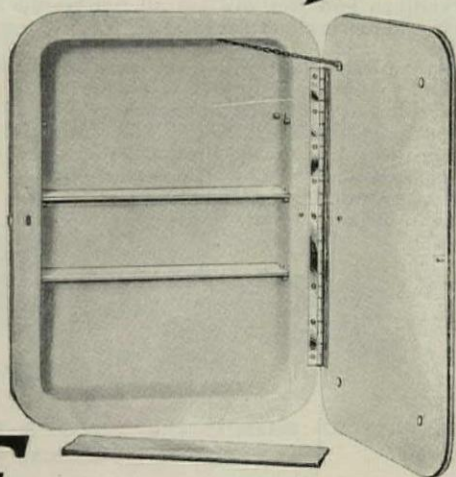
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Individual's Name.....

Address.....

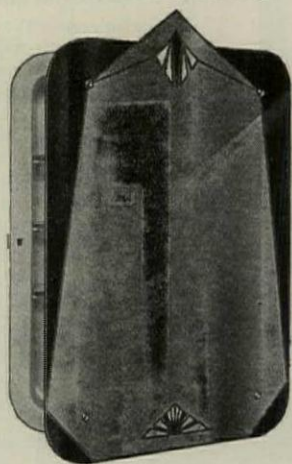
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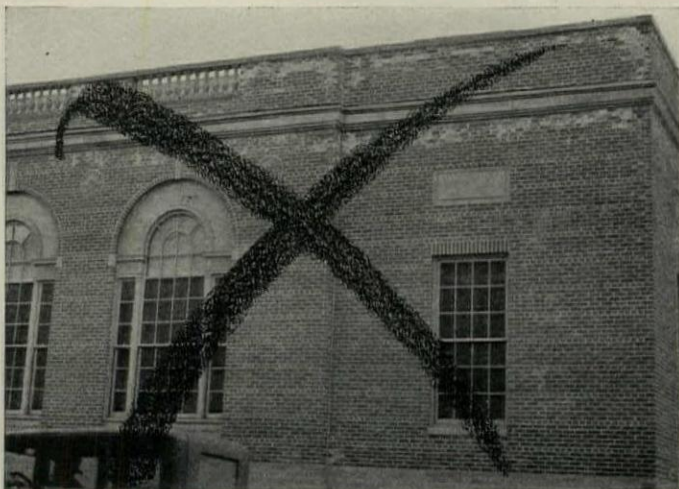
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We are interested in Corcoran One-Piece Steel Bathroom Cabinets. Kindly send catalog and full details.

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Architecturally spoiled by Efflorescence caused by Seepage. Cheney Thru-wall Flashing would have prevented such ugly defacement

CHENEY INTERLOCKING WALL FLASHING

*prevents ~ seepage
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Does not break the bond

CHENEY INTERLOCKING WALL FLASHING IS A THRU-WALL COPPER FLASHING that positively prevents seepage and eliminates for all time this bugaboo of Architect and Contractor.

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Cheney Interlocking Wall Flashing comes ready-to-use; is laid by the Mason as fast and easily as brick; requires no special fitting, soldering, or loss of time. The design of the Flashing cares for expansion and contraction due to temperature changes.

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DOES NOT BREAK THE BOND

NO FUEL REQUIRED

*With Kernerator,
the air-dried
rubbish and garbage
furnish the fuel
for their own
destruction.*

NO gas, or kindling — just a match, applied to the waste in the KERNERATOR, air-dried by means of the patented Kerner by-pass flue.

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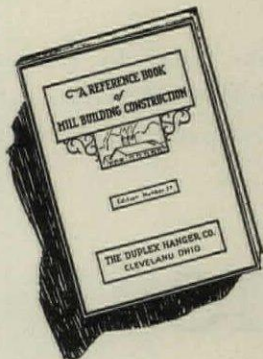
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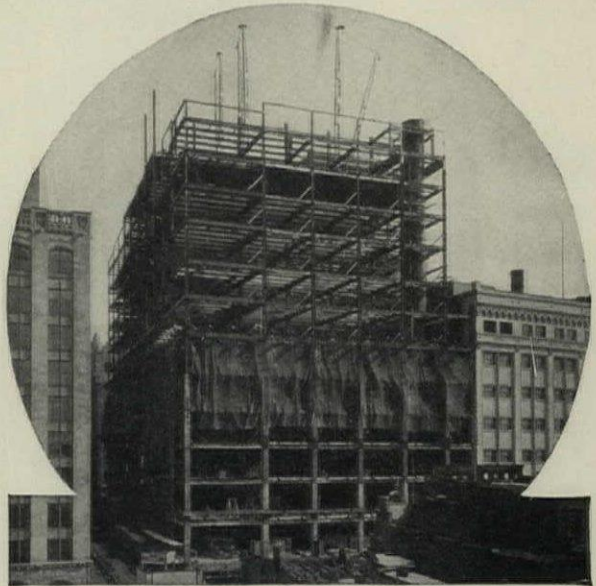
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CLEVELAND, OHIO ESTABLISHED 1890

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WALL PLATES
POST BASES

POST CAPS
BEAM HANGERS



Bamberger Store*, Newark, N. J.

Architect, Jarvis Hunt

THERE WAS MUCH TO BE DONE

WHEN this photograph was taken there was still a lot of work to be done before goods could be displayed and the public invited to enter.

Walls and floors. Elevators. Heating and lighting. One group of workmen after another. And then, when the great establishment approached the appearance of completion, the final test. Would it really be "shelter" for thousands of people and protection for merchandise, or would it allow drafts of air to filter through, carrying in dust and moisture and cold?

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Pecora Calking Compound is made by the makers of Pecora Mortar Stains—the pulp mortar colors.

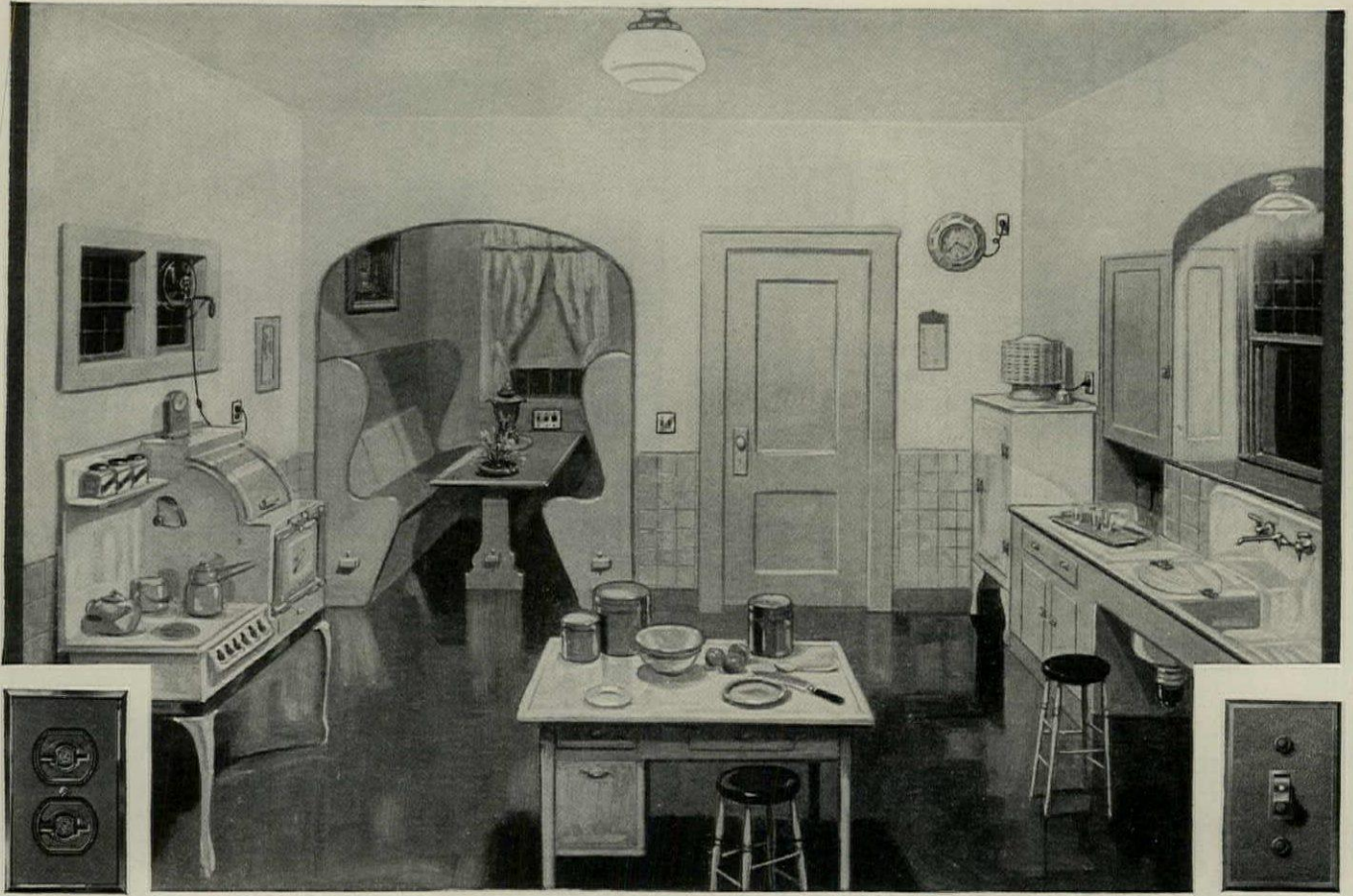
*A strictly modern department store building. Pecora Calking Compound installed by the pneumatic process by the Ev-Air-Tight Calking Company, Philadelphia, Pa.



PECORA PAINT COMPANY
Sedgley Avenue and Venango Street, Philadelphia

Please tell me why a building isn't completed until it is calked. And give me full information on Pecora Calking Compound.

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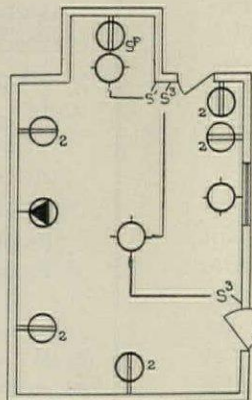
YOU can make the kitchen a joy —or a drudgehole

WHEN prospective buyers look through a new home and the woman exclaims: "Oh! this kitchen's a joy!"—in that moment YOU, the architect, probably have sold the house.

You can help to make any kitchen a "joy" with good lighting and plenty of outlets *properly placed*. They please buyers . . . because they reduce home drudgery by adding convenience.

Women nowadays recognize good wiring. General Electric enables you to pro-

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It's applicable to *any* building . . . small home or great business structure. It provides electrical adequacy with trouble-free wiring that makes long-run cost low. And it *adds property value* wherever it is used.

For full data write today to Section G-575, Merchandise Department, General Electric Company, Bridgeport, Connecticut.

GENERAL ELECTRIC WIRING SYSTEM



FOR EXTERIOR TRIM PONDOSA

IS THE PINE TO SPECIFY



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

—From the philosophy of the boss-carpenter

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

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

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Vertical Transportation for Hospitals

Hospital Elevators

must be—

SAFE,

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placed Where they will Contribute most to Ease and Comfort



In the residence of Mr. Howard F. Smith, Provencal Road, Grosse Pointe, Michigan, there are seven telephone outlets at convenient locations. They include one in the garage, and one in the children's wing of the house. RAYMOND CAREY, Architect, Detroit, Mich.

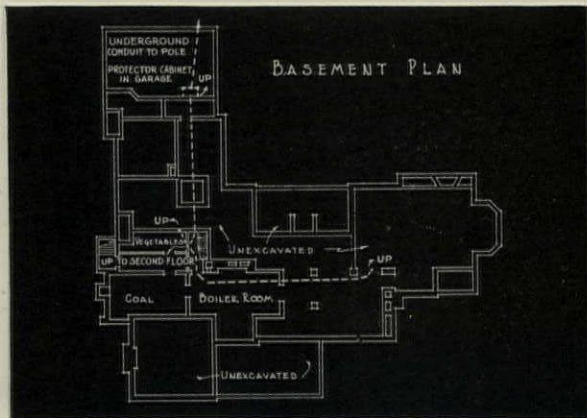
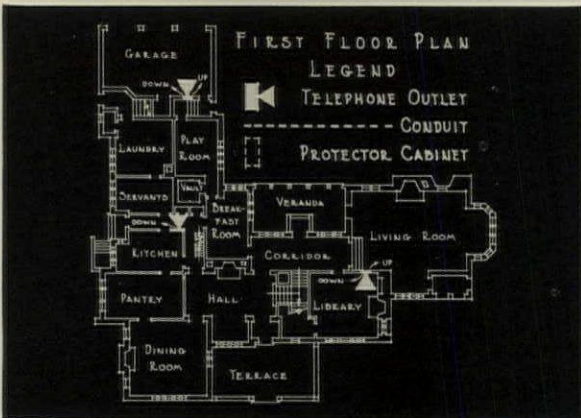
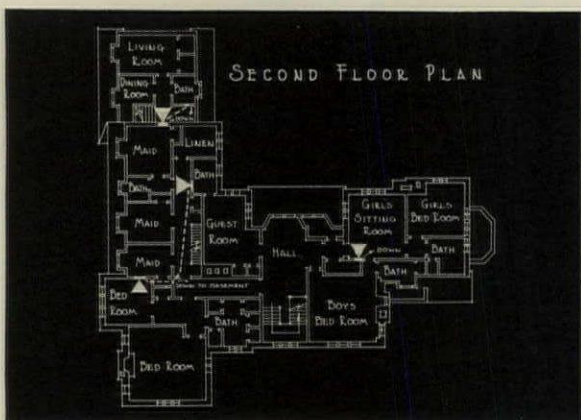
A FEW YEARS AGO a one-car garage . . . one bathroom . . . one telephone . . . were considered sufficient, even for a fairly large residence. Today's requirements are different. *Convenience* has become a dominant note in the design and the appointments of a home.

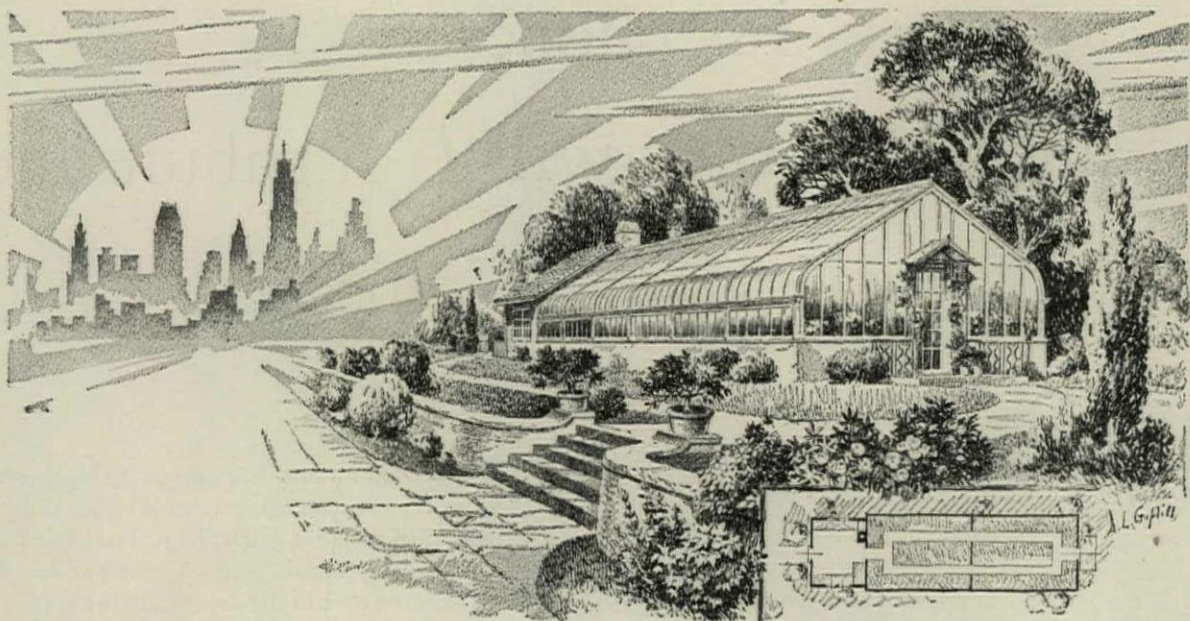
People want telephones in all the important rooms, placed where they will contribute most to ease and comfort. Many architects provide for this in their plans for new and remodeled residences by specifying conduit to those locations where telephones may be needed, initially and in the future.

Telephones can then be installed in as many of these locations as the occupant chooses, and the remaining outlets assure flexibility in expanding or re-arranging the service as may be desired.

The improved appearance resulting from the concealment of wires within the walls and floors is a feature much appreciated by home owners.

Representatives of the local Bell Company will gladly confer with you and your clients in planning telephone arrangements. No charge is made. Just call the Business Office.





FOR FOUR GENERATIONS BUILDERS OF GREENHOUSES

Why Do You Architects So Often Leave Yourself Out?

THE city's rush and rant. Its hustle and bustle.
The things it so relentlessly demands of you.
And the things it so surely takes out of you.

Then at the end of a trying day, a lane. A
thought lane, leading you to imprisoned Summer
time. A joy spot. A glass garden on your own
grounds. A garden where life's hurry worries
have a way of slipping away.

Strange isn't it? You paint these pictures so
effectually to your clients, and then leave your-
self out of them. Can you blame us for wonder-
ing just why it is, more of you architects don't
have your own Glass Gardens?

Lord & Burnham Co.

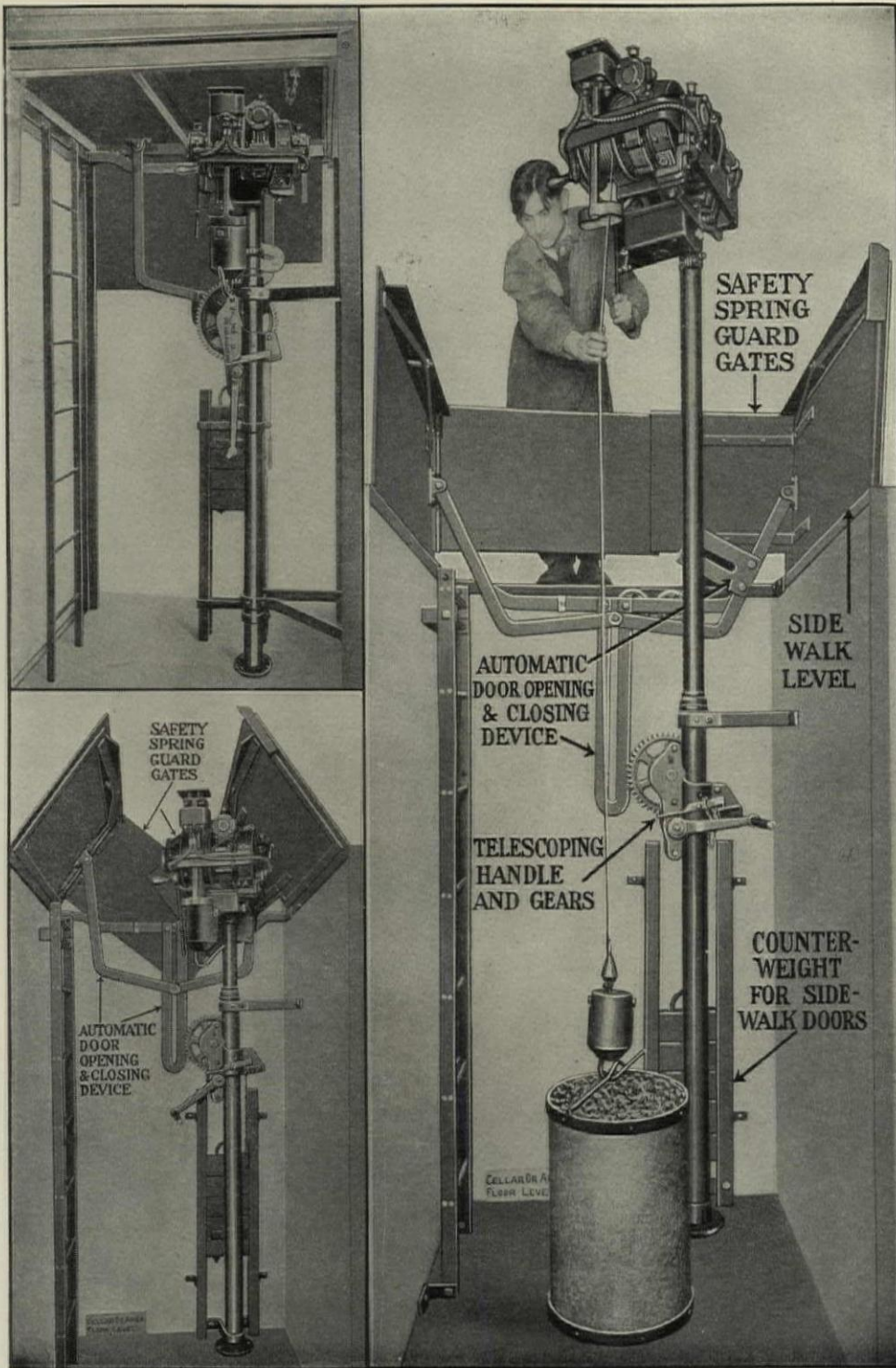
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G&G
ELECTRIC
Telescopic Hoist
With Automatic Stop and Gravity Lowering Device

ASH AND GARBAGE REMOVAL is an essential operation. A G&G Electric Telescopic Hoist will do the job with unequalled economy of operation. But be sure to include in your specification, "with G&G Sidewalk Doors, Spring Guard Gate and automatic opening, closing and locking device." This insures the sidewalk opening being safeguarded at all times and avoids damage suits for building owners.

You will find the services of our Engineering Department of considerable value in determining how various ash and garbage removal problems shall be met and in determining which Hoist and what equipment best suits the specific condition—so that the completed installation may give the building owner the utmost satisfaction throughout the years.

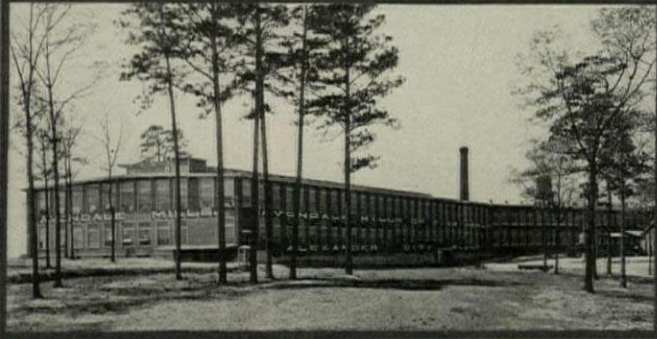
Catalog in Sweet's Archt. Cat., 24th Ed., pp. D5116-23
Catalog in Specification Data, 1930 Ed., pp. 230-231

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1975 Schools use G&G Equipment
601 Bank Buildings
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Churches, Hospitals, Theatres, etc.

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The Choice of Leading Structural Engineers

These immense Carolina mills along with many others designed by J. E. Sirrine & Co., of Greenville, S. C., are fully equipped with "St. Louis" Freight Elevator Doors. This prominent engineering firm—specialists in factory design—has repeatedly specified "St. Louis" Doors because of their high standard of quality and their record for continuous trouble-free service with minimum maintenance expense.

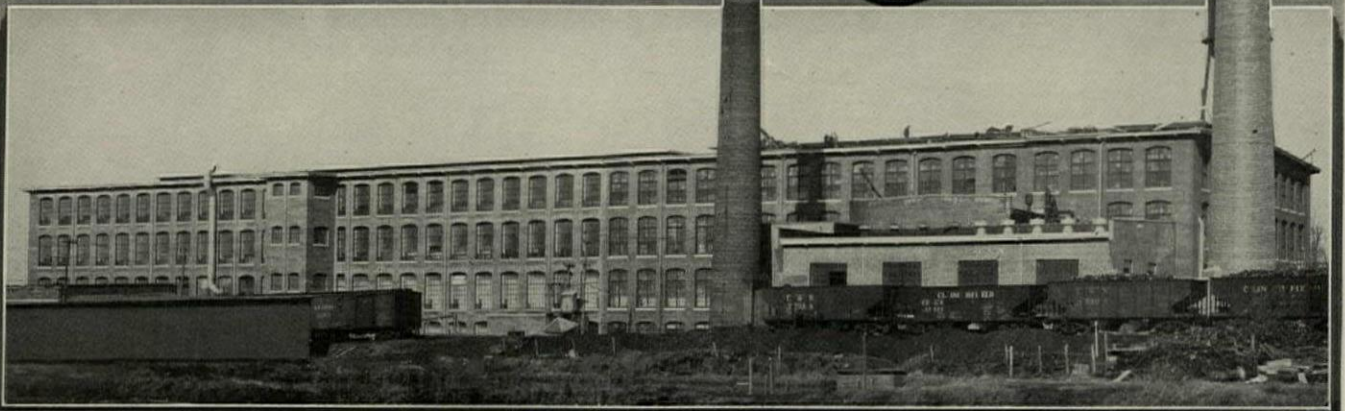
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23 FLOORS of R-G Steel Deck Construction



R-G Channel Joists in place ready for Steel Deck fireproofing and bridging forms.



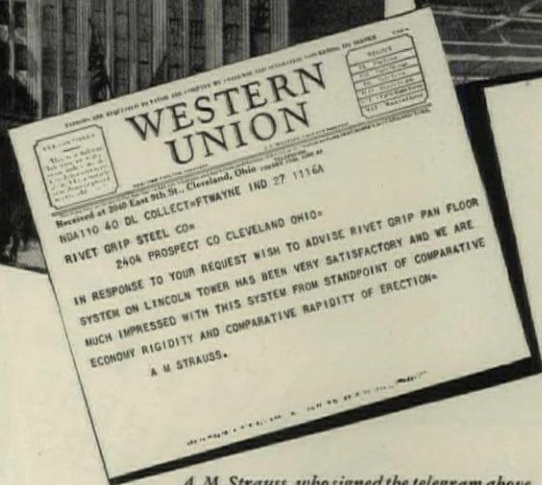
Close-up of bridging beam forms which are integral with and are suspended from steel deck pans for forming solid concrete beams six inches wide at right angles to steel joists.



View of under side of R-G Steel Deck Construction after pouring.



Workmen installing steel deck pans and girder fireproofing forms at 14th floor level.



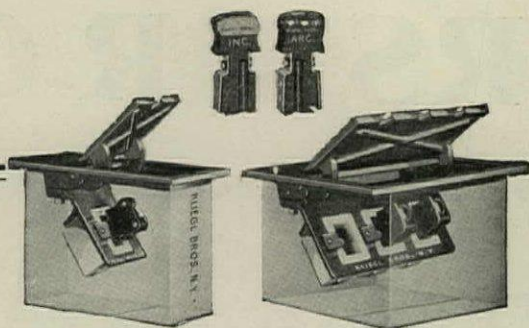
A. M. Strauss, who signed the telegram above, is architect on the Lincoln National Bank and Trust Co. Building. Buesching-Hagerman Co., Ft. Wayne, are the general contractors.

THE 23-story Lincoln National Bank and Trust Co. Building in Ft. Wayne, Ind., was originally designed for concrete joists and slab floors. Reduction of dead load through the use of R-G Steel Deck Construction permitted savings in structural steel and foundations of this building virtually equivalent to the cost of R-G channel joists and steel deck installed.

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GULFPORT, MISS.

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Gentlemen: Please send me full information on Cabot's Creosote Shingle and Wood Stains.

Name

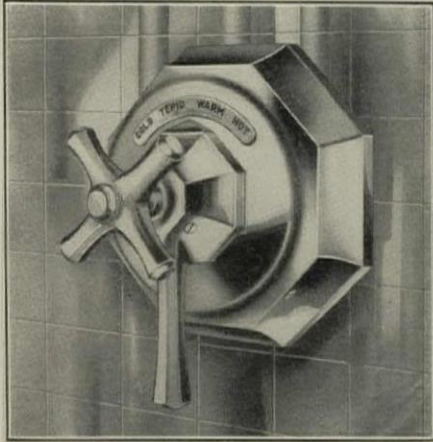
Address P.P.-5-30

WRITE FOR THESE CHAPTERS

Complete Drawings to Scale;
Specifications;
Standard Sizes;
Types; General
Information and Color Plates. In your files, these chapters will be a constant source of information.

THE STRUCTURAL SLATE CO.
520 ROBINSON AVE., PEN ARGYL, PA.

LEONARD Thermostatic Water Mixing Valves



ART LINE

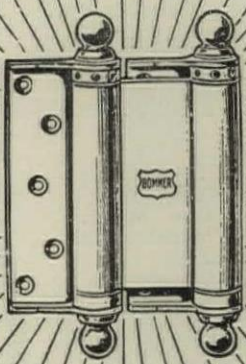
Catalog C of Leonard Valves, showing Art Line and Colors to match bathroom fixtures, is now ready.

Write for your copy

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

50 years on a DOOR good for fifty years more

They
are the
best

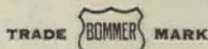


By
rigorous
test

Notabene

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

These Historic Hinges can be seen at our factory

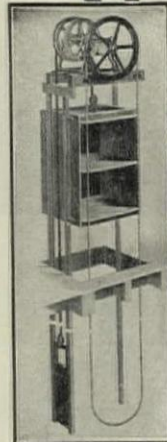


**Millions and Millions of People
are Pushing Bommer Spring Hinges
when opening doors**

Factory at Brooklyn, N. Y.

In the home

Countless steps are saved by Sedgwick Outfits



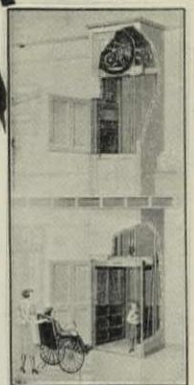
SEDGWICK
Dumb Waiter

*It may be linen to be taken to or from the laundry
▲ ▲ ▲ or a breakfast tray to be sent upstairs ▲ ▲ ▲
it may be a trunk to be taken to the attic ▲ ▲ ▲
it may be fuel for the fireplace ▲ ▲ ▲ perhaps the invalid of the family wants to go from floor to floor.

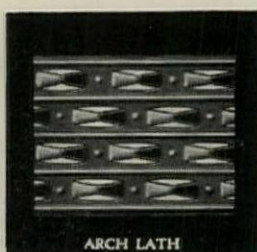
*For any of these tasks and many others there is a Sedgwick outfit that may be easily and economically installed in new or old homes. There are no operating costs.

The manifold advantages of vertical transportation in homes have come to be recognized. Residences equipped with one or more Sedgwick outfits are pleasanter to live in, sell more readily and bring better prices. Complete blue prints, specifications and data gladly furnished. Write Sedgwick Machine Works, 158 West 15th Street, New York.

SEDGWICK
Invalid
Elevator



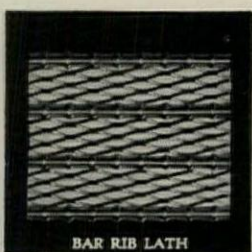
SEDGWICK
Dumb Waiters - Elevators
FOR ALL PURPOSES



ARCH LATH



ROOFING PLATE



BAR RIB LATH



CONDUCTOR PIPE



DIAMOND LATH



SPANISH TILE



CORRUGATED SHEETS



CORNER BEAD

Higher in Quality

Wheeling Metalware and Building Products

now made of

COP-R-LOY

Reg. U. S. Pat. Off.

THE COPPER ALLOYED STEEL

Now you and your client can expect even greater value, even longer service from Wheeling Building Products. For they are now made of COP-R-LOY, a better steel reinforced with rust-resistant copper. This is added quality that means added savings.

The homes *you* plan are deserving of the best protection against fire and depreciation. So take special precaution that your specifications include roofing lath, gutter, spouting and other building products that are made of COP-R-LOY, identified by the Wheeling registered trade mark.

WHEELING CORRUGATING COMPANY, Wheeling, W. Va.

Branches: New York Buffalo Philadelphia Chicago Kansas City St. Louis Richmond Chattanooga Minneapolis Des Moines Detroit Columbus, Ohio

See The Producers' Council Research Bulletins Nos. 6 and 8



Reg. U. S.

Pat. Off.

Save with Steel

U.S. Court upholds our patents on Stevenson Door Fastener and "Door that Cannot Stand Open"

The following decree, entered March 4, 1930 by the U. S. District Court (district of Maryland) is of importance to all users of cold storage doors:

We are sole owners of valid patents specified, on fasteners and doors.

Compartments, is good and valid in law as to the claims thereof, and that the Plaintiff, Jamison Cold Storage Door Company, a corporation of Maryland and having an established place of business in Hagerstown, Maryland, is the owner of the whole right, title and interest in and to said Letters Patents aforesaid, together with all claims for damages, profits, or recoveries for any infringements.

The defendant companies have infringed our valid patents.

selling in this District door fasteners and closures for compartments embodying respectively the invention set forth in claim 1 of patent No. 1,099,626, and embodying the invention set forth in the claims of said U. S. Letters Patent No. 1,208,042.

Injunction granted, against making, using or selling of fasteners and doors infringing our patents.

door fasteners or closures for compartments which will contain or embody the invention covered and secured by said claim 1 of patent No. 1,099,626, and by the claims of said patent No. 1,208,042.

Further, the Court referred the case to a Master to state an account of profits by the defendants and damages sustained by us by reason of infringements, the amount found due to be paid to us. Cost to be paid by defendants.

(Paragraphs numbered 1, 2 and 3, without bold face side heads are copied verbatim from court decree. Full copy of decree on request.)

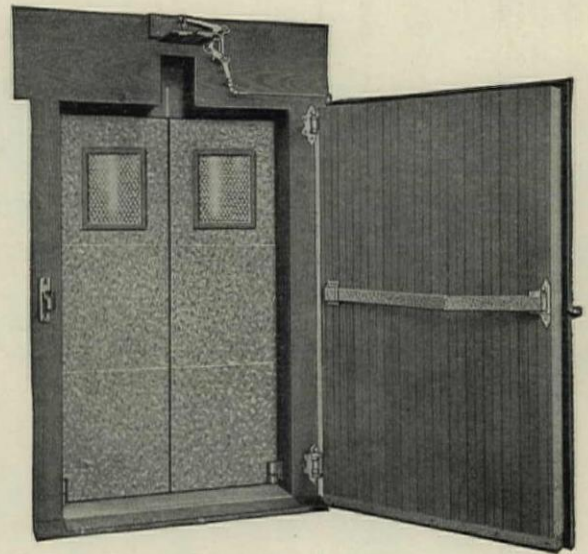
An Appeal by the defendants from this decree is to be heard at the June, 1930, term of the U. S. Circuit Court of Appeals.

JAMISON COLD STORAGE DOOR CO.
..... Hagerstown, Maryland, U. S. A.

STEVENSON COLD STORAGE DOOR CO.
..... Chester, Pennsylvania, U.S.A.

..... Branch Offices: 300 Madison Avenue, NEW YORK
..... 1832 Builders Bldg., 228 N. La Salle Street, CHICAGO
2650 Santa Fe Avenue, LOS ANGELES... 333 Market St., SAN FRANCISCO
D. E. Fryer & Co., SEATTLE & SPOKANE ... Southern Representatives
address Hagerstown ... Foreign Agents: Von Hamm-Young, HONOLULU
... Armstrong Cork Co., Ltd., LONDON ... Okura & Company, JAPAN

This Door Embodies the patented advantages on which we were "paid the tribute of imitation" in all essential features.



THE Stevenson "Door that Cannot Stand Open" (patented) is made up of two parts—an outer standard cold storage door with the regular Stevenson Door Fastener, and two cam-actuated, armored batten doors which are kept closed by gravity except when actually occupied by traffic passing through. At all busy doorways this door saves refrigeration by preventing any outflow of cold, dry air and keeps pipes free and storage in good condition by stopping the inevitable inrush of warm, moist air.

Speeds door action, as the batten doors are self-operating and on outbound traffic actuate to release the fastener and open the outer door. Actually an easier operation for a man with a truck than the opening of most regular doors.

This door has saved plant owners thousands of dollars—those not using it are paying for it anyway in escaping refrigeration, labor costs, and ruined goods. Write for complete description.

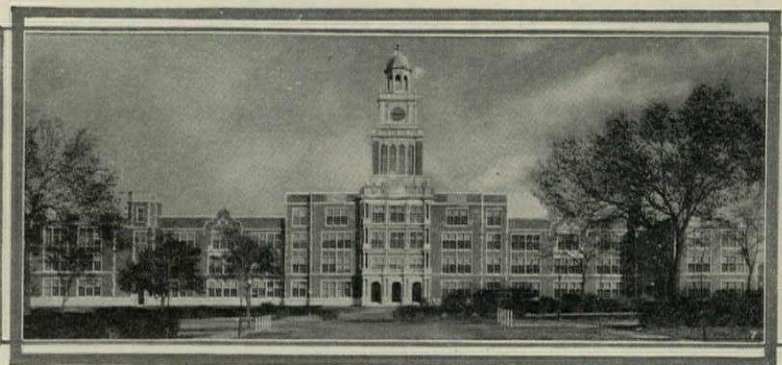
(Protected by patents No. 1,099,626 and 1,208,042—fully sustained by accompanying court decree. No infringements will be tolerated.)

**Jamison
& Stevenson**
Cold Storage
Doors



East High School
Denver, Colorado

Where acid conditions exist, it's sound common sense to specify DURIRON.



THE value of DURIRON Drain Pipe in corrosive waste systems is not noticeable on installation. Only with the years does this value become apparent. Unfailing service continues long after the average piping has disintegrated. Complete data in "Sweets," or write

THE DURIRON COMPANY, INC., Dayton, Ohio

DURIRON ACID PROOF DRAIN-PIPE

ENERGY DUMBWAITERS ARE USED PROFITABLY

*....in all types of
industries.....*

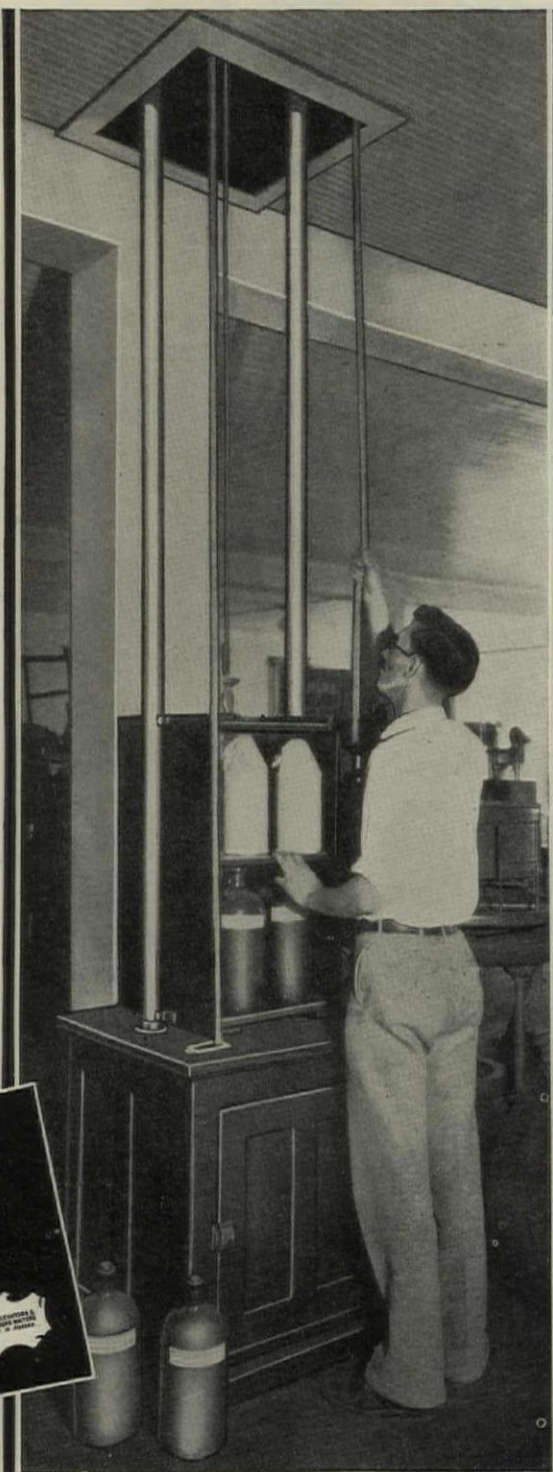
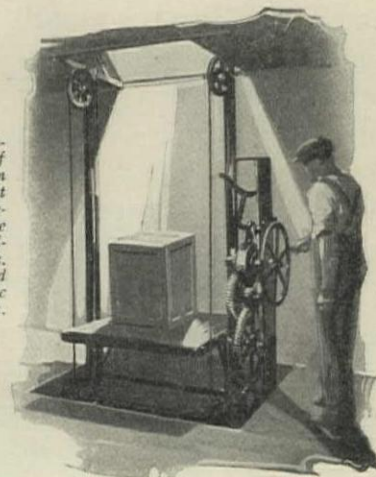
AN outstanding characteristic of Energy Dumbwaiters is their versatility. In banks, restaurants, manufacturing plants, hotels, and office buildings, you naturally expect to find them carrying on efficiently—and they are! But in a railroad station . . . Energy Dumbwaiters form a speedy, labor-saving method of transporting food in the new P. R. R. Station at Lancaster, Pa. . . in the X-Ray Dept. of the University of Penna. Hospital for moving photographic plates from the Dark Room . . . in Girard College, Philadelphia, where six of them in the dining halls adequately handle hundreds of meals a day . . . in newspaper offices, churches, etc. . . .

Two features, distinctly Energy, contribute to this widespread use; our long experience in meeting lifting needs of all kinds (we've been at it since 1887) and the number of Energy types, which make unnecessary an attempted application of a dumbwaiter to work for which it is not suited.

Architects make profitable use of our Engineering Department in the selecting of the dumbwaiter service best fitted to their needs. We invite your inquiry. Energy Elevator Company, 211 New Street, Philadelphia, Pa.




For the quick, convenient handling of materials between basement and street level, Energy Side-walk Elevator, Type 977, offers many advantageous features. Bulletin (Hand Power or Electric Types) on request.



Energy Little Beauty, with automatic brake, being used for the quick conveyance of syrup bottles.

Write
for this
Catalog

ENERGY  **ELEVATORS &
DUMB WAITERS**
WHEREVER A LIFT IS NEEDED



Every cold line creates a *dew* problem

Novoid Cork Covering prevents "pipe dew" and resulting damage from moisture—permanently!

YOU'VE seen dew on twigs on summer mornings. On the outside of water pitchers in warm rooms. But the dew that forms on hidden cold pipe lines is unseen until the damage is done.

Dripping water. Disfigured plaster. These are the results of "sweating" pipes, which, in turn, are caused by insufficient or inefficient insulation.

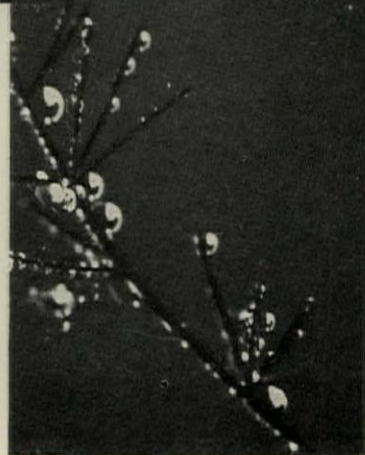
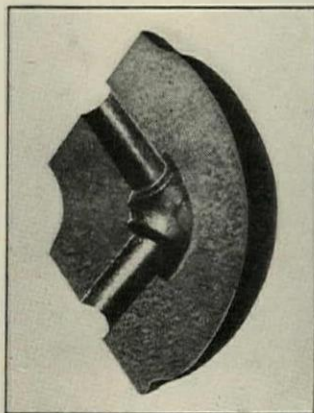
Novoid Cork Covering is made of pure cork. The high insulating value of the cork keeps the outside of the covering above the dew point. There is no condensation—no dripping.

Novoid Cork Covering reduces loss of refrigeration to a minimum. And because cork does not absorb moisture and lose its insulating value, the efficiency of Novoid Cork Covering is permanent. It does not deteriorate in service.

Novoid Cork Covering and Cork Fitting Jackets are made in all pipe sizes from $\frac{1}{4}$ inch up . . . and in three thicknesses. Write for samples and complete specification information. Cork Import Corporation, 345 West 40th Street, New York City.

When cold pipe lines are exposed to warm air, dew forms just as it does on cool twigs during a summer night. Novoid Cork Covering prevents dew on cold lines.

The modern luxury of refrigeration requires efficient pipe insulation. Novoid Cork Covering keeps line loss at a minimum—prevents condensation damage.



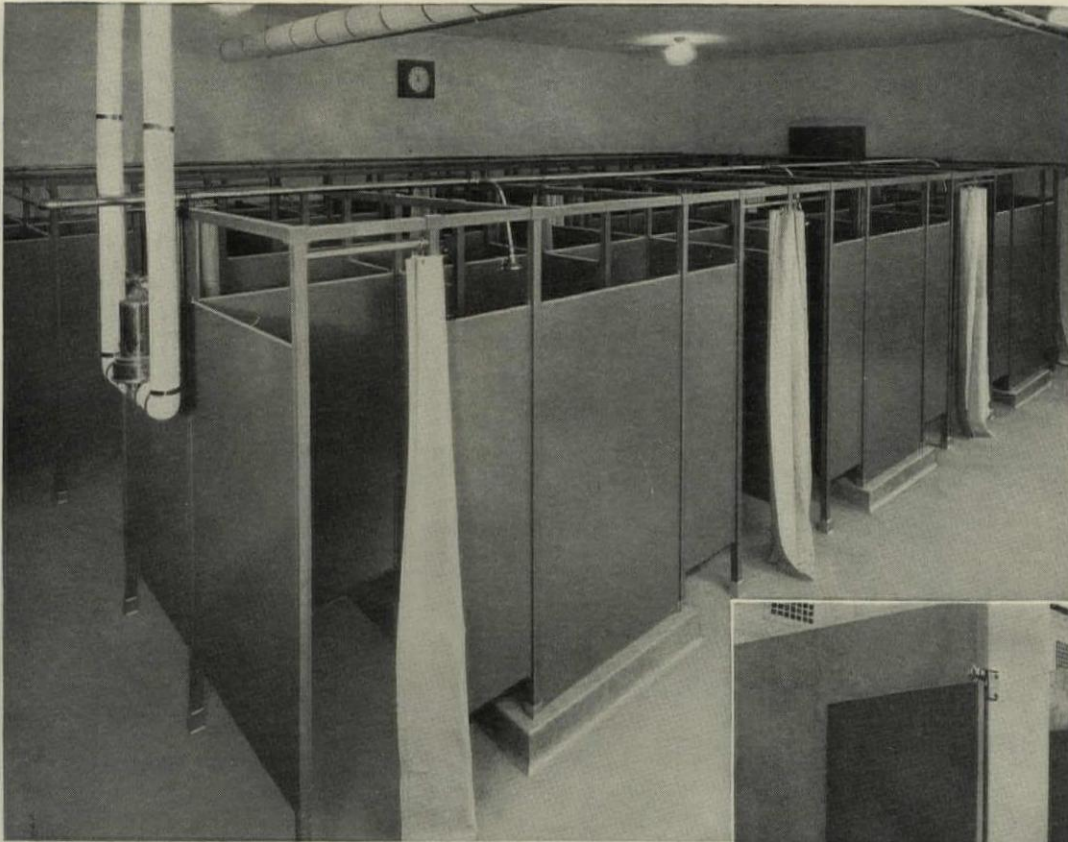
Novoid Cork Covering

CORK IMPORT CORPORATION



345 W. 40TH ST. NEW YORK

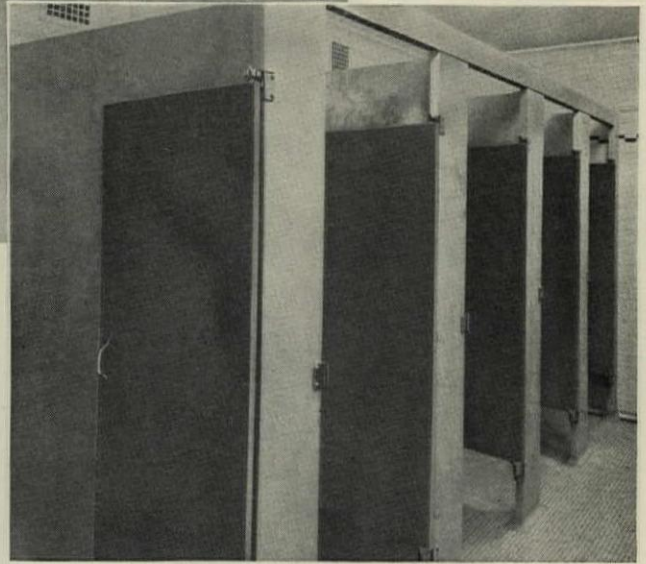
Permanent Insulation for Cold Lines and Tanks



THEIR DEPENDABILITY IS PROVED

THE dependability of Veneer-Steel Partitions for showers, toilets, dressing rooms—for ward screens and dwarf partitions in hospitals—has been thoroughly established by successful experience. Here are partitions that will stand up against rough use, time, hot and cold water, and excessive temperature changes.

Veneer-Steel Partitions and Doors are rust-proof, noiseless, non-absorbent and flush-type. They are built of galvanized sheets overlaid on a fibre core and cemented thereto with all edges soldered. All posts and wall attachments are sherardized inside and out after fabrication. Hardware is solid white brass buffed bright or pressed brass chromium plated. Because Veneer-Steel Doors and Partitions are solder sealed they are impervious to moisture and cannot absorb or retain odors. Standard finishes for Veneer-Steel Partitions and Doors are olive green and grey. Special finishes and wood grains can also be supplied.



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

CONCERNING GALVANIZING

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

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

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

Veneer-steel Partitions and Doors are galvanized.

Complete details found in Sweet's or send for bulletins

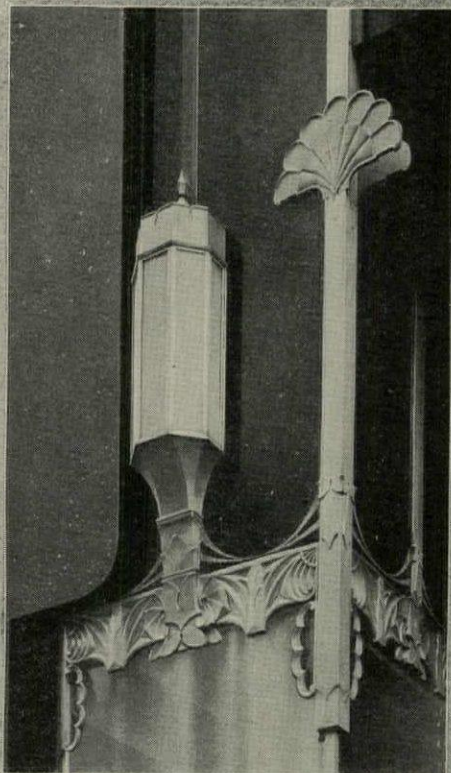
THE HART & HUTCHINSON COMPANY

New Britain, Conn.

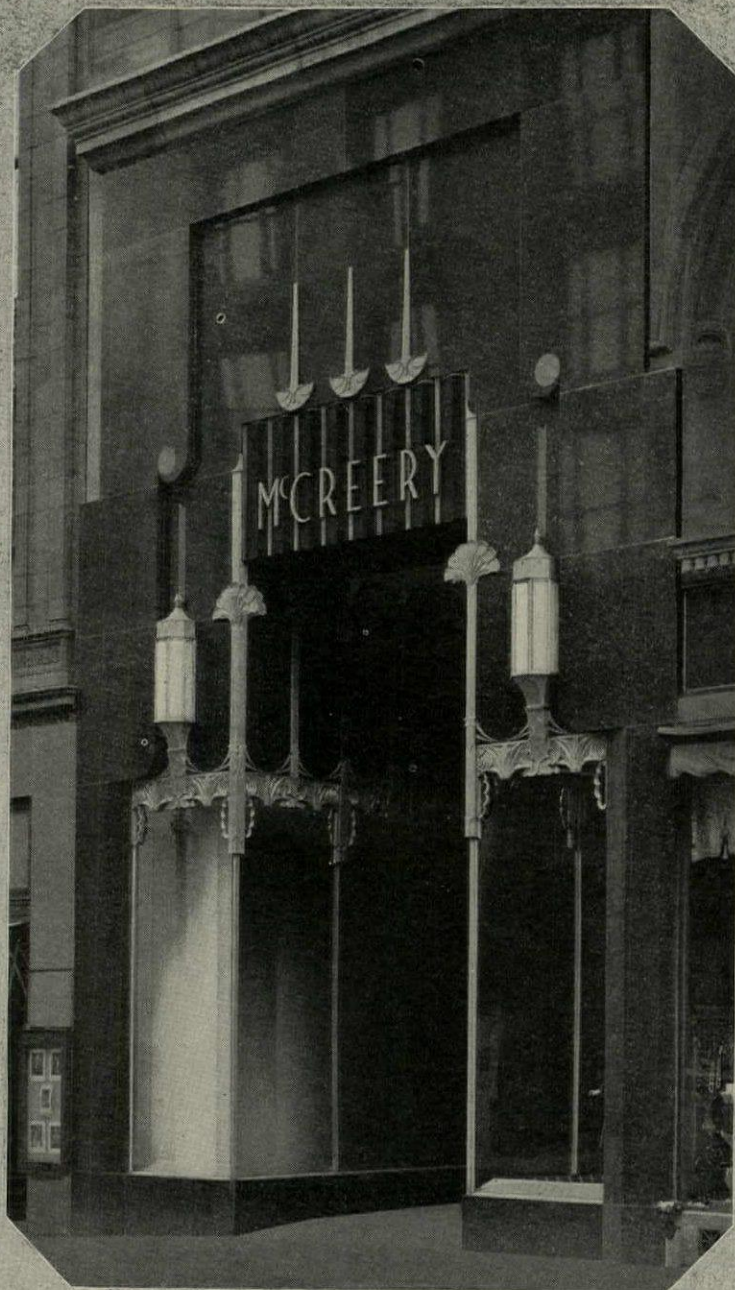
101 Park Ave., New York City

Agents in Principal Cities

MCCREERY NEW YORK



This famous Store's new Fifth Avenue Entrance—near the site of the old Waldorf-Astoria where the new Empire Building is in construction—contrasts Materials, Colors, Scales and Surface Textures in a distinctive Modernistic manner. ✓ Likewise, the interpretation of its Design and the spirit in which it was executed, aid this distinction. ✓ ✓ The Masonry is Polished Norwegian Shastone—emerald-black with pearl markings—done in Granite scale and handling—backgrounding Trimmings, Display Cases and Light Sconces of satined Aluminum—done in Bronze scale and handling. ✓ ✓ These further accent and complete this successful Architectural Feature.

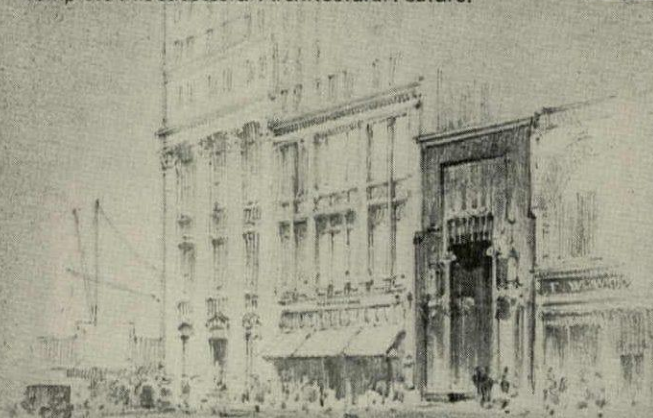


The Aluminum Work on this Entrance as well as on the Interior of the Annex connecting with the Main Store is done in the same manner, metal and handling.

Architects
STARRETT & VAN VLECK

Builders
GRANT CONSTRUCTION COMPANY

Modellers
ROCHETTE & PARZINI
Ornamental Metal Work
RENAISSANCE BRONZE & IRON PLANT



A DIVISION OF
GENERAL BRONZE CORPORATION
DISTINCTIVE PRODUCTIONS IN ALL METALS
LONG ISLAND CITY, N. Y.

PENCIL POINTS

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

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

PENCIL POINTS IS TEN YEARS OLD

TIME CERTAINLY HAS a way of slipping by in astounding fashion. It does not seem to us anything like ten years since the first issue of PENCIL POINTS was entrusted to the postman, but the calendar says it is so and we must believe it.

We have had a lot of fun during these ten years and we sincerely hope that we have, at the same time, done a little good. The underlying idea of PENCIL POINTS has met with a most cordial reception from the field. We are just a bit proud to be able to say that during the short ten years of our life we have built up by far the largest subscription list of any journal serving the architectural profession. And the grouping or distribution of this circulation, now almost 20,000 a month to subscribers, presents some extremely interesting side lights.

We reach three large groups, strangely enough in about equal numbers. An analysis of our subscription list shows that the practicing architects, the draftsmen employed by them, and the students of architecture subscribe for PENCIL POINTS in about equal numbers. It is very stimulating to us to realize that a magazine which we edited always with the draftsman uppermost in our minds is so interesting to the architects conducting practices and to the students who will be draftsmen pretty soon and architects by and by. It all seems very friendly and harmonious and as it should be.

We approach the next ten years in the same spirit of service that prompted us to issue the first copy of PENCIL POINTS. We have been told by lots of kind friends that we have done a good job—but we are by no means satisfied with it. Many problems, and some of them tough ones, are facing the architects and draftsmen of the country. We devoted a lot of space last year to the subject of "The Architect's Cost and Profit." That of course has nothing to

do with the technical side of the architect's work, but has a whole lot to do when the possibility of sending his son to college is under consideration. Without departing in the least from our general scheme, except to improve our work as we are able, we feel it to be a part of our opportunity and perhaps our duty to consider some of the economic and business aspects of a group of men who must, if they are to be successful, combine the practice of a profession with the conduct of a business. There are many important problems facing you today. Insofar as possible we want to be of assistance in solving these difficulties. Our pages are at your disposal for a discussion of anything that needs discussing. The subject may relate to the technical side of the architect's work or it may relate to its business aspects. We believe that just now architects are suffering because of an almost total lack

of comprehension by the general public of the nature and value to them of expert architectural services. We have had something to say on that subject during the past few months and expect to continue to agitate this important question until a plan of action is worked out.

PENCIL POINTS hopes never to become static. We hope, on the other hand, never to become blatant or hysterical. We do not want to tilt at windmills or to see things at night, and we are counting upon the loyal support of our readers to guide and counsel us during the next ten years.

We sincerely thank every architect, every draftsman, every student, and every producer of building materials who has made possible the growth we have enjoyed since May, 1920. We couldn't have done anything without your encouragement, criticism, and friendly cooperation. All we can possibly ask is the continuation of the same friendly relations with you as in the past.

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THE PENCIL POINTS EDUCATIONAL FUND

SECOND MONTHLY REPORT

WE LIST HEREWITH contributions received for the period, March 17th to April 15th, inclusive. They are listed in the order of their receipt. Please note that the names of manufacturers contributing to the fund are printed in heavy face type. Their willingness to cooperate in this movement we believe should receive this special recognition.

Previously acknowledged \$11,640.00

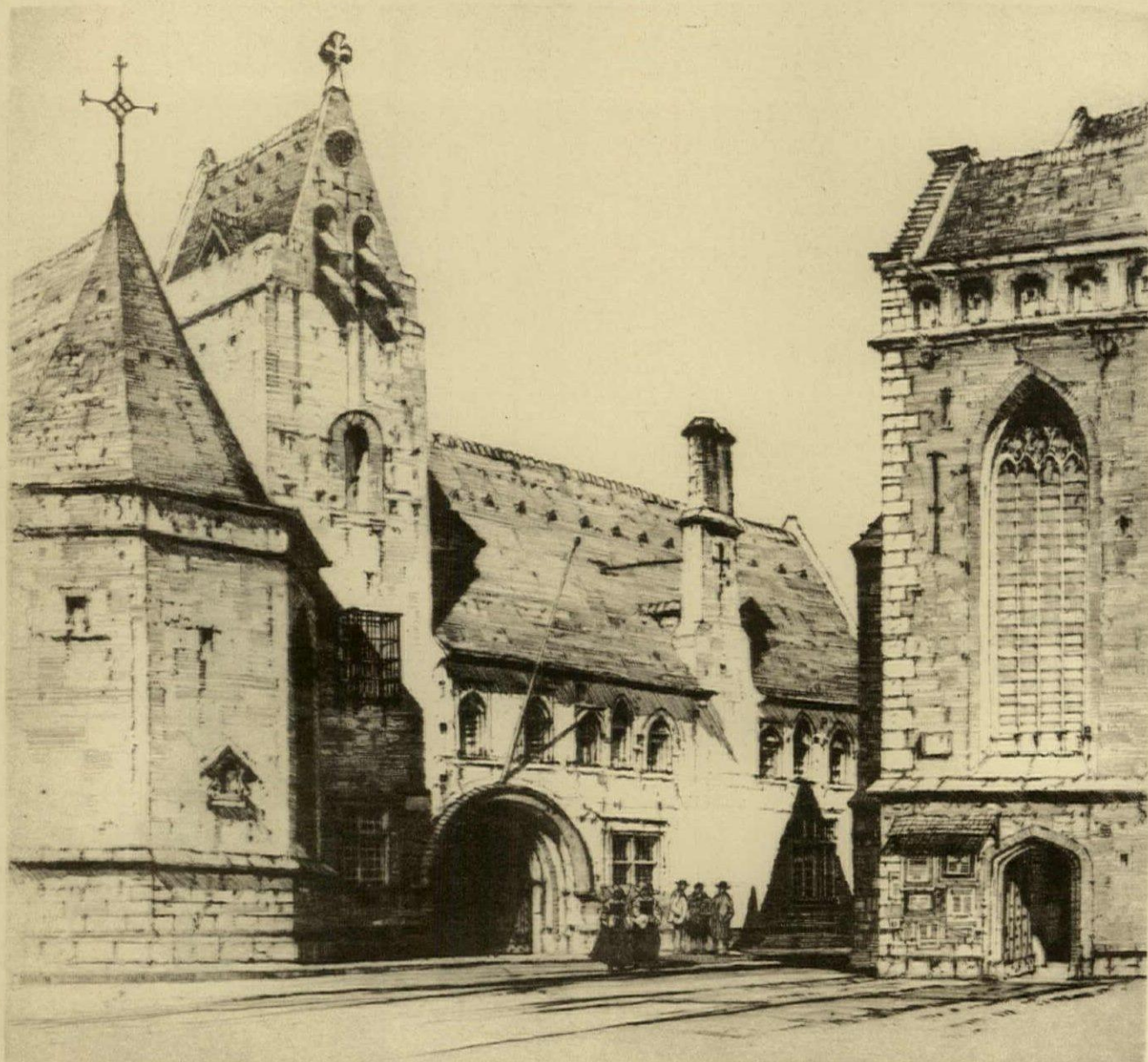
RECEIVED BETWEEN MARCH 17TH AND APRIL 15TH, INCLUSIVE

Wilfred E. Provost, Manchester, N. H.	25.00
Howard R. Perrin, Klamath Falls, Ore.	25.00
Douglas Orr, New Haven, Conn.	25.00
Guilbert & Betelle, Newark, N. J.	25.00
Sugarman & Berger, New York City, N. Y.	25.00
Arthur N. Gibb, Ithaca, N. Y.	25.00
Royal Barry Wills, Boston, Mass.	10.00
Albert S. Ross, Ada, Oklahoma	25.00
Cleverdon, Varney & Pike, Boston, Mass.	25.00
Holabird & Root, Chicago, Ill.	25.00
Peter Brust, Milwaukee, Wisc.	25.00
Mundie & Jensen, Chicago, Ill.	25.00
N. Max Dunning, Chicago, Ill.	25.00
Bull Dog Floor Clip Co., Winterset, Ia.	25.00
Blue Ridge Glass Corp., Kingsport, Tenn.	25.00
The Georgia Marble Co., Tate, Georgia	200.00
Fabre & Hildebrand, San Francisco, Calif.	5.00
Ritcher & Eiler, Reading, Pa.	25.00
Arthur Doré, Hackensack, N. J.	25.00
Kerner Incinerator Co., Milwaukee, Wisc.	100.00
Practicing Architectural Association, New Haven, Conn.	25.00
Ernest Irving Freese, South Pasadena, Calif.	25.00
The Architects' League of Hollywood, Hollywood, Calif.	25.00
Samuel Smulian, Baltimore, Md.	5.00
Allan Burton, Baltimore, Md.	25.00
Henry Powell Hopkins, Baltimore, Md.	25.00
M. F. Worthington, Baltimore, Md.	5.00
Howard F. Baldwin, Baltimore, Md.	25.00
Wren, Lewis, Westenhaver, & Jencks, Baltimore, Md.	25.00
Garber & Woodward, Cincinnati, Ohio	25.00
Eschweiler & Eschweiler, Milwaukee, Wisc.	100.00
Guy E. Hecklinger, Baltimore, Md.	5.00
Robert O. Derrick, Inc., Detroit, Mich.	25.00
T. Worth Jamison, Jr., Baltimore, Md.	25.00
Palmer & Lamdin, Baltimore, Md.	25.00
Hill, Mock & Morrison, Tacoma, Wash.	25.00
Anderson & Young, Salt Lake City, Utah	25.00

Grand total \$12,795.00

We feel that something special should be said about Royal Barry Wills of Boston. He was one of the first contributors to the fund, having sent his twenty-five dollars early in the game, and this month he sends along ten dollars more. The second contribution interests us much more than the amount involved. We salute Royal Barry Wills and have almost decided to make him a corporal or something.

In spite of the fact that the contributions to the fund are coming in very slowly we feel much more encouraged about the enterprise than we did a month ago. An architect who won't let us use his name has gotten so stirred up about this whole thing that he has called upon his brothers in the profession in the city where he has the honor to live and has received assurances that a considerable number of contributions will reach us from that city. It would not occur to us to ask any architect to do likewise but it certainly helps a lot to know that this man has thrown his hat into the ring in such an energetic fashion. We have a distinct feeling that from now on greater momentum may be expected.



HOSPITAL ST. JEAN, BRUGES
FROM A DRYPOINT BY SAMUEL CHAMBERLAIN
Reproduced by courtesy of Goodspeed's, Boston

PENCIL POINTS
May, 1930

PENCIL POINTS

Volume XI

May, 1930

Number 5

DESIGN IN MODERN ARCHITECTURE

5—THE ANTECEDENTS OF MODERN ORNAMENT

By John F. Harbeson

"IT IS AN article of faith that to design entails the possession of the creative faculty, which may be taken for granted with the proviso that the creative faculty is concerned rather with the association of elements common to all than with invention pure and simple.

"To be more explicit, the human imagination is limited to personal and acquired experience. At no period has any form been created that is not traceable to some process of production, or natural suggestion. . . .

"The term originality is indeed generally misunderstood, and for the reasons already advanced it is impossible to be original. The real interest in artistic production of any kind is the expression of personality, in other words, the individual point of view of the artist; which is more or less interesting as it is more or less personal in idea and expression.

"In the training of the designer it is essential that the imagination be carefully cultivated and trained to accept suggestion from any possible source."

AMOR FENN, in *Design and Tradition*.

Those who have theorized about "modern" design have emphasized the desirability of discarding all "useless" members**—mouldings, cornices, trims, and, of

**It is well to remember that teachers of art have always had much this theory, and have indicated that it is the ability with which things are left out that is a mark of the greater talent. "Ornament is good only insofar as it is an indispensable part of something, helping its effect without hurt to its use. It is begotten of use by the consideration of beauty. The test of ornament is its fitness. It must occupy a space, fulfill a purpose, be adapted to the material in which and the process by which it is executed. 'Style' as distinguished from 'the Styles,' comes of an artist's intelligent and sympathetic treatment of his material, and of his personality and strength." Lewis F. Day, *Encyclopædia Britannica*.

course, "ornament"—for architecture, both inside and out, and also for furniture, and furnishings, on the principle that "Loveliness needs not the foreign aid of ornament, but is when unadorn'd adorn'd the most."*

But from the days of the cave dwellers of Altamira the natural desire of mankind for attempts at beautiful form, even if "useless" from any standpoint but that of composition, can not be denied by any such prohibition, and designers who are clever in composing ornamental forms, who are apt in the "exploration, experiment and consideration of possibilities in the great reservoir of ideas," have seen in the new movement only new opportunities and an incentive for roaming further afield for "inspiration"—that fillip to the imagination which is the basis for what is known as originality.

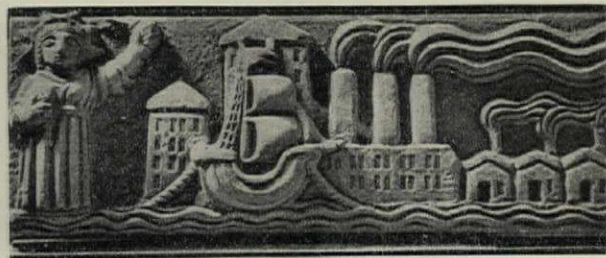
In early times such inspiration was not detailed or definite and until comparatively recent times there were no photographs with enlarged views of interesting corners, no measured drawings with full sized profiles. There were vivid mental impressions—a few sketches in the designer's notebook. Consequently there was no standardizing of style—each example was really different from the examples which inspired it.

As means of recording ideas became perfected, first by steel plate engravings from measured drawings, in such work as Stuart and Revett's *Antiquities of Athens* and Letarouilly's *Edifices de Rome Moderne*, to mention but two, and the process of photography became expert and inexpensive, there was a stronger and stronger tendency, on the part of the unimaginative,

*Thompson, *the Seasons*.



From "L'Art International d'Aujourd'hui"

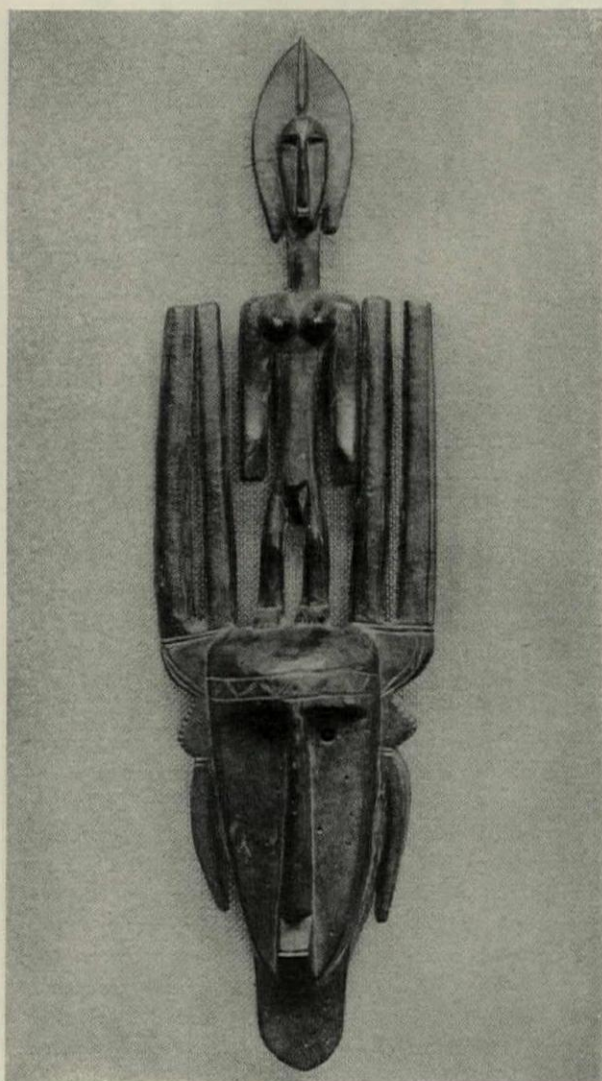


WOODCUT TECHNIQUE IN SCULPTURE RELIEF

This work by Robert Garrison, part of a frieze for a bank portraying the arts of peace—navigation, husbandry, etc.—shows ideas borrowed from typical woodcut technique, and successfully, from a decorative viewpoint. Everything is today being used as a "document" for decorative forms.



From "Negerplastik"—Carl Einstein



Guillaume and Munro—Primitive Negro Sculpture

AN AFRICAN FETISH FIGURE AND A CEREMONIAL MASK FROM THE SUDAN

This sculpture in wood (left) illustrates very well the several characteristics of negro sculpture—the distortion of natural forms to achieve effects in design, and the repetition of lines or motives. Note here the repetition of the obtuse angle, much the shape of an Australian boomerang—down the face and out to the chin, down the neck and out on the breasts, down the upper arm and out on the lower arm, down the lower part of the torso and out on the thigh, down the lower leg and out on the instep, each time at the same angle, recalling the insistent recurrence of the beat of a tom-tom.

Though the details of the mask (right) are not as well executed as those of the mask from the Ivory Coast, the design is equally good, the silhouette just as interesting. In this mask "the vertical rod and flat, sharp-edged plane are the dominant themes, stated most decisively in the row of upright horns and in the long, thin, rigid nose. In all parts of the small standing figure this theme is made to recur, so that a straight-up movement continues without material interruption as a persistent rhythm from bottom to top. The conical breasts, reversing the small depressions of the eyes, are minor contrasting punctuations and so are the horizontal mouth and forehead grooves, which parallel the line of the tops of the horns. Within these stiff right angles, to melt somewhat their geometrical hardness and provide a further contrasting undercurrent, straight lines are softened a little into curves in the standing figure's head, its body, the forehead below and the drooping rods outside the face, which parallel the nose to form a series like the horns. But as a whole the design towers up in menacing rigidity, an insistent rhythm of unyielding columns."

to rest too much on definite precedent, a different thing from living tradition. In this country we have replicas of the Parthenon, of the Palace of the Legion of Honor, of the buildings of Gabriel on the Place de la Concorde, usually in cheaper materials and by clumsier craftsmen, for unfortunately the growth of machinery has resulted in a decline of the crafts, and

a decline of appreciation of the crafts on the part of the public.

The newspapers may fairly be said to represent the average taste of the populace, and in the period just before the war the highest praises the newspapers felt they could give to a work of architecture was that it "was an exact copy" of the Pantheon, say, or some

other well known work of art in history, that was known to those who had had some acquaintanceship with the arts. (In most such cases the resemblance of the building to the ascribed source has been quite superficial.)

The men with real designing ability have used the greater and greater stores of knowledge, and the greater accuracy of the records of past works as a larger opportunity for that "exploration of the possibilities in arches, vaults, domes and the like"—in all the elements of architecture—"as a chemist or a mathematician explores,"* the method by which great works are produced.

Of course there have always been those to rebel at quiet and slow processes, who have attempted what they believe to be original work, who chafe at the "exploration, experiment, consideration of possibilities," and wish by a single master stroke to achieve something new. But when time has passed to allow of some perspective, we find these so-called original styles to be very much inspired by work of the past, as is all work, but by examples of work little known previously, or at any rate little appreciated, these being used, of course, with a new feeling as is inevitable in a new time. Some designers of this sort, because they go elsewhere for their roots—or perhaps rely on the storehouse of the brain and draw on impressions placed there years earlier of which the memory of the source has faded in the intervening time—do not realize, and do not acknowledge, the debt they owe to the past. But archæologists, trained in tracing the ancestry of the pediment, for instance, or the volute, would have no difficulty in placing the art of Louis Sullivan, or Frank Lloyd Wright, as the definite result of definite art forms of the past of which the influences could be very clearly shown. And meanwhile the putting of too high a value on originality, other than the exploration, experiment, and consideration of possibilities above spoken of, is to "restrict natural growth from vital roots, in which true originality consists."**

*W. R. Lethaby—"Design"—Encyclopædia Britannica.

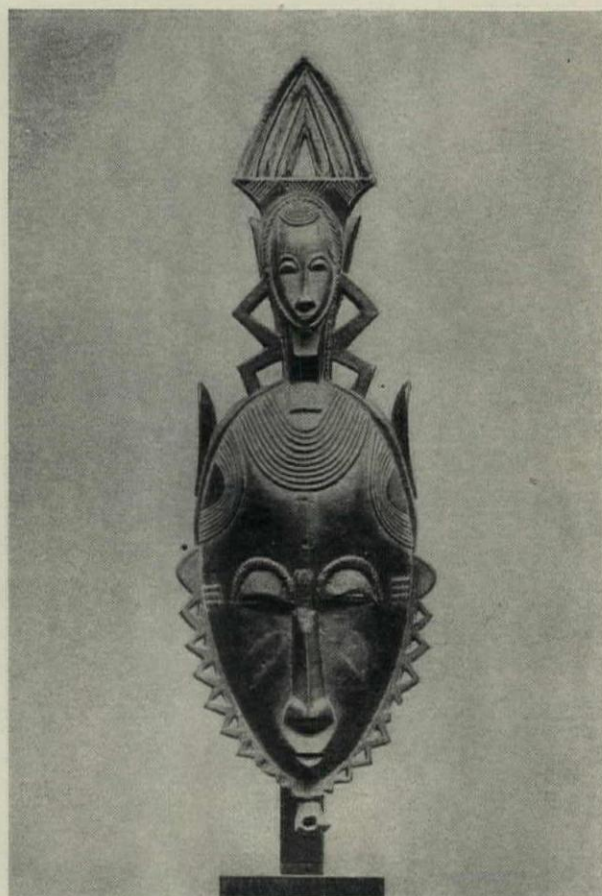
**Idem.



the face is that of a man belonging to the White race. From "L'Art International d'Aujourd'hui"—Sculpture.

MODERN SCULPTURE AN AMERICAN SAILOR

This work of Oscar Jespers, cut in stone, is obviously influenced by the characteristics of primitive negro sculpture—the simplification of natural forms, the features being forced into conventionalized decorative lines and much detail omitted entirely. In spite of this there is a maritime flavor, certainly in the hat, and

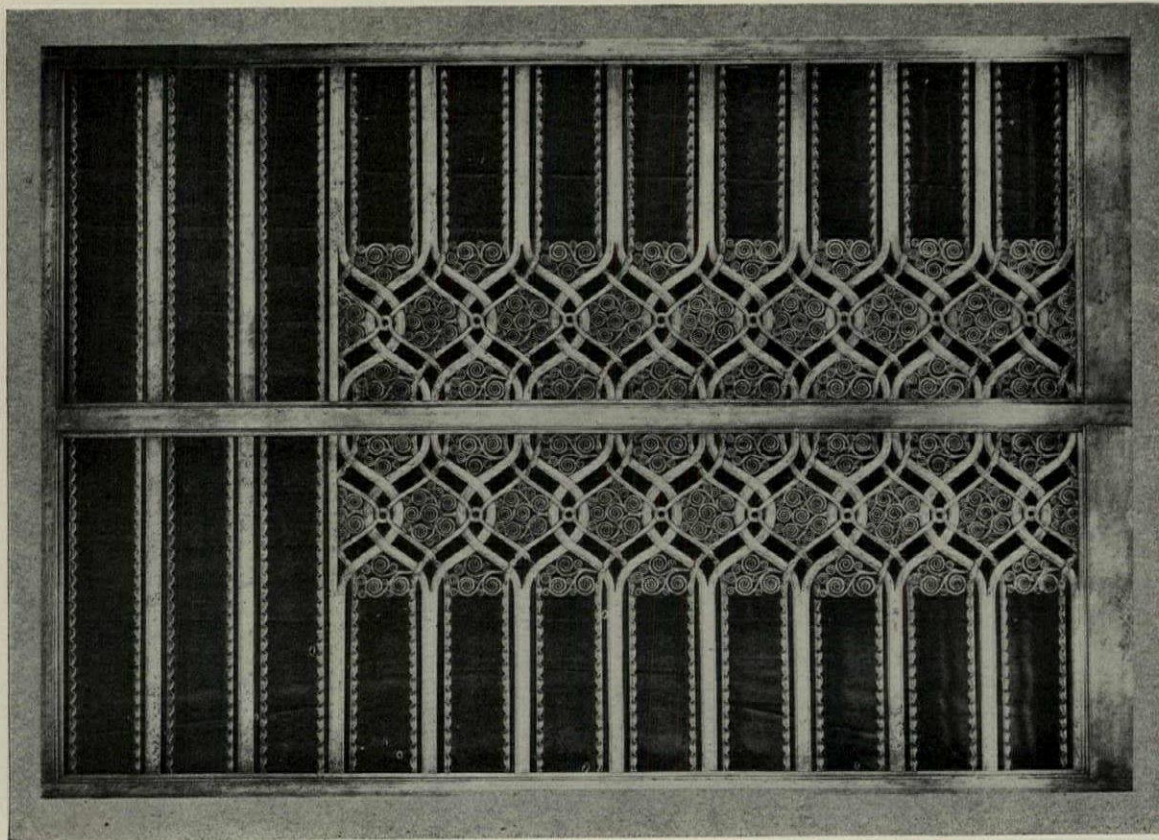


Primitive Negro Sculpture—Paul Guillaume and Thomas Munro

AN IVORY COAST MASK—NEGRO SCULPTURE

The composition and the execution of this piece of mediæval art are so perfect that one does not notice for awhile the distortions and conventionalizations from the natural proportions of a human face—the extremely small mouth, absence of chin, height of forehead, etc. These distortions, however, permit of an architectonic quality, as of a cartouche, or other ornament. Especially effective is the repetition at smaller size in the crest of the face below, each line and projection repeated. "All through the movement angles are softened into curves, then stiffened again into angles and triangles. On the forehead are three symmetrical groups of parallel curving ridges, which as corrugated surfaces contrast with the smoothly curving planes below. As curves, they repeat in various positions the arches of the eyebrows and nostrils. Elsewhere are straight angular cuts and ridges, for contrast . . . Two different rhythms are thus in motion at once: a series of smooth but firm and decisive curves (ellipses and parts of ellipses) and a series of crisp staccato angles. They interlace, echo, and reverse each other, here one predominant, there another! . . . All the multiplicity of movements is tamed and regulated, each fitted precisely into place and confined to its proper scope, so that the whole is a structure of almost frozen perfection."

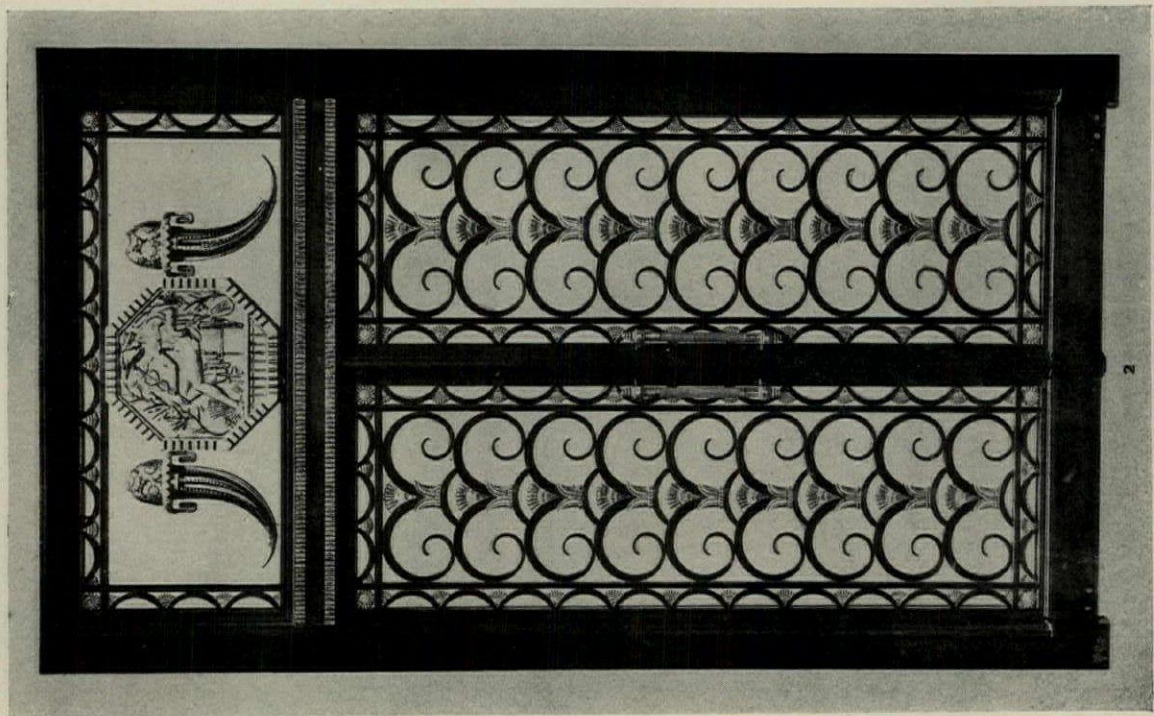
International traffic, invention, and the spread of Western civilization have gone far to do away with national characteristics in ornament, which "becomes yearly more and more alike all the world over." We have mentioned the growth of printing, the invention and perfection of reproductive processes, by which



From "La Ferronnerie Moderne"—3rd Series

(LEFT) The workmanship and detail recall medieval ironwork, the design is very much that of peasant art—of embroidery or lace. The scroll forms are treated much as they are on the hinges of doors of Gothic churches, but this ornamental work is organized into symmetrical shapes and bounded by geometrical lines. (RIGHT) Of wrought iron and bronze by Edgar Brandt, contemporary French master-craftsman. Without any triangles—or any angular forms at all—the design is nevertheless distinctly geometrical in arrangement; the detail in the gates seems to combine the forms of medieval wrought iron with the plant forms made known by magnifying photography. The arrangement of the transom is of a quite different character; there is no feeling of the medieval here, but rather of the "art nouveau" period of France of 1904.

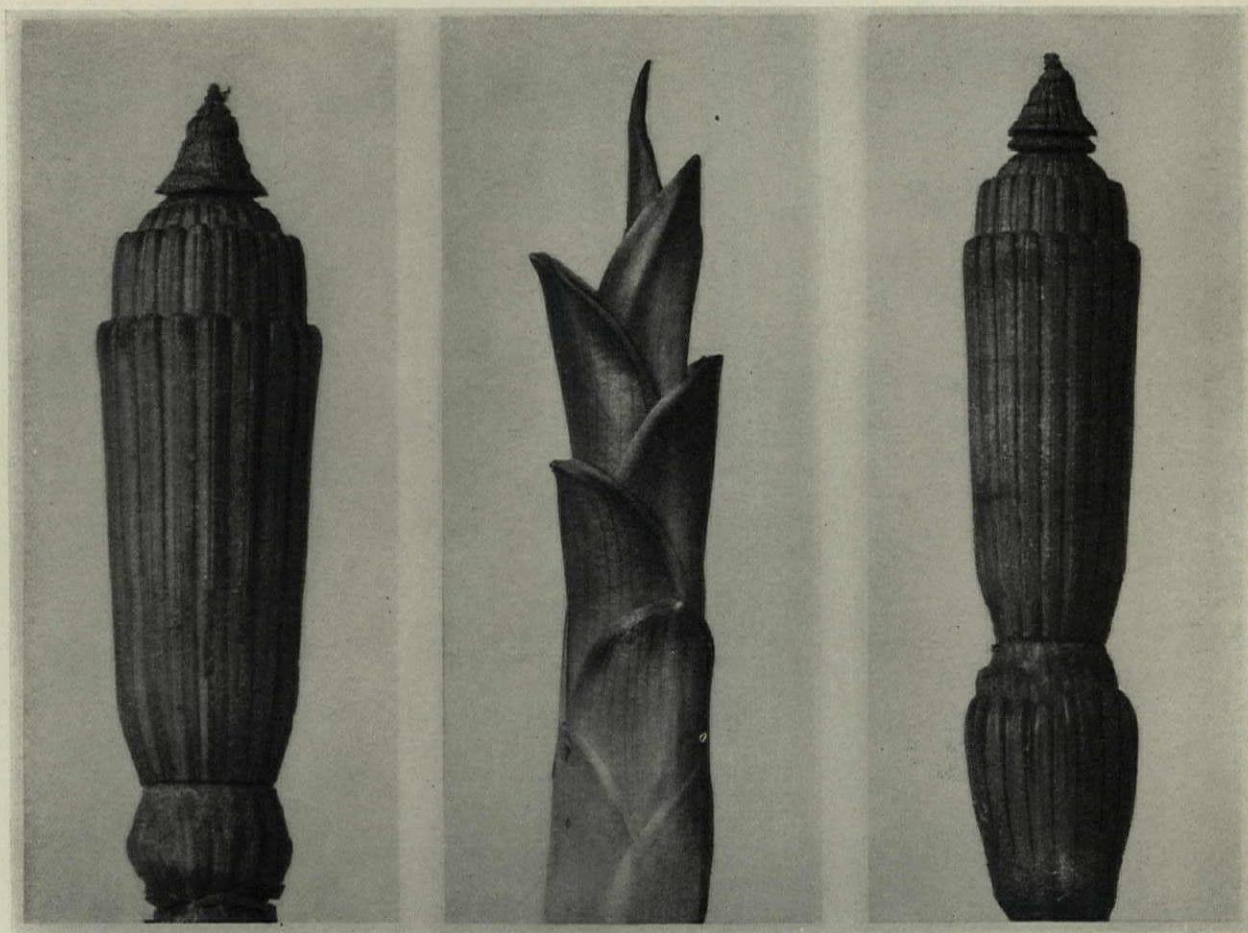
APARTMENT
HOUSE GRILLE
BY
RAYMOND
SUBES
AT LEFT
AND
GRILLE IN
MONTREAL
"BOURSE DE
COMMERCE"
AT RIGHT



From "La Ferronnerie Moderne"—2nd Series

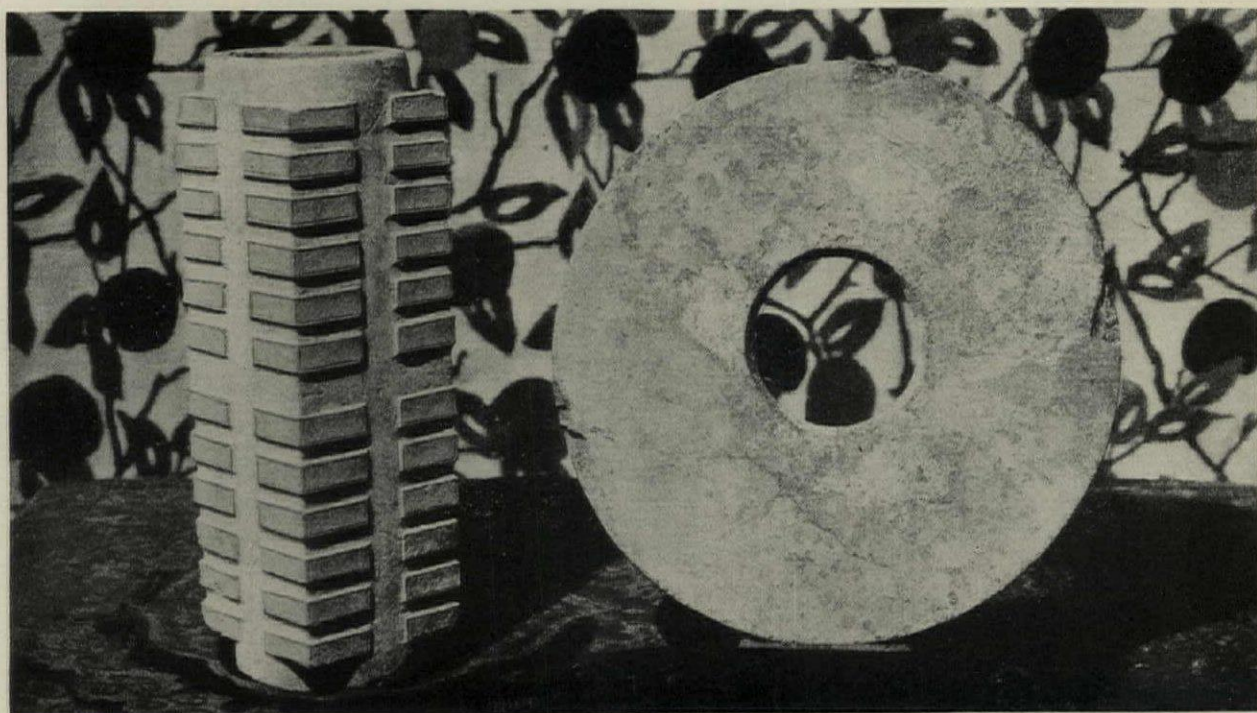
(RIGHT) Of wrought iron and bronze by Edgar Brandt, contemporary French master-craftsman. Without any triangles—or any angular forms at all—the design is nevertheless distinctly geometrical in arrangement; the detail in the gates seems to combine the forms of medieval wrought iron with the plant forms made known by magnifying photography. The arrangement of the transom is of a quite different character; there is no feeling of the medieval here, but rather of the "art nouveau" period of France of 1904.

DESIGN IN MODERN ARCHITECTURE



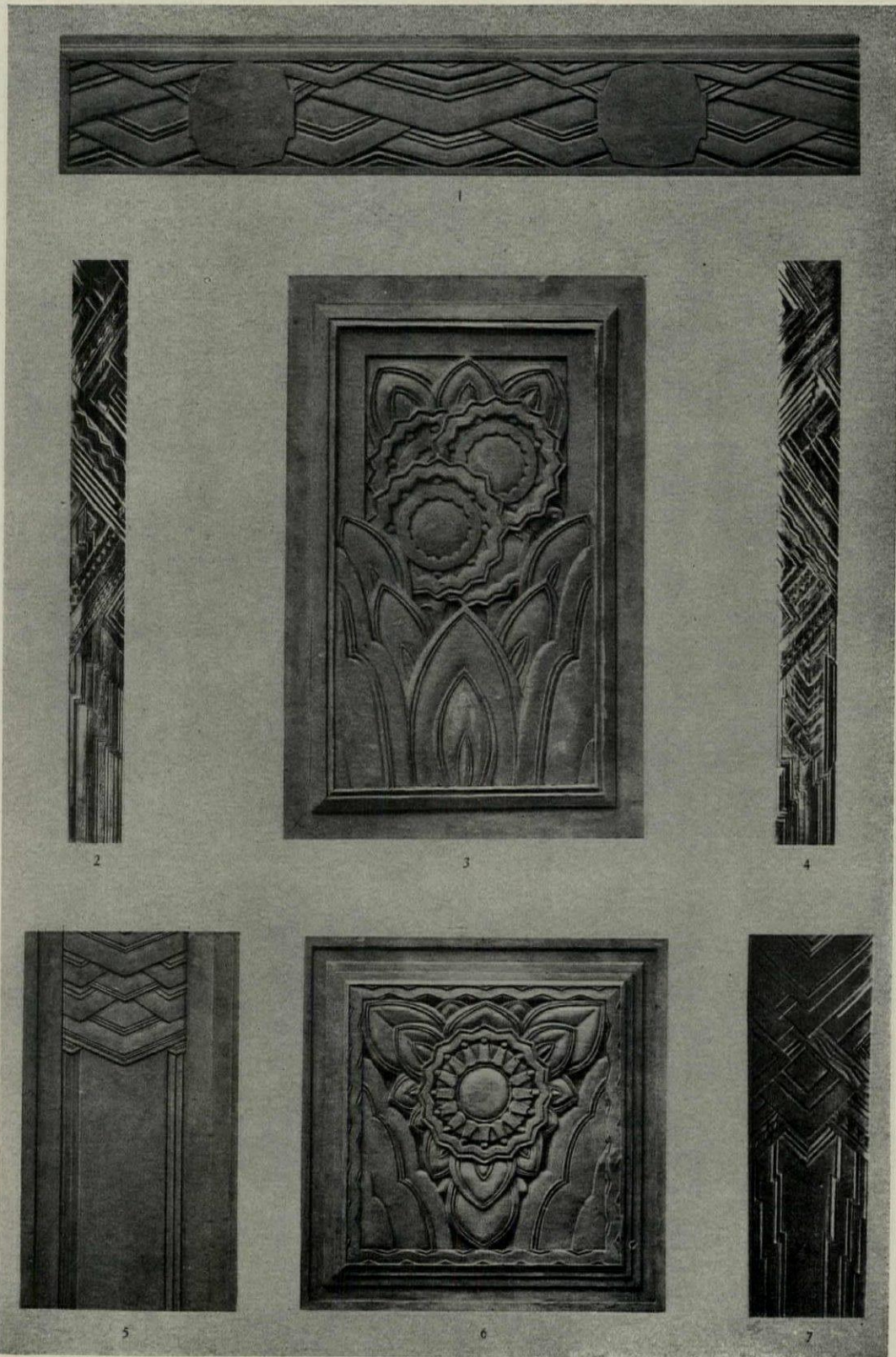
MAGNIFIED PLANT FORMS

At either side seed pod, "*Equisetum hiemale*," magnified twelve times. In the center "*Hosta Japanica*," budding stalk, magnified four times. A source of inspiration made possible by the invention of microscopic photography.



EARLY CHINESE RITUAL JADES

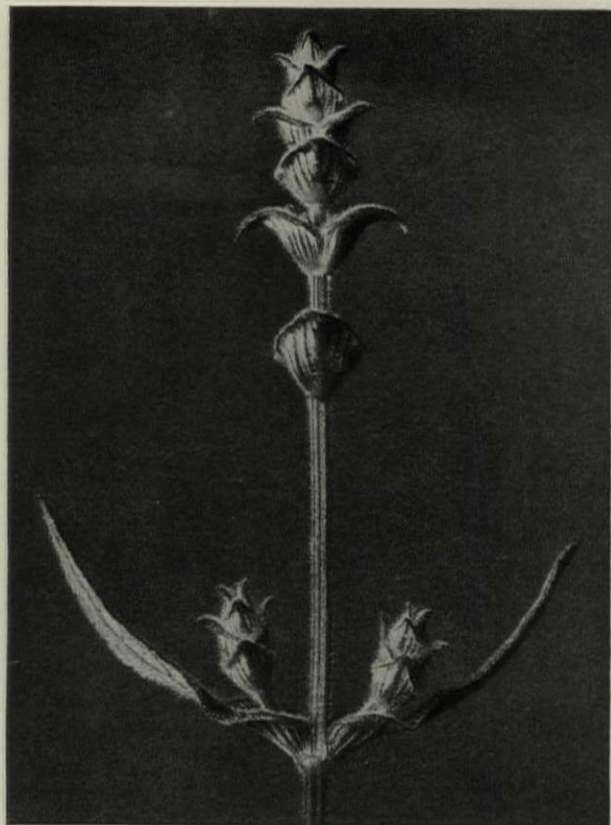
Images of deity Earth and deity Heaven. From the University Museum, Philadelphia. Much of the early Chinese work is geometrical in inspiration, and has the repeating rhythms that so mark the decoration of the modern school. The jade at the left is of this kind: most early Chinese art has much in common with modern forms.



From Rapin—"La Sculpture Decorative Moderne"

TYPICAL GEOMETRICAL ORNAMENT FORMS

Perhaps if one were asked to choose which forms were most identified with the term "modern decoration," the geometrical forms would be unanimously accepted as such. Although many primitive arts have used such angular forms as are here shown, they have seldom been used in a sophisticated way. The chevron is thus a form that typifies the modern spirit in decoration.



STALK AND BUDS OF SALVIA

Another plant form, magnified five times, from "La Plante." From such forms has come much of the inspiration of modern metal-work and other ornamental design.

examples of any art are brought within reach of the modern designer.

Each addition to the treasures in Museums, each new work of archaeological exploration, has had its effect on art and architecture, has added new material in the reservoir from which inspiration for ornament is drawn. The real interest of archaeologists in the antiquities of Greece in the latter half of the eighteenth century, of which the works of Stuart and Revett are a well known example, and the theft of the Elgin marbles a consequence, resulted finally in the Greek revival of the first quarter of the nineteenth century. The art spoils which Napoleon demanded of every conquered foe, and which form such a large part of the Louvre collections, have served as inspiration for generations of designers.

Books of travel, and the work of archaeologists led to a revival of interest in exotic arts—the Japanese print, Chinese paintings and porcelains, and more primitive objects from excavations in Egypt, Chaldea, Crete, and Central America. These paved the way for a popular reception of another discovery of recent times—primitive negro sculpture of the sixteenth and later centuries. "Primitive arts often possess a vigorous inventiveness and sensitive power lacking in sophisticated art." At first these idols and fetishes—this was religious art, as was most art of the mediæval period—were gathered only as sources for ethnological study. But "expressionists," those contemporary

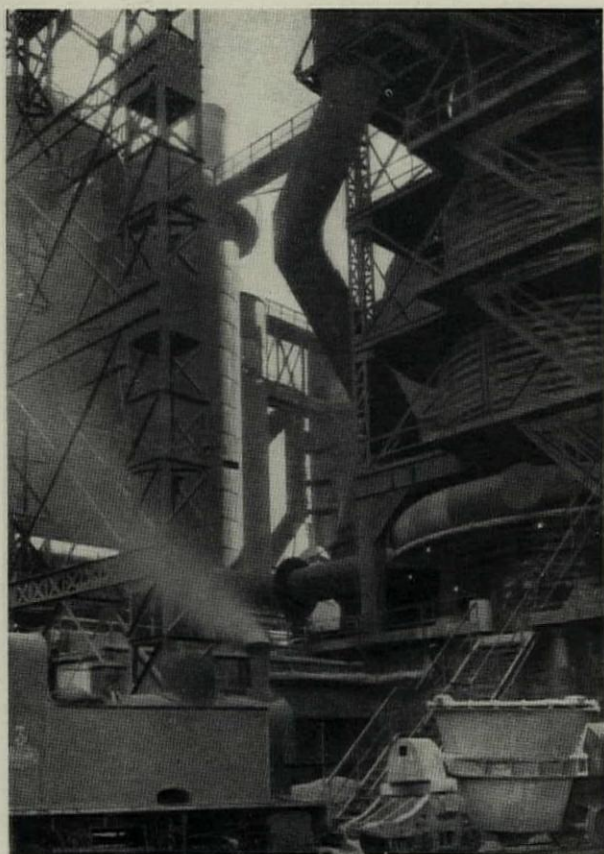
painters who have gone beyond the "impressionists," found something in negro sculpture that was in sympathy with their ideas of art.

The impressionist, reacting from the realism whose aim was a conscientious and literal portrayal of the material world, attempted the presentation of a vivid impression of a subject under particular circumstances—"as changing light and atmosphere are usually responsible for the particularity of the impression, the representation of these promptly becomes more important than the subject itself."*

In contrast to this idea, the expressionist "aims to give neither literal facts about his subject, nor an impression momentarily created by it, but to *express* the immaterial qualities which are responsible for its material form."** Painters who were trying to express such ideas on canvas suddenly found that similar effects had been achieved with remarkable success in primitive African art. "Where they seemed to be misshapen, badly proportioned, they were really fashioned with consummate skill to achieve effects that

*"When Art Meets Art,"—Leicester B. Holland, *The General Magazine and Historical Chronicle*, October, 1929.

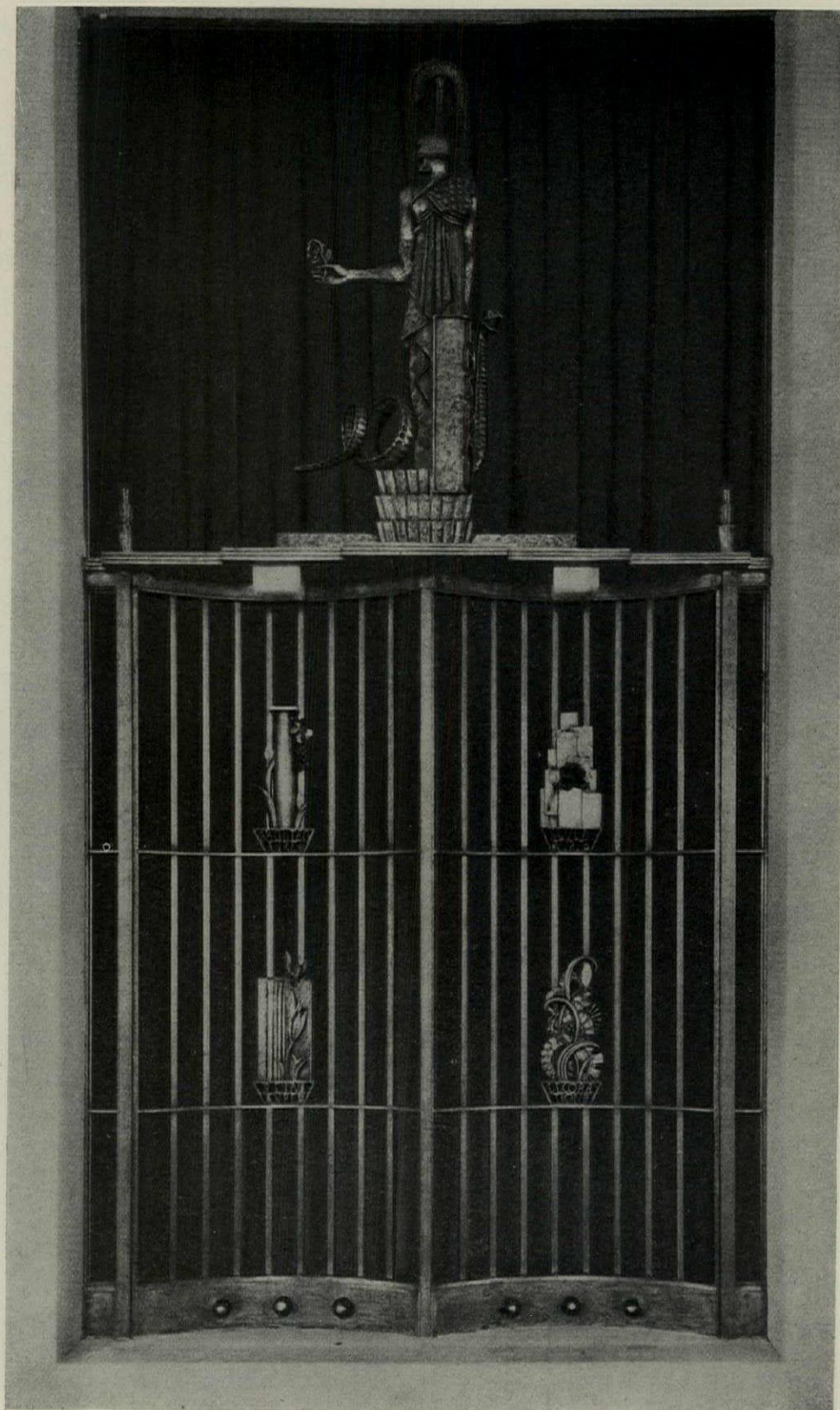
**Idem.



From *Art et Decoration*

FACTORY IN LORRAINE

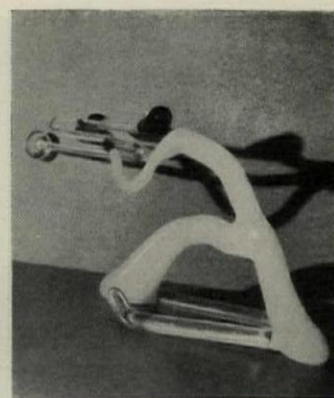
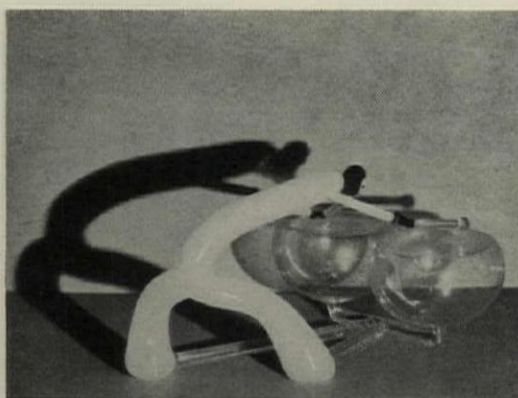
A source of much inspiration in modern design is the photograph, especially the photograph of machinery, or of novel effects of lighting, or novel points of view. The regular geometric pattern of the cross bracing in this photograph is found in much modern design, especially of wall papers and textiles, but also in metal work.



From Art et Decoration

GRILLE FOR THE ÉCOLE DES ARTS DECORATIFS, PARIS

Design of Roger Expert, architect, executed by Raymond Subes. Here is a design much inspired by primitive or archaic Greek art. The decorative compositions representing Architecture, Painting, Sculpture, and Decoration are an interesting combination of archaic and modernistic forms.



From the XIXe Salon des Artistes Decorateurs—"Le Bibelot Moderne"—Art et Decoration

"JAZZ," BLOWN GLASS FIGURES BY LEON ZACK

At one time glass making was a very limited process. Today commercial manufacture has so developed that enormous sheets of perfect plate glass and mirrors can be easily obtained, greatly affecting design, and the glass blower has become a virtuoso. Here are three figurines of an amusing character. But this sort of work influences design also—the simplified forms resulting from the process of glass blowing are interesting, and are carried over into other processes for their decorative value.

Europeans had not been able to see or appreciate"†—Europeans whose eyes were steeped in Greek standards of cultural beauty. "The persistent interest of painters and sculptors in the negro form (of this period), the variety of ways they are using it for subjects quite remote from negro life, is some indication that it is being found significant on purely æsthetic grounds."††

Quite different from any European standards, its influence on contemporary art movements is the result of effects of line, plane, mass, and, to a less extent, color. There is a stressing of rhythms, a repetition of a line, an angle or a mass like the repetition of the beats of a tom-tom. There is a simplification of forms—irrespective of nature; geometrical and conventionalized forms are substituted for human forms—a design "in which the natural object is to be utilized rather than imitated." This is very clearly seen in such sculpture as that of Brancusi, but it has had a marked effect also on the ornamentation of plane surfaces.

After all, this is very much like the processes of architectural design where we are accustomed to think in terms of conventional form, though art theorists have long written about the growth of the column from the tree, and of other forms from other natural sources, including the human figure.

It is likely that none of these primitive objects was intended as "art" when it was done; this may be said of all primitive arts. But the designer of today has taken from this art another method of work—to build up a design from the dissociated parts of a natural object, especially making use of the repetition and recall of forms, and the contrasts of forms, much as is done in music. Probably the egg-and-dart was originated in much the same way.

Other modern ornament is inspired by the "peasant art" of various countries. The Germans, Austrians,

and Poles have used these sources for much of the modern work—the designs from embroidery, laces, wood carving and painted furniture decoration. As much of this peasant work is geometrical in pattern, or conventionalized, it is easy to understand why it fits so well with the "modern" spirit.

Other modern ornament is mechanistic—frankly geometrical, taking ideas from the rich patterns formed by modern machinery in motion. Looms, with numerous rows of countless bobbins, each one reinforcing the lines of the one before it—a repetition of a motif that has the same force as the rhythms of negro sculpture, or the regular beat of modern jazz. Some modern moving picture films from Germany have shown nothing but just such pictures of moving machinery, taken now from below, looking up through moving parts, now from above, some of the pictures being close-ups, the whole fitted into some sort of plot or sequence so that there is a definite feeling, toward the end, of approaching a climax.

Photographers have dramatized this sort of thing; smart magazines have published not only such photographs of machinery, photographs of the paraphernalia of the stage ("the machinery of illusion") but even arrangements of a few matches or cubes of sugar, which, by the choice of viewpoint and arrangement of lighting source, make exceedingly interesting compositions of line and mass.

Craftsmanship, as much as is still left, adds new forms, when the means of production have expanded. In glass blowing for instance, it is now possible to do many things that until recently were impossible. Representations of figures are attempted, and prove interesting because of their soft, rounded forms. These in turn are used by designers in painting and in sculptural ornament, for this use of the human form fits into the modern pattern of conventionalizing all forms.

The automobile, and other expensive machinery in popular demand, designed to appeal to the buying pub-

†Primitive African Sculpture, Guillaume and Munro.

††Idem.

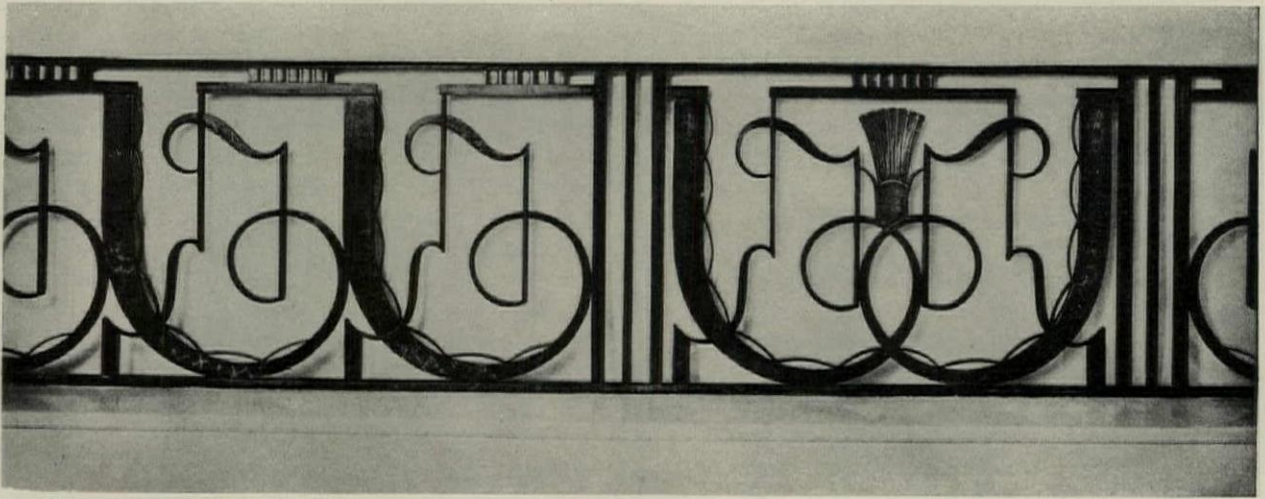
lic, has in turn created a taste for that type of design, which is reflected in other objects—furniture, silverware, and small appliances.

Another source of new forms is the result of new optical instruments; under water lenses that show formerly unknown sea forms, shells, fish, and plant life, and the strong magnifying glasses with which photographs can be taken of animal forms, insects and insect life, and, most important in its effect on modern art, photographs of parts of vegetation, buds and stalks of plants that fit exactly into the modern ideas. These have been reproduced in several books, of which the best is, perhaps, *La Plante*, as it is called in the French edition. (*Urformen der Kunst* in the German.)

All of these tendencies were gathered together, as we have said, at the 1925 Exposition of Decorative Arts in Paris, and examples of the work at that exposition have been published in great detail. Unfortunately much American work of today is copied from these books—the designers forgetting the large plain surfaces, which are omitted where possible from the plates in the books so as to save space—the ideas are

used over and over again, without any original research or attempt at understanding the principles underlying the new work. Those who used to copy whole plates, who sent a photostat of a page in a book to the modeller, still continue to do so, merely substituting the plates from the new books for the plates from d'Espouy that used to be sent—this does not make modern art, nor should it be confused with the work of real designers, who, after a real study in proportion and scale (most easily made in the classic forms because they have been used so often as to have tried out countless variations, and arrived at a standard), use this sense of proportion in composing with the larger vocabulary of forms now at their command—this vocabulary made possible by travel, by printing and photography, by modern invention.

But all of it is inspired—it builds on what has gone before, for we cannot escape our heritage. Art forms have always built on that which went before. Modern art is a sophisticated art. Even when it borrows from negro or other primitive arts the material is used in a sophisticated way, for this is a sophisticated age.



From "*La Féronnerie Moderne*"—3rd Series

HOTEL BALCONY RAILING BY EDGAR BRANDT

Here are the vertical "columns" of negro sculpture, the channels which have become so much identified with modern decoration that they seem an expression peculiar to it, and an interesting recall of the flowing metal forms used for monograms at the time of the French Renaissance. Notice that the shape and size of the voids between the members is as carefully studied as in any Renaissance work, as is the relation of these voids to the solid members.

THE GEOMETRY OF ARCHITECTURAL DRAFTING

10—DRAFTING-SCALE TACTICS

By Ernest Irving Freese

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

THE FIVE ORDERS of architecture are based on some inherent and arbitrary system of proportion invented by Vignola and Palladio or the other Renaissance architects, and persistently perpetuated by the Ecole des Beaux Arts. In the Vignolan and Palladian systems either the column diameter or the radius is divided into a certain number of equal parts. In another Renaissance system the entire height of the entablature is so divided. In each system the "part" becomes the unit by means of which the proportions, *but not the dimensions*, of the order are expressed.

The units of these two or more systems are not commensurable, one with the other. This is bad enough. But, what is worse, these arbitrary units almost invariably work out so as to be incommensurable with units of actual measurement. Wherefore, profiting by the well-known and multitudinous "plates" depicting, down to the last detail, the orthographical aspect of the Five Orders according to the above-named authorities, but having no regard whatsoever for their various systems of "modules and parts," I too have invented a "system." And in *this* system, the classical "proportions" are directly read off the plate in *feet and inches*. So, I have not only sidestepped tedium but also have no doubt forestalled at least a few blasphemous wonderings of mill men and stonecutters as to what particular kind of a measuring-stick that architect used in laying out those full-size details! Well, you may have discovered the same system. Anyhow, this is it:—

One of your stereotyped "plates" looks some-

thing like Figure 90, Diagram "1." It has plenty of proportions—but no actual *scale*. Well, *establish* its scale, and your work is finished! I shall assume that this particular order is to total, say, a height of 23' 8". The height *H*, of the entablature, then becomes one-fifth of this or 4' 8-4/5". But, regardless of Vignola, Palladio, the Renaissance and the Beaux Arts, no architect in his right mind would put such a dimension on a working drawing if it could be *avoided*. He'd call it 4' 9". Or, if there were a steel beam in the way that had to be "covered up," or

an arched window-head that could not be lowered to come within the resultant column height, the aforementioned dimension might either be increased to 5' 0" or decreased to 4' 6". Say an entablature height of 4' 6" is adopted. Now, immediately, a working scale for this particular order is established. The height H , of Figure 90, Diagram "1," then represents, *not 100 parts*, but *four feet and six inches*. Lay any convenient scale across this entablature at such a slant that AB will read 4' 6". Continue this slanting line across the plate. On this "scale line," or on any other *paralleling* line, read off directly, in *feet and inches*, all other vertical "proportions" of the order. The height of the column cap is BC . The height of the base is DE . The scaled slant height between the two paralleling lines of *any* member is the *dimension* of that member. Now draw any other line, FQ , or any series of *parallel* lines, FQ , JK , LN , across the plate in a direction *perpendicular* to AE . If necessary, project the verticals to

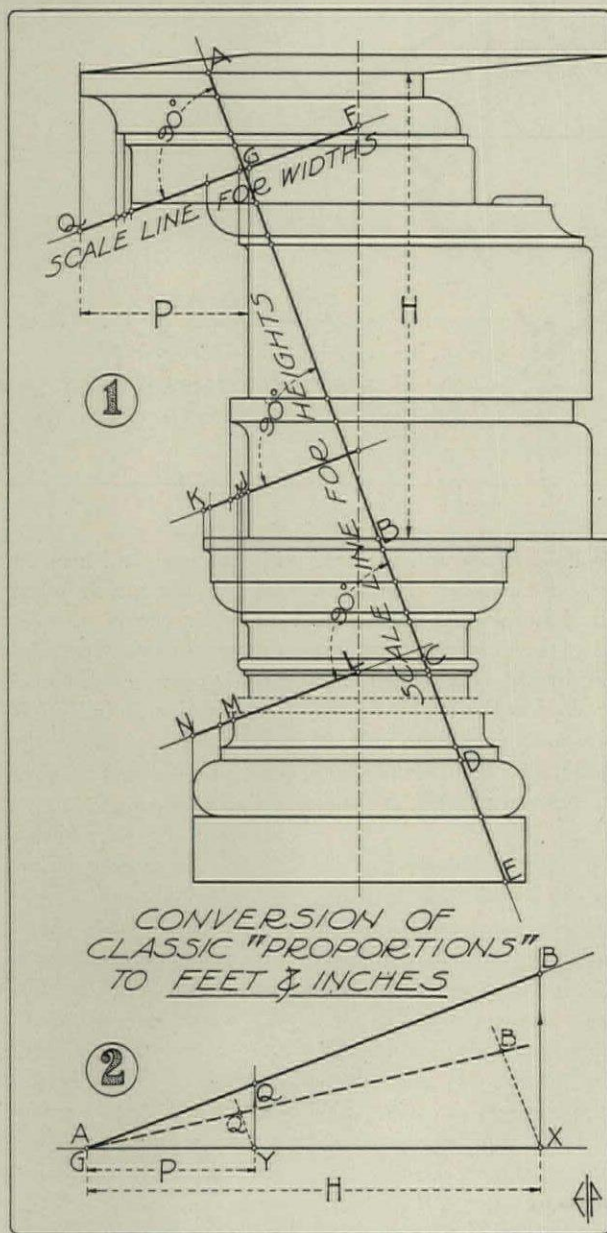


FIGURE 90

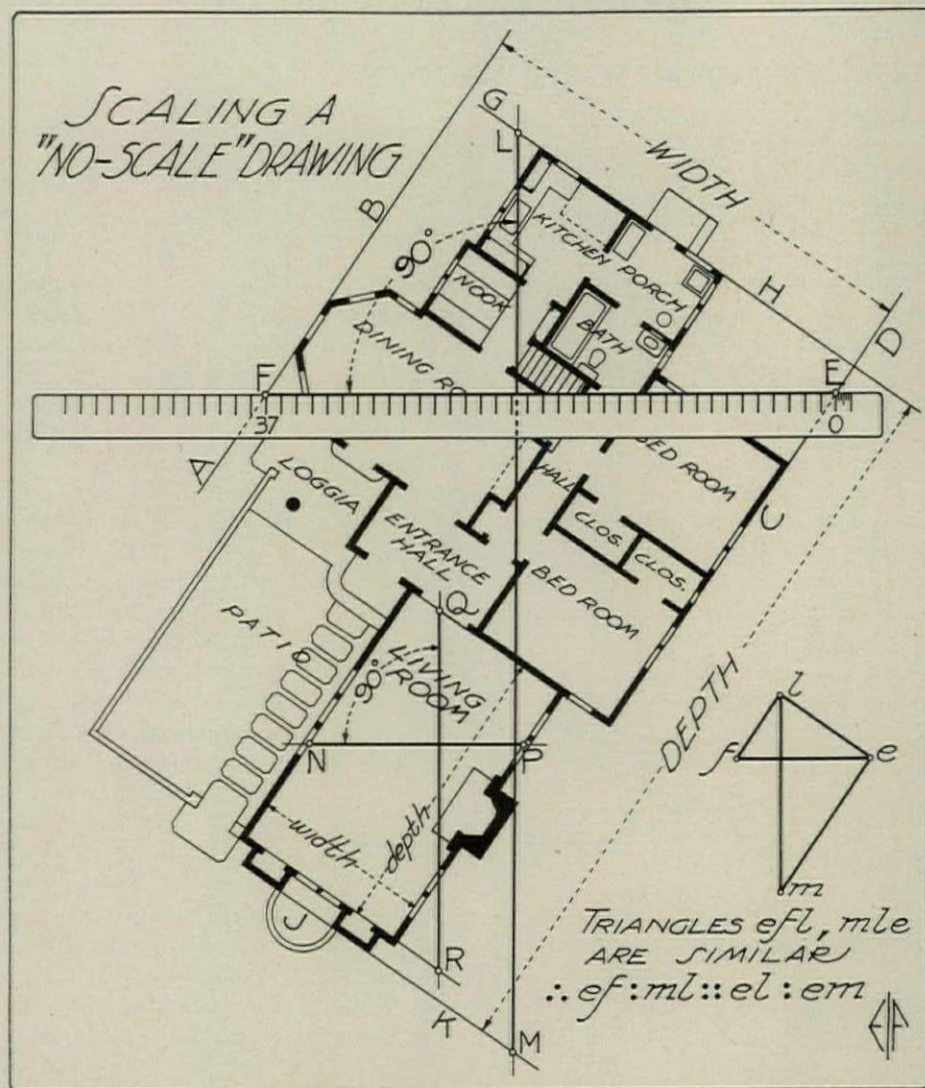


FIGURE 91

intersect or cross these latter lines as shown. Then, at the same scale as the vertical measurements were obtained, read off the required horizontal ones also. The thus-scaled distance GQ is the cornice projection P , but in feet and inches. So, by the same token, JK is the column cap projection; LM is the radius of the column; and MN is the projection of the base. Now go ahead and full-size it, or detail it at any scale you choose, and forget all that machinery of "modules and parts."

The above operation can be done directly on the plate itself, in faint pencil lines so as to be easily erasable to make way for some other "interpretation," or you can place a piece of thin tracing paper over the plate and operate on that. Or, as at Diagram "2," on a separate piece of paper you can construct a simple conversion scale like this: On a paper strip, transfer H from the plate to the scale, as shown. Draw XB in any direction, preferably vertical though not necessarily so. Then establish the slope of AB in the same manner as it would have been established on the plate itself, that is, by making the slant distance AB measure the actual corresponding dimension of H that you are working to, but at any convenient scale. Make GY

equal P , also by transference with a paper strip. Project YQ parallel with XB . Then GQ equals the required projection, P , in feet and inches. Similarly, all other "proportions" can be converted to feet and inches by scaling the projected intercepts along the line AB .

The above geometric principle, which is merely another practical application of the properties of similar triangles, can be put to work in many other ways: one of which is illustrated in Figure 91. This plan happened to be a clipping from a magazine, brought into the office by a prospective client. It was "just what she wanted." But there was not a dimension on it and, because of arbitrary reduction to fit a certain space on the magazine page, the reproduction had no scale, or, rather, no definite scale by means of which its original dimensions could be discovered. But the client's lot was fifty feet wide. Allowing nine feet on one side for

a driveway, and a clearance of four feet on the other side, a maximum width of 37' 0" was determined upon for the plan. Accordingly, one of the regular drafting-scales was laid across the plan, between the limiting projected lines AB and CD , in such a position as to read exactly 37' 0" between said paralleling lines, as the Figure indicates. The thus-fixed line, FE , was then drawn and the plan "squared" on the drafting-board to this scale line. Any vertical ML , then drawn between the projected parallels JK and GH , yielded the corresponding depth of the plan and, in the same manner, by scaling the horizontal and vertical intercepts between any two parallels, every corresponding dimension of the proposed plan was immediately determined. The lines NP and QR , for instance, gave the width and depth of the living room when measured to the same scale as FE . In some such manner as used in the foregoing two examples, any so-called "no-scale" drawing or reproduction can be quickly scaled by establishing, as has been variously shown, any one desired or controlling dimension of same. Obviously, the same process is applicable to the enlargement or reduction of drawings to any size desired.

Now, before proceeding to other interesting, though

less familiar and possibly heretofore unheard of, uses of the drafting-scale that are herein, and in Part 11, to be portrayed, it will be well to tarry somewhat and first consider the apparently simple process of laying off scale measurement, as well as the equally simple and commonly-used "carpenteresque" method of bisecting straight lines.

The graduation marks of the drafting-scale are perpendicular to its direction. Conceive, then, each individual mark as being contained within an invisible plane of which the graduation mark, prolonged somewhat in each direction, would be the *plan*. Such planes will be perpendicular to the plane of the paper upon which the scale is placed. Then, in transferring a scale value to the paper, bring your line of vision and the axis of the transferring instrument—whether the instrument be a pencil or *one* leg of the dividers—within this imaginary plane. Observe, however, that this does not mean that either your line of sight or the transferring instrument must, necessarily, be perpendicular, but only that both should be centered within the imaginary perpendicular plane which contains the graduation mark in scrutiny. The ideal condition, at the moment of recording the mark, is, of course, that the instrument be *practically* perpendicular to the paper and that the line of sight be inclined backward from the perpendicular only to an extent that will make visible the exact registration of the instrument and the graduation mark. By forming the above simple conception of the imaginary planes within which all operations of the transfer should be made, and by making the transfer with the marker held snug to the scale's edge, you will speedily acquire the *habit* of laying off scale measurement in the most exact manner possible, and no thought about the matter will thereafter be required.

Always, in laying out scale working drawings, keep them "to scale" as closely as is possible. In no other way can you rest assured that they will "work out" on the job, and in no other way can you form a true idea of the relative size and disposition of the various parts. Moreover, a drawing made accurately to scale is an absolute check on any serious miscalculation that might otherwise be made in figured dimensioning.

Architectural drafting-scales possess one peculiarity that is not found in any other type of measuring instrument; namely, that consecutive measurements or readings cannot be made therewith or therefrom, except in foot units, without shifting the instrument for each successive operation. To prevent cumulative errors in the laying off of consecutive distances, each successive point should be located by measurement dating from the initial point of measurement rather than from the immediately preceding one. In other words, where a chain of odd measurements must be laid off, always *add in* the one to follow, so that each measurement becomes the *total* measurement to the point recorded. If the total distance exceeds the limit of the scale, establish a *second datum* point at the scale's limit and begin again. For example, suppose the following consecutive but irregular measurements, totaling 55' 0", must be accurately laid off at a scale

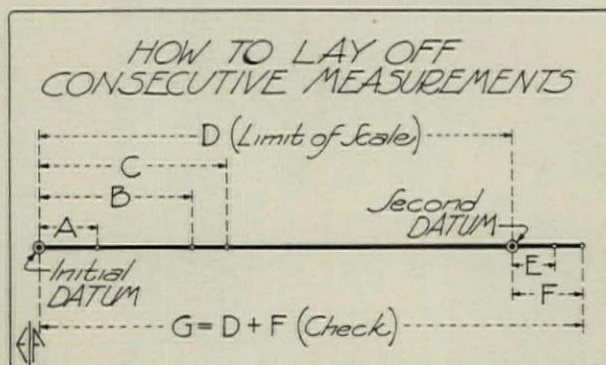


FIGURE 92

of, say, $\frac{1}{4}" = 1' 0"$, the limit of the scale being 48' 0": 5' 11", 9' 7½", 3' 6", 33' 3" and 2' 8½". On a scratch-pad, perform the following calculations concomitant with the laying-out process typified at reduced scale in Figure 92:—

Lay off	5' 11"	A
Add	9' 7½"	
Lay off	15' 6½"	B
Add	3' 6"	
Lay off	19' 0½"	C
Add	33' 3"	
	52' 3½"	
Lay off	48' 0"	D
Lay off	4' 3½"	E
Add	2' 8½"	
Lay off	7' 0"	F
Add	48' 0"	D
Check	55' 0"	G

When, however, consecutive measurement takes the form of *equal spacing*, more direct, but no less precise, methods are available: all of which will be exemplified herein and in Part 11.

At Diagram "1," of Figure 93, I have recorded a method of linear bisection that antedates geometry and precedes the "rope doubling" method of the Egyptians. It is prehistoric. It was invented by the first human being who scratched a series of equally-spaced marks on a tree-branch and called it a measuring-stick. Millions of years later, a carpenter reaches for his two-foot rule: From each end of a two-by-four he marks off equal distances such that the central gap, *AB*, remaining, is less than the length of his rule. If exceedingly precise, he continues the cutting-down process by yet smaller but equal distances until the marks at *A* and *B* can be encompassed in a single glance. Then, exercising the unerring judgment of eye that is his heritage, he adjusts his rule to this mid-gap in such a manner that the two infinitesimal distances, *X*, appear equal, and so that these two distances, plus the intervening gap, just equal any definitely halvable measure on his thus-placed rule. And this measure, which happens to be the distance of $3\frac{5}{8}"$ in the Diagram,

BISECTION "BY EYE"

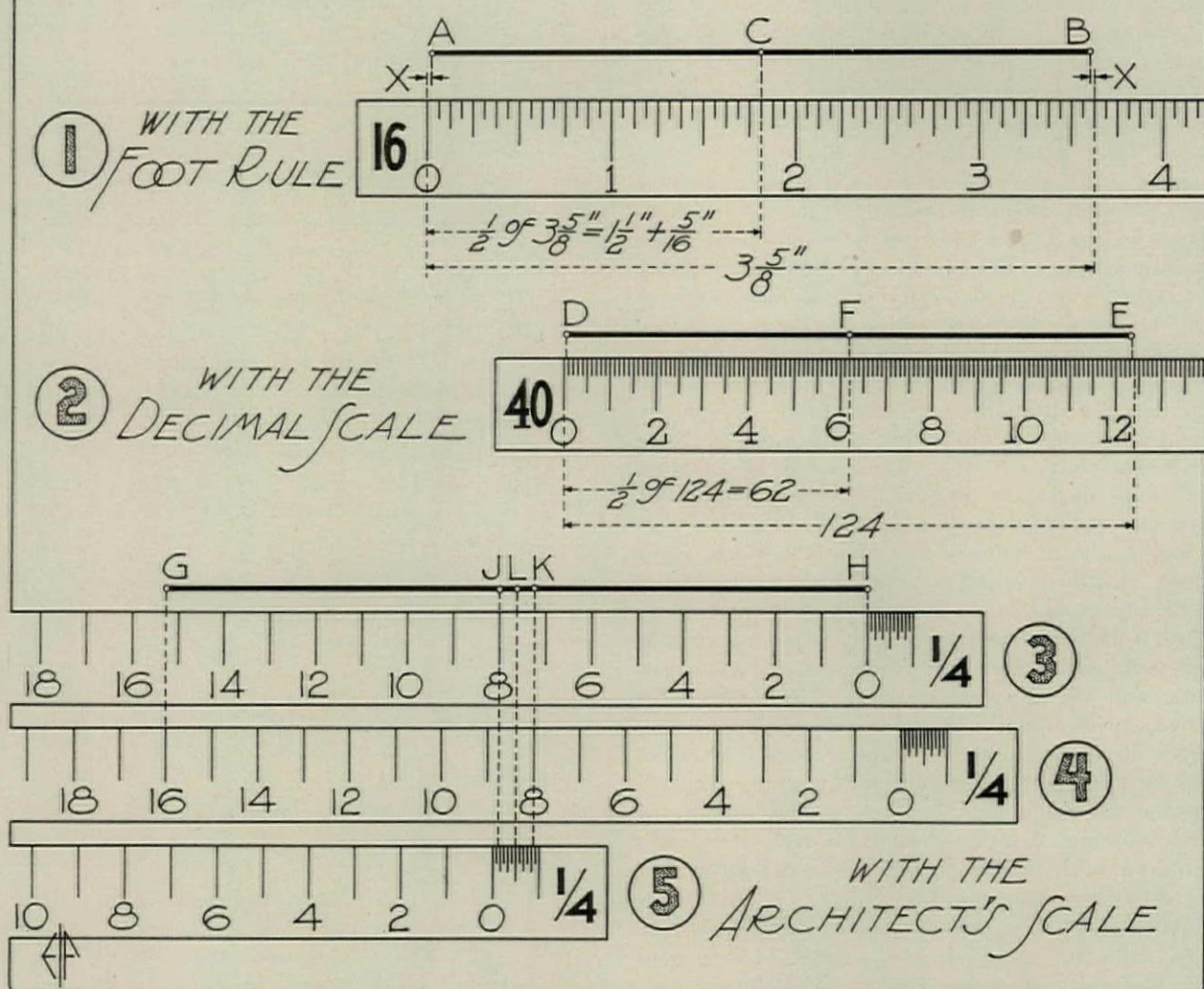


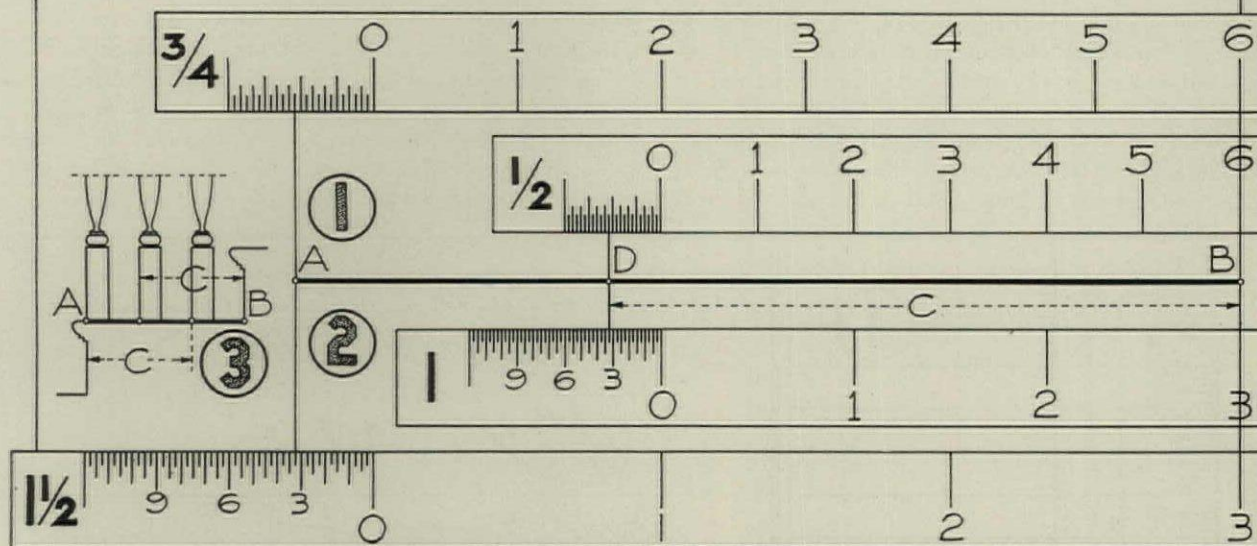
FIGURE 93

he mentally halves in the manner indicated, so locating point *C*. He has found the center of that two-by-four. He has "bisected" the distance between its ends. He has used the identical method invented by a calculating barbarian long before the world had cut its first wisdom tooth. And all the piled-up geometries of the intervening ages can not prove him wrong!

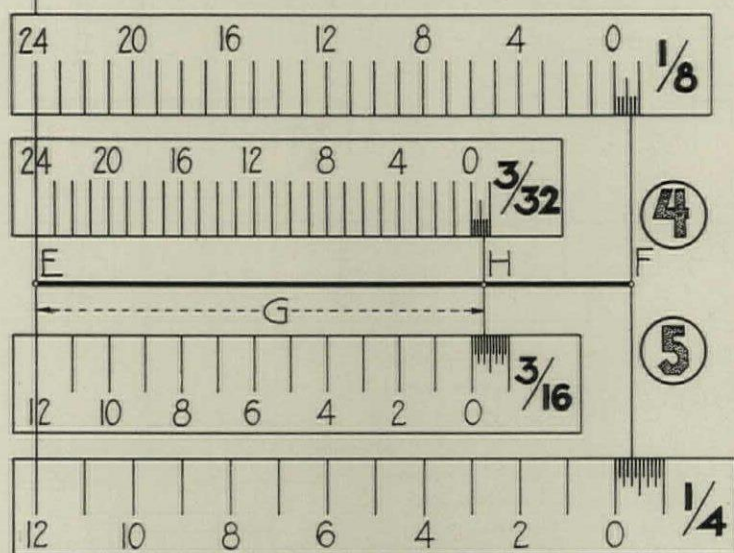
I have designated the above universal and natural manner of bisection as "carpenteresque." But it is just as assuredly *draftsmanesque*—probably more so. It remains the commonest and most-used method of the drafting-room, and will, no doubt, *always* remain so. It defies mathematics and laughs at geometry. Yet, with a very little practice, and by employing a finely-divided *scale*, it yields results so exact that exact methods cannot detect its inexactness. So there you are! The variation suggested at Diagram "2," Figure 93, requires no comment: it makes use of a "measuring-stick" graduated to fortieths of an inch instead of sixteenths. The variation progressively shown at Diagrams "3," "4," and "5" utilizes the $\frac{1}{4}$ " draft-

ing-scale unit to bisect the gap *JK*, thus reducing the distances that are estimated by eye (the distances *X* of Diagram "1") to less than half of $\frac{1}{48}$ th of an actual inch. In this depiction, as well as in the others of this Figure, the scales are, of course, supposed to be in contact with the line to be bisected: they are shown apart therefrom for clarity. At Diagram "3," let *GH* be the line to be divided into two equal parts, or merely such a distance without a line. Place the zero mark of the $\frac{1}{4}$ " scale at either extreme point, say *H*. At the other extreme, note the nearest *even* number of units—that is, the unit designation nearest to *G* that can be divided by two and still yield a *whole* unit. It's 16, in this case. Half of 16 is 8. So, make a mark at 8, which is point *J*, on the line. Then, as at Diagram "4," move the scale so that 16 registers with *G*. Make another mark at 8, which is point *K*, on the line. Now, as at Diagram "5," move the *divided* unit of the scale to the gap *JK* and bisect it "by eye" at *L*, in true "carpenteresque" manner as before recorded. Now check the result by any one

DIRECT DIVISION BY USE OF PROPORTIONAL SCALES



THIRD POINTS



QUARTER POINTS

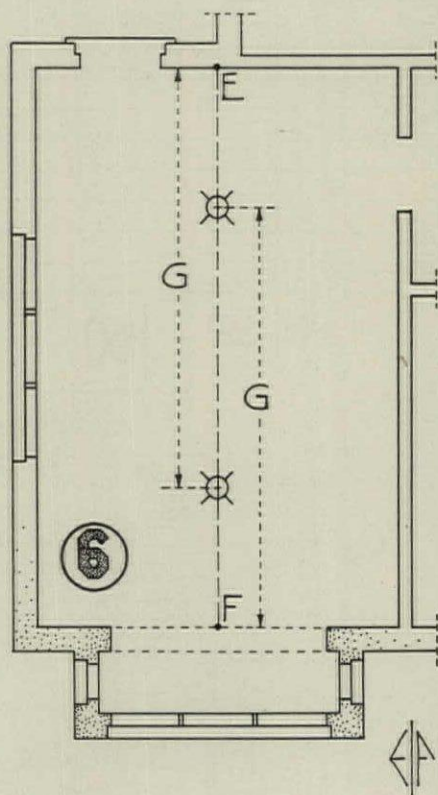


FIGURE 94

of the various geometric methods made plain in foregoing Parts of *this* geometry. If the results coincide—it may be an accident. Try again. Try several times. If the results continue to agree, you may be qualified to abandon the geometric regime in favor of direct bisection “by eye.” If the results vary—stick to geometry until your eye and judgment become reliable.

Of course, any line that scales, or that is laid out, to a *whole* number of inches, can be directly and accurately divided by two by laying off, from either end of the line, *the same length of line at one-half the scale.* If a distance, say *AB*, reads exactly 11' 7" at $\frac{3}{4}$ " scale, lay off the *same distance*, either from *A* or *B*, at $\frac{3}{8}$ " scale, and the original distance becomes bisected.

But if the distance to be thus divided reads to *fractions* of an inch, this method is no better than the “eye ball” methods of Figure 93, since there is no scale unit that is half the scale unit of any working scale and, at the same time, that is graduated to the same degree of fineness. Suppose, for instance, that the distance to be bisected reads 11' 7½" at $\frac{3}{4}$ " scale. The $\frac{3}{4}$ " scale unit contains ½" graduations. But the $\frac{3}{8}$ " scale unit usually does not. Hence, as intimated, in laying off the same distance with the reduced scale, the ½" must be estimated. A reversal of this process, however, always yields exact results; that is to say, any definitely-to-scale distance may always be doubled or tripled or quadrupled by laying off the *same* distance

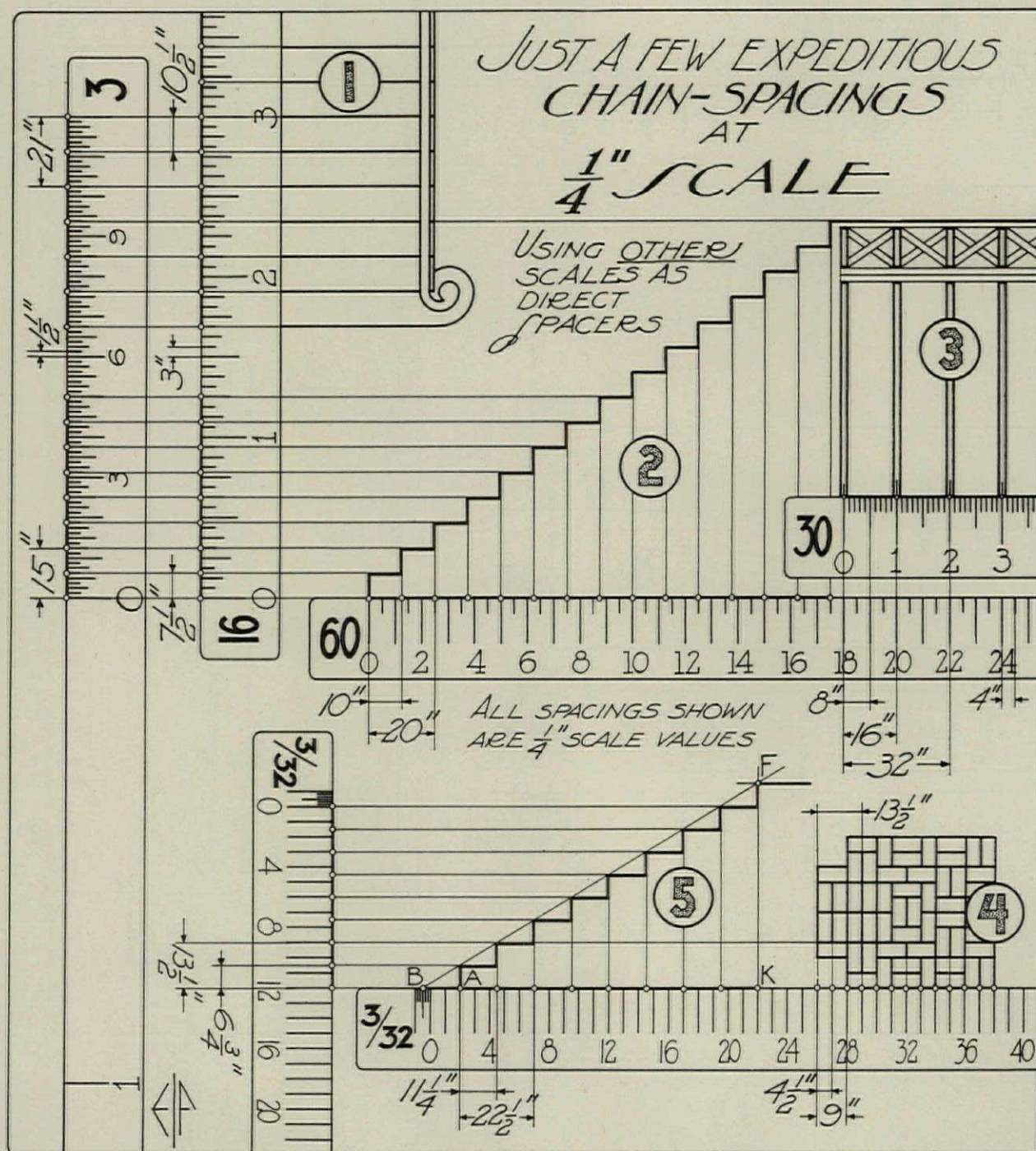


FIGURE 95

at a similarly increased scale, provided such a scale is available. Also, the *radius* of any drawn circle, or semicircular arch, can readily and quickly be determined by taking a *diameter-reading* at twice the designated scale of the drawing.

When working either at $\frac{3}{4}$ " scale or at $1\frac{1}{2}$ " scale, direct linear *trisection* can be precisely accomplished as illustrated by Diagrams "1" and "2" of Figure 94. The line *AB* is $6' 6\frac{1}{2}"$ long at $\frac{3}{4}$ " scale. Lay off this same distance, which is *C*, at $\frac{1}{2}$ " scale. Then *AD*, remaining, is exactly one-third of *AB*. The other third-point can be gotten by laying off *C* from *A* toward *B*. But, you say, why not use the $\frac{1}{4}$ " scale for trisecting $\frac{3}{4}$ " scale lines? Answer: the $\frac{1}{4}$ " scale unit is not graduated to the fineness of the $\frac{3}{4}$ " scale unit—but the $\frac{1}{2}$ " scale unit is. In the same manner, as shown at Diagram "2," a $1\frac{1}{2}$ " scale distance can be trisected with the 1" scale. Diagram "3" depicts but one of the many practical and expeditious applications of the above knowledge—which is simple enough, *after your attention is directed to it!* Let the tread *AB* measure, say, $11\frac{3}{4}"$ at $1\frac{1}{2}$ " scale. Lay off *C*, also $11\frac{3}{4}"$, but at 1" scale. This immediately gives the third-point spacing for the balusters, as shown. But say you are laying out a detail similar to that at Diagram "3" full size. All right, I shall assume that you have fixed the tread *AB* as the same distance of $11\frac{3}{4}"$, but this time by *foot-rule* measurement. Now measure *AB* at $1\frac{1}{2}$ " scale. You read off exactly $7' 10"$ at that scale. Make *C* equal $7' 10"$ at 1" scale. Presto! —the exact third-point spacings of the balusters—as before.

When working either at $\frac{1}{8}$ " scale or at $\frac{1}{4}$ " scale, direct *quarter-point division* can be accomplished by use of the $\frac{3}{32}$ " scale or the $\frac{3}{16}$ " scale, respectively, as made evident at Diagrams "4" and "5" of Figure 94. This is based on the same principle of the linear proportionality of drafting-scales exemplified immediately above. Diagram "6" illustrates but a single common instance of quarter-point division—though it can be applied in numerous other cases in which a distance must be divided into three parts such that the central part is twice as great as each end part. In the case at hand, make *G* equal *EF*, but at *three-quarters the scale of the drawing*. Then the distance between the outlets is exactly twice the distance of each from the nearer wall—which is as it should be to result in the most equable distribution of light under the given conditions.

The direct use of the drafting-scale as a *spacing device* is seldom, if ever, fully appreciated. But this usage is one of the greatest expedients imaginable. In this respect, as has been mentioned in Part 9, the possession of the full range of both the architectural and decimal scales, as contained in the two triangular instruments described and illustrated in the Part referred to, is an advantage that no modern draftsman can afford to overlook—as you shall presently see.

The *most* direct, of the three direct methods of spacing or "dividing" herein to be made known, is *chain-spacing*. Only a very few of the almost unlimited number of $\frac{1}{4}$ " scale chain-spacing values

available are submitted in the five diagrams of Figure 95. It will, no doubt, come as a welcome surprise to most draftsmen that the every-day-occurring instances of spacing therein indicated can be done *directly* with the scale rather than by the less direct, but more general and time-honored, process of graphical subdivision. Figure 95 is of sufficient clarity and eloquence to require but little explanatory discussion. The accuracy of this direct method of spacing is beyond question: the scale used as a spacer remains stationary during the entire extent of the spacing. No accumulation of error is possible. The spacing-interval is an exact sub-multiple of the total distance encompassed. In some cases, true enough, the half-unit of the spacing-scale must be estimated, or interpolated "by eye"; this occurs when the scale noted as the spacer does not contain such chain-graduations. Observe, however, that the bisecting interpolation *always* occurs between two close-together marks (never more than $\frac{3}{32}"$ apart, and more often much less), and so can be accurately and *quickly* done. Furthermore, even if a slight error is here made, it is at once corrected, insofar as the next succeeding point of distance is concerned, for, in all such cases, every *second* spacing "hits" full on the mark. Hence, as before noted, no *accumulation* of error is possible. Now, as a general instruction applicable to all forms of direct spacing, let your *mental* calculation of the particular spacing-interval in scrutiny, be in terms of the *accented* intervals of the scale. For example: you want to space off a series of $10\frac{1}{2}"$ stair treads on a $\frac{1}{4}"$ scale working drawing. Figure 95, Diagram "1," shows that this spacing-interval is equivalent to $\frac{7}{8}"$ on the 3" scale. But do not *think* of this as 7 eighths, but as $3\frac{1}{2}$ quarters. Because of the manner in which the higher graduations are accented by correspondingly longer marks, the eye can readily "jump" $3\frac{1}{2}$ quarters, whereas 7 eighths would have to be consciously counted. Practice in spacing will make this "trick" appreciated. Finally, never think of another scale equivalent as being *another scale value*, but only as the *space* equal to the drawing-scale value. In other words, in the case previously cited, don't think of that $\frac{7}{8}"$, on the 3" scale, as $\frac{7}{8}"$, but as the $\frac{1}{4}"$ scale value of $10\frac{1}{2}"$. In the same manner, think of $2\frac{1}{2}$ sixteenths on the *foot rule* as being the $\frac{1}{4}"$ scale value of $7\frac{1}{2}"$. The upshot of the whole matter is this: when you use *another* scale as a *spacer*, it *ceases* to be a *scale*. Of course, as the spacing-table herein-after given shows, the scale with which the drawing is being made can often be used as the spacer also, but the reverse is more often the case. You may then wonder why a "chain-divided" architectural scale can not be used for *all* spacings required. Such scales are findable—if you enjoy extensive hunting. As their name implies, *every* foot-unit thereon is divided into *inches*—but, note *this*: it's the feet, not the inches, that carry the continuous numbering. And there are twelve inches to the foot—not ten. In other words, such scales are *chain-divided*, all right, but not *chain-numbered*. So your wondering has borne good fruit: namely, a "chain-divided" scale of feet-and-inches

is the most confusing and useless drafting instrument that was ever "offered" for sale. The same statement, however, as you will become aware of, is in no sense true of the chain-divided *decimal* scale, since here the numbering is in terms of the "links" of the chain—not in terms of every *twelfth* link. Now I can proceed without further detour.

Figure 95, Diagram "3," calls particular attention to the little-known fact that the decimal scales of 30 and 60 parts to the inch are directly available as spacers for floor and ceiling joists, studding and rafters, on the framing plans and elevations of timber-constructed structures, as well as on the usual cross-sectional views of such buildings. I have repeatedly known draftsmen to construct, tediously and thoughtlessly, paper-strip after paper-strip of "framing-spacing-scales" when the thing they sought was right before their eyes, on the decimal scale, waiting to be *used*—and they knew it not! No one had ever told them. So—I'm tellin' you! Now you know.

Again, I doubt if any draftsman who here finds it so, has before been aware of the facts that 10" treads can be directly spaced off the decimal scale, and that the more or less common story-height of 9' 0" can be exactly and speedily divided into 15 stair risers, at *any* scale, by the direct application of the decimal scale thereto. Figure 96 calls attention to the latter curious parallel between the architectural scale of $\frac{1}{4}"$ to the foot and the decimal scale of 20 parts to the inch. It is a remarkable coincidence, and would scarcely be *accidentally* discovered. Here, again, by remembering the linear relationship of the various drafting-scales, even this *outré* but obviously *unavoidable* quotient involving a *fifth* of an inch, can be chain-spaced or laid off at *any* scale by use of the following equivalents:

At $\frac{1}{8}"$ scale, $7\text{--}1/5" = 3/40$ ths on the decimal scale.
 At $\frac{1}{4}"$ scale, $7\text{--}1/5" = 3/20$ ths on the decimal scale.
 At $\frac{3}{4}"$ scale, $7\text{--}1/5" = 9/20$ ths on the decimal scale.

At $1\frac{1}{2}"$ scale, $7\text{--}1/5" = 9/10$ ths on the decimal scale.
 At 3" scale, $7\text{--}1/5" = 18/10$ ths on the decimal scale.
 Full size, $7\text{--}1/5" = 72/10$ ths on the decimal scale.
 And 15 risers, at $7\frac{1}{5}"$ each, total 9' 0".

At Diagrams "2" and "5," Figure 95, I have shown instances in which both the stair treads *and* the risers work out to available direct spacings. This, however, is more illustrative of the range of obtainable spacings than of actual conditions. Story heights are not often fixed by multiplying a predetermined definite height of riser by the number of risers desired—though there is no reason why this should *not* be done if an ideally-proportioned stairway is worth considering. The fact that it is *not* commonly done, probably accounts for the fact that stairway proportions are *not* commonly ideal. Howbeit: the story-height is almost invariably the predetermined factor: the riser-height being left to work out as it may. This *usually* results in the riser-height becoming an odd fractional dimension that can neither be laid off with the scale nor with any other instrument to which the scale is related. This is *one* case occurring in architectural drafting in which a dimension must *necessarily* be an aliquot part of the *story-height* rather than a recognizable interval on a "white man's rule." Here are encountered such queer-looking figures as $7\text{--}1/17"$, $6\text{--}6/19"$, or $5\text{--}5/7"$, as you will see if you set down a story-height of 10' 0" and divide it, respectively, by 14, 17, or 19, any one of which divisors might be, and often *is*, the number of stair risers making up that particular story-height. Certainly, such values can not be directly spaced with the scale. But they *can* be determined directly, accurately and quickly, from the laid-off spacing of the *treads*. Refer to Diagram "5" of Figure 95. The steps there shown have a tread of $11\frac{1}{4}"$ and a riser of $6\frac{3}{4}"$. But suppose we disregard the height of the riser, whatever it may be, and lay out the steps from no other data except the *width* of the

tread and the *number* of risers. In the case shown, the tread-width is $11\frac{1}{4}"$ and the required number of risers is assumed as 9. Space off, directly as shown, a number of treads *equaling* the number of risers. This, of course, makes the first space, *BA*, an imaginary tread *on the floor*, since there is always one less tread than there are risers. Project *K* to the upper level at *F*. Connect *FB*. That's all the "construction" you need to put the whole flight into elevation or section, whichever it may be. For the intersections with *FB*, of the projected verticals from the tread-spacing, fix not

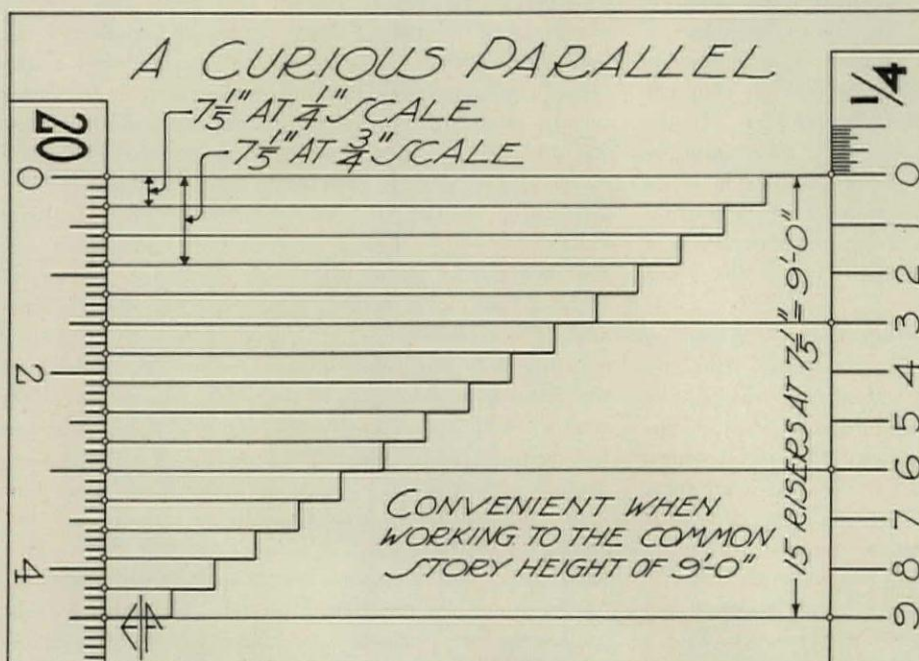


FIGURE 96

only the *treads* but, perforce, the *risers*! So that's that. And in Part 11 you will discover another speedy method of laying out stairs where the conditions are such that *neither* the treads nor the risers can be spaced by any of the direct methods in this Part being exemplified.

Now then, if "chain-spacing" will not yield the value you require, then the *ratchet* method may produce it, for, by this method, another almost unlimited range of values becomes directly available. Figure 97 illustrates the general method, applicable with any "open-divided" or architectural scale. Point *K* is datum. Say eleven-inch spacing is required, as at Diagram "1." Eleven inches from one foot-unit leaves 1". And 1" will exactly *space out* the divided foot unit: It is an *aliquot* part of 12. Wherefore, 11" can be ratchet-spaced, but 7" or 5" can not. But 11" is the spacing you desire. All right: here goes. Place the 11" mark at *K*. Mark zero, 11" from *K*. Subtract *another* inch from the divided unit by moving the 10" mark to *K*. Then mark 1, which is 11" from the last mark because it is twice 11" from *K*. Now, you're getting the *idea*. So, in that manner, always dating from *K*, mark each succeeding unit, 2, 3, 4, 5, etc., until the inch-marks of the divided unit are no more. Then, ratchet back to the original 11" mark at *K*, in *one jump* this time, and continue on your way, subtracting, as before, 1" from the divided scale-unit each time by merely moving the scale 1" each time in the *opposite* direction of spacing, and always making *K* the one point of registry. If you want to space 23", proceed exactly in the same manner, but using *two* foot-units as the *marking* interval, that is, mark *this* off as follows: 2' minus 1", 4' minus 2", 6' minus 3", etc., etc. Similarly, any number of units may be used as "foot-units," and the difference between this and the required spacing-interval subtracted successively from the one divided unit of the scale, as shown. This method of spacing is almost as fast as chain-spacing and, like the

latter, can not develop any errors of accumulation. By remembering that *all* the scales shown in the Diagram are, in reality, but the *one* scale that is being used, and that this one scale is, in reality, always snug to the line, the "ratchet" machinery can easily be "put back together again" from the taken-apart pieces arrayed in Figure 97. Another variation is shown at Diagram "2," which is just the reverse of Diagram "1"; that is, it is done by *adding the differential increment* instead of *subtracting the differential decrement*. If you know what *that* means, it will be entirely unnecessary for you to refer to Diagram "2" to learn how to do thirteen-inch spacing—in fact it will be entirely unnecessary for you to learn spacing at *all*: you should *hire* it done, and henceforth devote your prehensile profundity to a lucid explanation of the Fourth or Fifth Dimension which, as you are qualifiedly aware of, is the verbal extraction of the mathematically-inextractable Fourth or Fifth Root of a Cubic Equation. Howbeit: at Diagram "3," I proceed
(Text continued on page 342)

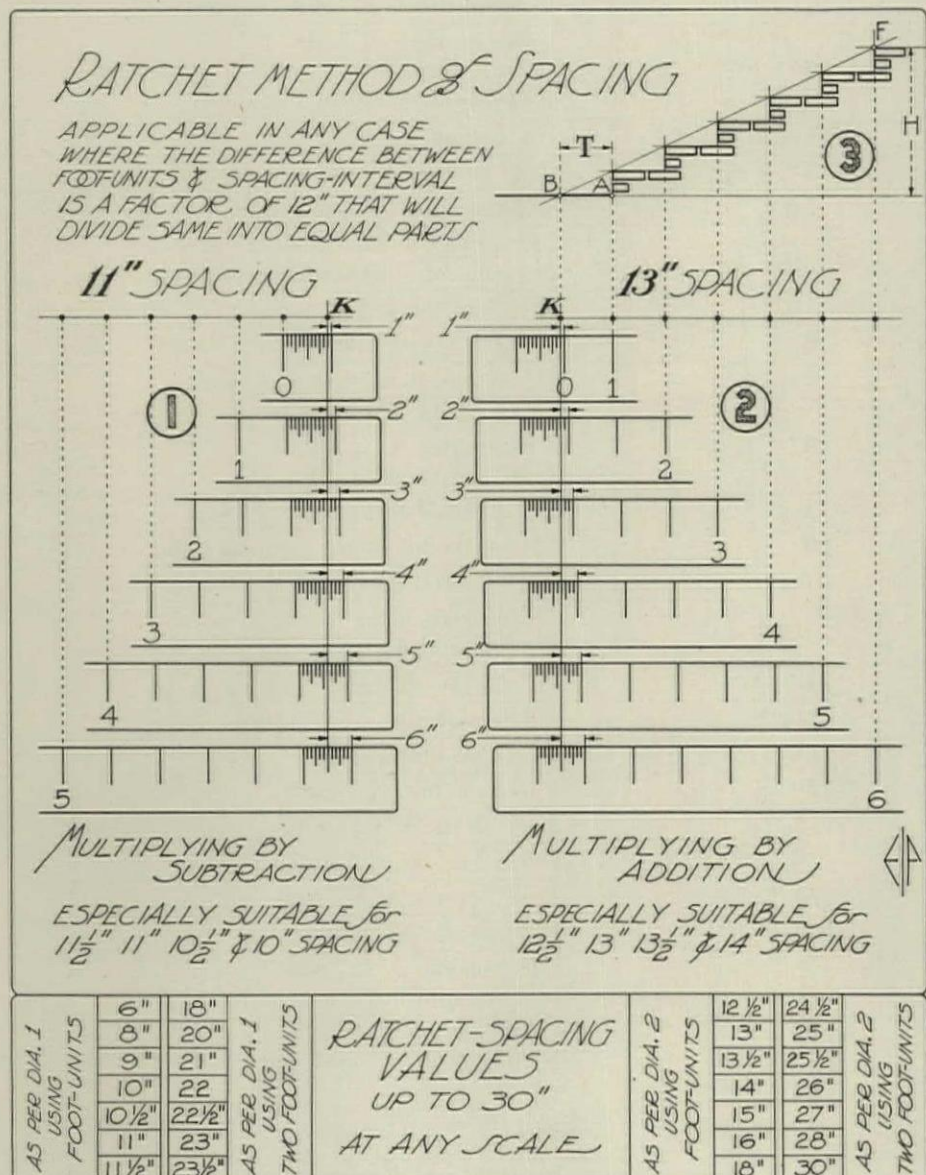


FIGURE 97

PENCIL POINTS FOR MAY, 1930

TABLE 2—SPACING VALUES AT $\frac{1}{4}$ " SCALE

Spacing Interval	Equivalent Value and Where Found	Method of Spacing
$\frac{3}{4}$ "	$\frac{1}{2}$ of $\frac{1}{8}$ " on the 3" scale	Chain
1"	$\frac{1}{4}$ " on the 1" scale	Combination
$1\frac{1}{8}$ "	$1\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Combination
$1\frac{1}{2}$ "	$\frac{1}{8}$ " on the 3" scale $\frac{1}{2}$ of $\frac{1}{16}$ " on the foot rule	Chain
2"	$\frac{1}{2}$ of $\frac{5}{60}$ ths on the decimal scale	Chain
$2\frac{1}{4}$ "	$\frac{1}{2}$ of 1 foot on the $\frac{3}{32}$ " scale	Chain
3"	$\frac{1}{16}$ " on the foot rule	Chain
$3\frac{3}{8}$ "	9" on the $\frac{3}{32}$ " scale	Ratchet
$3\frac{3}{4}$ "	$2\frac{1}{2}$ eighth-inches on the 3" scale	Chain
4"	$\frac{5}{60}$ ths on the decimal scale	Chain
$4\frac{1}{2}$ "	1 foot on the $\frac{3}{32}$ " scale $1\frac{1}{2}$ sixteenth-inches on the foot rule	Chain
5"	10" on the $\frac{1}{8}$ " scale	Ratchet
$5\frac{1}{4}$ "	1' 2" on the $\frac{3}{32}$ " scale	Ratchet
$5\frac{5}{8}$ "	1' 3" on the $\frac{3}{32}$ " scale	Ratchet
6"	1 foot on the $\frac{1}{8}$ " scale $\frac{1}{8}$ " on the foot rule $\frac{5}{40}$ ths on the decimal scale	Chain
$6\frac{3}{4}$ "	$1\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale	Chain
7"	1' 2" on the $\frac{1}{8}$ " scale	Ratchet
7-1/5"	$\frac{3}{20}$ ths on the decimal scale	Chain
$7\frac{1}{2}$ "	$2\frac{1}{2}$ quarter-inches on the 3" scale $2\frac{1}{2}$ sixteenth-inches on the foot rule	Chain
$7\frac{7}{8}$ "	$10\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Ratchet
8"	$\frac{5}{30}$ ths or $\frac{10}{60}$ ths on the decimal scale	Chain
$8\frac{1}{4}$ "	$5\frac{1}{2}$ eighth-inches on the 3" scale	Chain
9"	1 foot on the $\frac{3}{16}$ " scale 2 feet on the $\frac{3}{32}$ " scale $\frac{3}{16}$ " on the foot rule	Chain
$9\frac{3}{4}$ "	$6\frac{1}{2}$ eighth-inches on the 3" scale	Chain
10"	$12\frac{1}{2}$ sixtieths on the decimal scale	Chain
$10\frac{1}{8}$ "	1' $1\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Ratchet
$10\frac{1}{2}$ "	$3\frac{1}{2}$ quarter-inches on the 3" scale $3\frac{1}{2}$ sixteenth-inches on the foot rule	Chain
11"	11" on the $\frac{1}{4}$ " scale	Ratchet
$11\frac{1}{4}$ "	$2\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale	Chain
$11\frac{1}{2}$ "	$11\frac{1}{2}$ " on the $\frac{1}{4}$ " scale	Ratchet
12"	1 foot on the $\frac{1}{4}$ " scale	Chain
$12\frac{3}{8}$ "	2' 9" on the $\frac{3}{32}$ " scale	Ratchet
$12\frac{1}{2}$ "	1' $0\frac{1}{2}$ " on the $\frac{1}{4}$ " scale	Ratchet
$12\frac{3}{4}$ "	2' 10" on the $\frac{3}{32}$ " scale	Ratchet
13"	1' 1" on the $\frac{1}{4}$ " scale	Ratchet
$13\frac{1}{2}$ "	3 feet on the $\frac{3}{32}$ " scale $4\frac{1}{2}$ sixteenth-inches on the foot rule	Chain
14"	1' 2" on the $\frac{1}{4}$ " scale	Ratchet
$14\frac{1}{4}$ "	3' 2" on the $\frac{3}{32}$ " scale	Ratchet
15"	$2\frac{1}{2}$ eighth-inches on the foot rule	Chain
$15\frac{3}{4}$ "	$3\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale	Chain
16"	$\frac{10}{30}$ ths or $\frac{20}{60}$ ths on the decimal scale	Chain

TABLE 2—SPACING VALUES AT $\frac{1}{4}$ " SCALE

Spacing Interval	Equivalent Value and Where Found	Method of Spacing
16 $\frac{1}{2}$ "	5 $\frac{1}{2}$ quarter-inches on the 3" scale 5 $\frac{1}{2}$ sixteenths on the foot rule	Chain
16 $\frac{7}{8}$ "	1' 10 $\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Ratchet
17"	2' 10" on the $\frac{1}{8}$ " scale	Ratchet
17 $\frac{1}{4}$ "	11 $\frac{1}{2}$ " on the $\frac{3}{8}$ " scale	Ratchet
18"	1 foot on the $\frac{3}{8}$ " scale 3 feet on the $\frac{1}{8}$ " scale $\frac{3}{8}$ " on the foot rule 15/40ths on the decimal scale	Chain
18 $\frac{3}{4}$ "	1' 0 $\frac{1}{2}$ " on the $\frac{3}{8}$ " scale	Ratchet
19"	3' 2" on the $\frac{1}{8}$ " scale	Ratchet
19 $\frac{1}{8}$ "	2' 1 $\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Ratchet
19 $\frac{1}{2}$ "	6 $\frac{1}{2}$ quarter-inches on the 3" scale 6 $\frac{1}{2}$ sixteenth-inches on the foot rule	Chain
20"	25/60ths on the decimal scale	Chain
20 $\frac{1}{4}$ "	4 $\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale	Chain
21"	3 $\frac{1}{2}$ eighth-inches on the foot rule	Chain
21 $\frac{3}{8}$ "	4' 9" on the $\frac{3}{32}$ " scale	Ratchet
21 $\frac{3}{4}$ "	4' 10" on the $\frac{3}{32}$ " scale	Ratchet
22"	11" on the $\frac{1}{2}$ " scale	Ratchet
22 $\frac{1}{2}$ "	5 feet on the $\frac{3}{32}$ " scale	Chain
23"	11 $\frac{1}{2}$ " on the $\frac{1}{2}$ " scale	Ratchet
23 $\frac{1}{4}$ "	5' 2" on the $\frac{3}{32}$ " scale	Ratchet
23 $\frac{1}{2}$ "	11 $\frac{3}{4}$ " on the $\frac{1}{2}$ " scale	Ratchet
24"	2 feet on the $\frac{1}{4}$ " scale	Chain
24 $\frac{1}{2}$ "	1' 0 $\frac{1}{4}$ " on the $\frac{1}{2}$ " scale	Ratchet
24 $\frac{3}{4}$ "	5 $\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale	Chain
25"	1' 0 $\frac{1}{2}$ " on the $\frac{1}{2}$ " scale	Ratchet
25 $\frac{1}{2}$ "	1' 0 $\frac{3}{4}$ " on the $\frac{1}{2}$ " scale	Ratchet
25 $\frac{7}{8}$ "	2' 10 $\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Ratchet
26"	1' 1" on the $\frac{1}{2}$ " scale	Ratchet
26 $\frac{1}{4}$ "	2' 11" on the $\frac{3}{16}$ " scale	Ratchet
27"	3 feet on the $\frac{3}{16}$ " scale 4 $\frac{1}{2}$ eighth-inches on the foot rule	Chain
27 $\frac{3}{4}$ "	3' 1" on the $\frac{3}{16}$ " scale	Ratchet
28"	1' 2" on the $\frac{1}{2}$ " scale	Ratchet
28 $\frac{1}{8}$ "	3' 1 $\frac{1}{2}$ " on the $\frac{3}{16}$ " scale	Ratchet
28 $\frac{1}{2}$ "	3' 2" on the $\frac{3}{16}$ " scale	Ratchet
29"	4' 10" on the $\frac{1}{8}$ " scale	Ratchet
29 $\frac{1}{4}$ "	6 $\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale	Chain
30"	5 feet on the $\frac{1}{8}$ " scale 2 $\frac{1}{2}$ quarter-inches on the foot rule 25/40ths on the decimal scale	Chain
30 $\frac{3}{8}$ "	6' 9" on the $\frac{3}{32}$ " scale	Ratchet
30 $\frac{3}{4}$ "	6' 10" on the $\frac{3}{32}$ " scale	Ratchet
31"	5' 2" on the $\frac{1}{8}$ " scale	Ratchet
31 $\frac{1}{2}$ "	7 feet on the $\frac{3}{32}$ " scale	Chain
32"	20/30ths or 40/60ths on the decimal scale	Chain

See Figures 95 and 96 for chain-spacing at $\frac{1}{4}$ " scale.

See Figure 97 for general ratchet-spacing method.

See Figure 98 for general combination method.

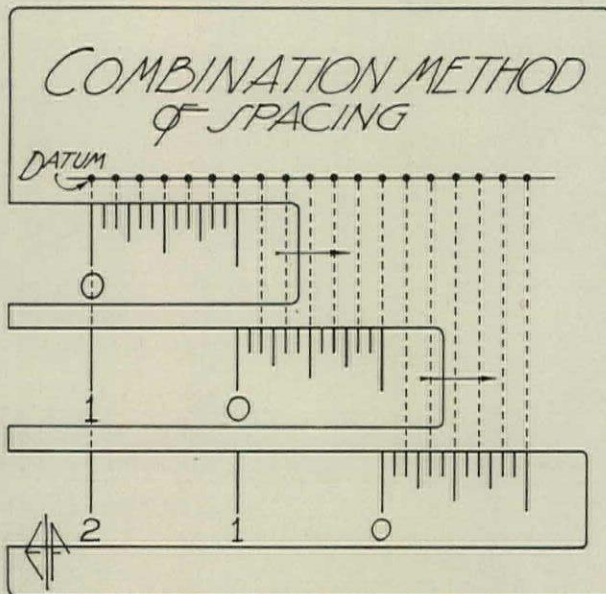


FIGURE 98

on my accustomed way by indicating how your knowledge of—differential increments—can also be applied to the laying out of a flight of brick steps. Thirteen inches is *brick* spacing, no doubt. The first space of this kind appears on the ground, or on the walk, or on the edge view of whatever horizontal plane it is from which the first riser aspires to verticality. It's *AB*. Draw *BF*. Project the spacing to *BF*, which materializes the risers. Project the treads from *BF*, and the deed is done. But you'd better make sure that *H* will "work out" for *brick* spacing too—not with the scale; with the bricklayer!

Figure 98 illustrates a "combination" method of direct spacing (of which there are many varieties, but all the same in principle) that will occasionally yield a spacing-interval not possible or convenient by the other two methods. This combination method, which is progressively diagrammed in the Figure, is general within its limits. It is applicable, however, only to those few spacings that will divide a scale unit into two or more equal parts, that is, into aliquot parts. Hence: the divided unit, after being spaced out, is moved ahead so that the next unit graduation registers with datum. Space out. Repeat. As far as you like. In this, as well as in ratchet-spacing, the scale used as a spacer may sometimes have to be turned around, end for end, and placed on the other side of the line with the figures upside down, in order to make the spacing travel in the direction you want it to travel. Of course, I am referring either to the multiple flat scale or to the triangular scale: the individual flat scales of the two-way-reading type illustrated at Diagram "E" of Figure 83, in Part 9, are not subject to this requirement. Neither do they yield a desirably wide range of spacing-values.

TABLE 2 (pages 340-341), or a facsimile of same, should hang on the walls of every drafting-room, even as it has been thumb-tacked to the data-covered walls of the author's drafting-room since, years ago, he first "took thought about the matter" and, forthwith, de-

liberately and studiously compiled same for the avowed purpose of *saving time*. It contains 81 one-quarter-inch-scale spacing-values, ranging from $\frac{3}{4}$ " up to 32", inclusive, tabulated for instant reference. A mere glance will suffice to pick out any available spacing, inform you which scale to use as a spacer, and tell you the method of spacing it. All spacing given in this tabulation can be done *directly* with the scale designated and by one or another of the three exact and simple methods heretofore demonstrated. By far the most used scale in the drafting-room is the scale of $\frac{1}{4}$ " = 1' 0", familiarly known and referred to as "quarter-inch scale." It is the scale at which most of the general working drawings are made in American practice. Hence, this scale was adopted as the basis of TABLE 2, though, as has been repeatedly mentioned, by bearing in mind the direct linear proportionality of the architectural drafting-scales, as clearly set forth in Part 9, corresponding spacing values at any other scale can be deduced by a mental process so simple that it could scarcely be termed "arithmetic." Suppose you were working at $\frac{1}{8}$ " scale instead of $\frac{1}{4}$ " scale, and that you wanted to indicate, say, a tile flooring pattern in which the units spaced 9" center to center of joints. Eighth-inch scale is one-half the value of quarter-inch scale. Half of 9" is $4\frac{1}{2}$ ". Look for the spacing interval of $4\frac{1}{2}$ " in the table. There it is, and it tells you to use the foot unit of the $\frac{3}{32}$ " scale, or $1\frac{1}{2}$ sixteenths on the foot rule, as the equivalent value of 9" at $\frac{1}{8}$ " scale, and that either of these can be chain-spaced with the instruments designated. Or, simpler yet, look for the $\frac{1}{4}$ " scale equivalent of 9", and halve the scale of the equivalent to get the $\frac{1}{8}$ " scale equivalent. Same result. Again, you are laying out a $\frac{3}{4}$ " scale detail of a flight of stairs. The treads are $11\frac{1}{4}$ ". The $\frac{1}{4}$ " scale equivalent, as the table shows, is $2\frac{1}{2}$ feet on the $\frac{3}{32}$ " scale. Hence, since $\frac{3}{4}$ " scale is thrice the magnitude of $\frac{1}{4}$ " scale, you could chain-space those treads all in *one direct operation* by using an interval of thrice $2\frac{1}{2}$ feet, or $7\frac{1}{2}$ feet, on the $\frac{3}{32}$ " scale. But if the tread happened to be $11\frac{1}{2}$ ", the table tells you to ratchet space them at that same $\frac{3}{4}$ " scale value, which you could quickly do in the manner shown at Figure 96. TABLE 2 transforms irksome spacing to an interesting pastime. It's even easier than "fallin' off a log"—if you just "hit" the right space!

Now then, I've put them all down—all the usable ones—in TABLE 2. If I had omitted one, it might have been the very one you'd sometime need. But, if you still can not find the spacing-value needed—for brick, stone or terra cotta coursing and jointing; for siding, clapboards, shingles, slate or tile; for rivets, bolts and reinforcing steel; for joists, studding and rafters, for stair treads and risers, fire-escapes and ladders; for panels, balusters, spindles, lattice work and fences; for dingbats, dentils, brackets, gadgets and modillions; for paving, flooring, tiling, pattern work and—oh well, in Part 11 you'll find the fastest system of graphical arithmetic that has ever been developed to cut down the drafting-room time account.

TABLE 3, herewith, is not a spacing table, but it

TABLE 3
Units of measurement that are *not available on the foot rule.*

Non-decimal fractions of ONE INCH	Decimal fractions of ONE INCH
$1/64'' = 1''$ on the $3/16''$ scale	$1/50'' = .02'' = 1/50$ th on the decimal scale
$1/60'' = 1/60$ th on the decimal scale	$1/40'' = .025'' = 1/40$ th on the decimal scale
$1/48'' = 1/4''$ on the $1''$ scale	$1/25'' = .04'' = 2/50$ ths on the decimal scale
$1/32'' = 1/8''$ on the $3''$ scale	$1/20'' = .05'' = 1/20$ th on the decimal scale
$1/30'' = 1/30$ th on the decimal scale	$1/10'' = .10'' = 1/10$ th on the decimal scale
$1/24'' = 1/2''$ on the $1''$ scale	$1/5'' = .20'' = 2/10$ ths on the decimal scale
$1/15'' = 2/30$ ths on the decimal scale	
$1/12'' = \begin{cases} 1'' \text{ on the } 1'' \text{ scale} \\ 5/60 \text{ths on the decimal scale} \end{cases}$	
$1/6'' = \begin{cases} 2'' \text{ on the } 1'' \text{ scale} \\ 5/30 \text{ths on the decimal scale} \end{cases}$	
$1/3'' = \begin{cases} 4'' \text{ on the } 1'' \text{ scale} \\ 10/30 \text{ths on the decimal scale} \end{cases}$	
	Decimal Fractions of ONE FOOT
	$1/100' = .01' = 6/50$ ths on the decimal scale
	$1/10' = .10' = 12/10$ ths on the decimal scale

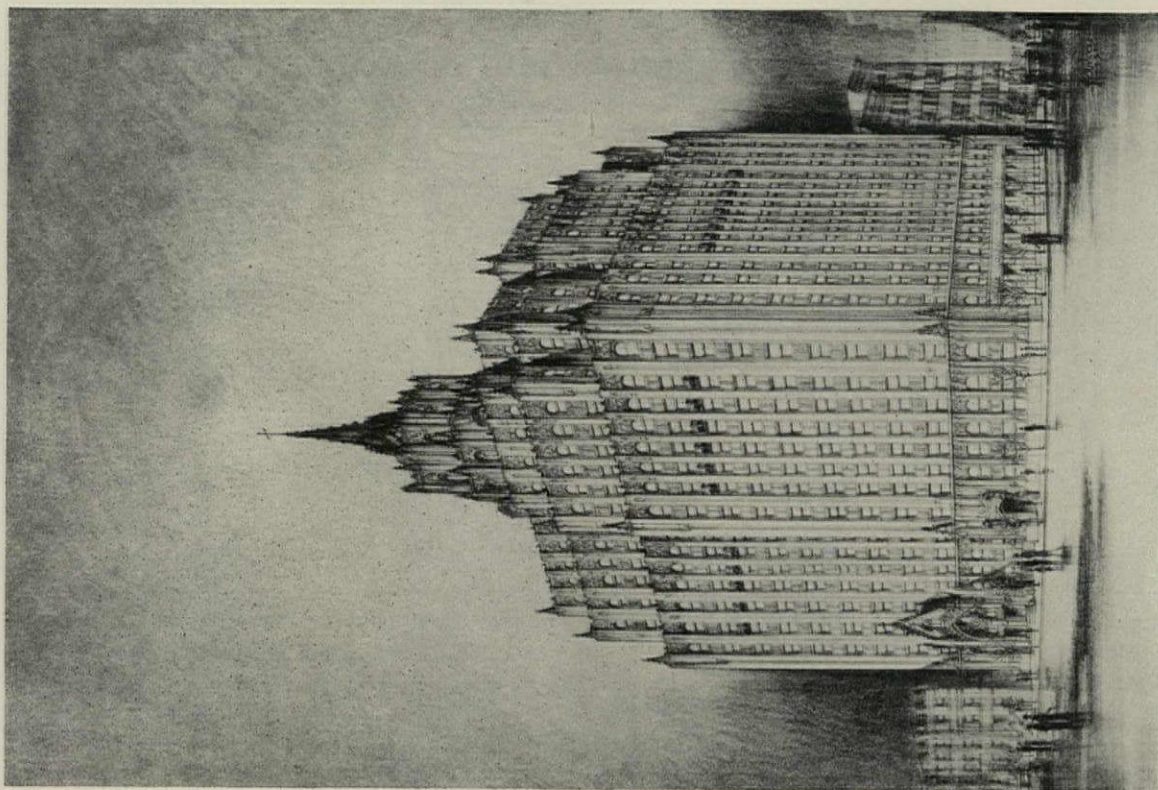
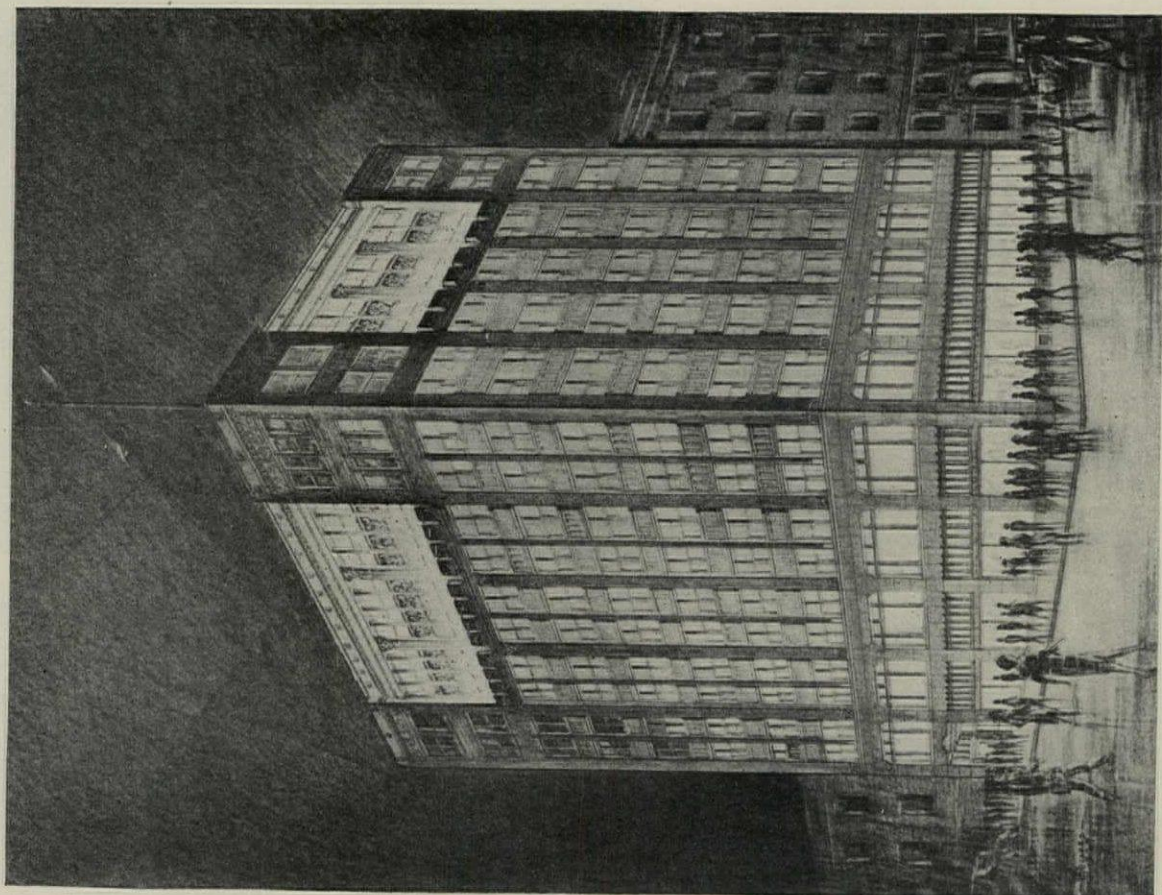
has another direct use. It will instantly refer you to the proper scale by means of which odd or irregular fractions and decimals of *actual measurement* can be quickly and accurately obtained when the necessity arises. These can *not* be gotten on the regular foot rule. They are *outré*. Nevertheless, there are times either when "full size" detailing requires some one of them or when the necessity for "close measurement" makes their use imperative. Wherefore, TABLE 3 is another useful reference document.

Suppose conditions demand that you lay off a distance of $8-51/64''$, exactly. How'd you do it by the above table of equivalents? Like this: Lay off the nearest approach to it on the foot rule, which is $8\frac{3}{4}''$. Add the remaining $3/64''$ by adding $3''$ at $3/16''$ scale. In the same manner you can lay off *any* actual distance, or *measure* any such distance, to any fractional value of the denominations contained in Table 3.



FROM A RENDERING IN WATER COLOR BY ALEXANDER J. SCHOLTES OF BOSTON
A SEASHORE RESIDENCE DESIGNED BY EDWARD J. SHIELDS, ARCHITECT

PENCIL POINTS FOR MAY, 1930



FROM TWO COLORED CRAYON AND PENCIL RENDERINGS BY F. A. OLIVARES, FOR MURRAY KLEIN, ARCHITECTS
A TEN-STORY STORE AND OFFICE BUILDING AT FLUSHING, L. I., AND A COMBINATION CHURCH, STORE, AND APARTMENT BUILDING IN BROOKLYN, NEW YORK

ARE ARCHITECTS OBSOLETE?

By Gerald Lynton Kaufman, A.I.A.

THERE HAVE BEEN a surprisingly large number of articles appearing in architectural magazines recently, on the general subject of "What is the Matter with the Profession of Architecture?" Little groups of architects have been overheard at their favorite speakeasies, discussing in fervent whispers the imminent menace of oblivion. Committees have been formed to talk of This and That, and others have even gone so far as to talk of That and This. Some report the latest dodge,—while others Dodge reports;—and even the latter are far from encouraging.

It has been said that the building trades are the last to feel the effects of a period of depression and also the last to recover from these effects; may it be another truism that architects do not know when they are asleep and lack sufficient sense of perspective to be aware of their own vanishing-points?

Or is all this talk merely a form of efflorescence which is just coming to the surface as a result of the recent soaking we got in Wall Street? If so, let us bear it like bricks, and bond ourselves together by putting up a good front,—whether or not we have substantial backing.

Enough of words, however; what are the facts? Let us first look at the dark side of the picture, illuminating it sufficiently, though, to show up all the detail.

As we sit around the table airing cynicisms over our synthetic appetizers, the Residential Man is the first to tell his story. He explains how his practice in small houses has been cut into by the free plan-books distributed by building trade associations, material dealers, manufacturers. He tells of the 1929 record of the largest mail-order house, which claims 41,500 homes built in the United States with "ready-cut" lumber during the past year; he adds that this company tells in its catalog that an architect is an unnecessary luxury, that plans, financing, and superintendence are "thrown in" with every order, and that this is absolutely the cheapest and most up-to-date and efficient way to build a home.

"True enough," replies his friend the Apartment House Man, "but this applies only to homes costing under \$20,000. Surely you don't find mail-order houses selling plans and service for larger houses as well."

"No, we do not," answers the Residential Man, taking another sip, "but take a look at the advertisements in the popular magazines catering to home-builders, and see the plan-books advertised there, by architects who invest in display-cuts instead of A.I.A. dues." He opens up a current issue of a well-known periodical and shows an illustration with the slogan "100 Plans of Homes Like This: \$5.00." Then he goes on to tell of the speculative builder, who hires his architectural talent at \$60.00 a week and puts up

six or eight houses at a time, ranging in price from \$25,000 to \$50,000; of the land development company which sells architectural service with each lot; and of the construction company which guarantees completion of any home desired, at cost plus 10%,—and never mind the overhead and contingent fees.

We heave a composite sigh, order up another round, and listen to the Commercial Man. He tells us about the Loan Companies and what they dictate, the Operators and what they demand, and the Real Estate Specialists and how much they have to say. He adds a few words about the Building Department, the Owners, the Tenants, and the Sister-in-Law of the Second Mortgage, and then he tells the old story about the architect who was offered 1% to get the plans filed and put some ornament around the entrance door and one of those cornice-things at the top. He too has something to say about the construction companies and explains the complete financing and engineering service rendered by some of them, making it incumbent upon the so-called Owner to do nothing except arrange some of the primary financing and have the title searched. "Architects?" they say,—"oh we have our own force, all packed in boxes, ready to serve; what kind would you like, a Renaissance Italian or a Revived Greek?"

The Apartment House Man comes next, and after signalling to the waiter to "make it the same around once more," he too tells us How It Is Done,—by the other fellow. He tells of plans made by structural engineers, plans made by a friend of the Inspector's, plans borrowed from the Department and traced; he tells of the archytect who "offers" complete working drawings for \$25. a front foot, and who "knows how to get it passed,"—or past,—the spelling doesn't matter.

"But how do you compete with these fellows, and make it pay?" we inquire, continuing to slake our thirst for information. "The answer to that, my dear friends, is that I don't compete, and I don't make it pay;—just between ourselves, you know, I wouldn't be in practice at all were it not for the fact that I took an interest instead of a fee, for some of my first few jobs."

We are now feeling in a humor to listen to the Hospital Man, as he tells us who it is that plans *his* buildings,—but this too is a story we have heard before, and we cannot help recalling that his uncle's brother was Chairman of the Board of the Physicians and Surgeons Lying-In and his wife's sister endowed fifty Permanent Beds.

So we join the School Man in a round of Alexanders, and listen to the political history of our State government. We hear what the Board of Supervisors said, and we are told about the business connections of the fellow lodge-member of the Chairman, as well as the inside story of that Competition for Grafton

High and how they got the plans for practically nothing, merely by Taking the Best Features of Each.

Perhaps it is the story of the School Man, and yet on the other hand it may be the Alexanders, but at any rate the series of personal grievances is now interrupted by a Beaux-Arts architect-emeritus who married into the Bond Business and ever since has been amusing himself with statistics:—

"The fact that all of you have been overlooking," he discloses amiably, "is the trend of the times in general,—and the trend of the schools in particular. Most of you are University graduates, and now and then you get a catalogue from the College of Architecture of your old Alma Mater. Does anything strike you as you look through its pages?"

"Certainly," replies the Cornell University Fellow of Arch., 1915, "the Alumni Pledge Committee,—annually, for a cool fifty!"

"No, that's not what I mean," explains Tony Garnier's *élève*, emptying his glass, "don't you notice the increase in size, each year, of the graduating class? Doesn't it mean anything to you to observe that the colleges are constantly pouring out larger and larger quantities of architects, most of them better trained than you were yourselves when you graduated, and that all of these men are looking for a chance to step into your shoes long before you leave them to walk through the pearly gates and start esquisses for halos?"

Before we had a chance to reply, the Statistician went on to show, first, that universities were constantly growing in size,—as we all knew,—and second, that increasingly larger numbers of their graduates had degrees in the professions. Following up his argument with still another round of Alexandrine lubrication, he then pointed out that while modern life, the age of mechanism, and the speed-mania and nerve-strain of our present civilization demanded more lawyers and judicial machinery, more doctors, hospitals,—and asylums,—still these very same tendencies were constantly decreasing the need for architects.

"As building becomes more and more controlled by large corporations, industrial mergers with high finance and scientific management, and small-home mail-order houses," he continued, "architectural service becomes more than ever a question of supply and demand. There was once a day when architects talked of labor as a commodity and told how an influx of foreign labor, both skilled and unskilled, would glut the labor market, reduce prices, stimulate building, and cover the drafting boards with tracing-cloth. Today architects themselves are becoming a commodity, the building market is very ably controlled by big business and labor unions, and the drafting-boards are covered with empty smocks. There is a solution of your problem, but you are all too soaked in old traditions, to absorb it,—"

"Oh, is THAT what we're soaked in?" asked the Apartment Man, who was beginning to feel that

some other saturating agent was responsible for his illogical feeling of gaiety.

"Exactly," retorted the Statistician, ignoring the interruption, "tradition, together with an antiquated dignity, an obsolete ethical system, and a Middle Age ideal of craftsmanship. The fault, dear Vitruvius, is not in our stars but in ourselves, that we are obsolete,—" but now that paraphrasing had commenced it were better to transcribe the Statistician's thoughts, than his words.

He pointed out first, that dignity was preventing us from group advertising, from all sorts of paid publicity practised by the other professions, and from most forms of soliciting. That in combination with traditional ethics, our dignity prevented us from exploiting our own merits over those of commercial Engineering Departments, Structural Service Departments, private Planning Departments, and cut-rate archy-tects and wholesale engineers. That the Craftsmanship ideal made us detail mouldings and trim which had already been standardized by the machine-age processes, made us full-size ornament and sculpture which could be designed in half the time and conceivably with twice the merit by a competent modeler, and made us write reams of specifications which might be incorporated in the words "in accordance with manufacturer's directions."

Having thus censured us for being both too meek and too conscientious, he then launched forth upon another pet tradition; that of the sacredness of Individual Service. His argument here followed the trend of the times, somewhat as outlined below:—

The machine-age automatically produced the age of mergers. Mergers are not today confined to industrial and commercial enterprises; they invaded the professional field years ago, for everyone except the architect. The formation of National Associations, though this is a modern tendency, is not at all the same thing as an actual merger. Granted that there exists an American Medical Association, a Bar Association and an American Institute of Architects, there is still room for a Life Extension Institute, a Legal Aid Society, and,—WHAT? There are still thousands of hospitals, each with its own clinic, thousands of courts, each with lawyers to be assigned for nominal fees, for the good of the public (and, incidentally, for the profession as well), and there are still Local Chapters of the A.I.A.,—with WHAT? Where must we look for architectural clinical advice? To manufacturers, mail-order houses, material dealers, builders, and real estate men. Where must we look for architectural specialists?—In Someone Else's office,—the Apartment Man hasn't yet merged with the Residential Man, the Hospital Man, or the School Man;—though true enough, if he needs the Job, he will take it and get the necessary experience at the hands of his client; but this is hardly the merger idea, nor one calculated to inspire public confidence.

When we enter a modern up-to-date law office, what do we see on the door? First, the three or four names of the senior partners; then underneath, the

ARE ARCHITECTS OBSOLETE?

six or eight names of junior partners,—each a specialist in a certain branch of the law. We may not be certain just who is going to handle our particular problem, but we do know that he will be a specialist, and that he has been merged into the firm for the very reason that mines, lumber-mills, and even railroads have been merged into General Motors. Professional service today, like industrial service, is becoming mechanized; interests and expenses are being pooled; talent, training, and experience are pooled;—everything is gradually merged into more and more efficient units, but units composed of teams rather than individuals. Everyone has learned this lesson,—except the architect, who still through all his practice, remains the dignified old bachelor of the arts.

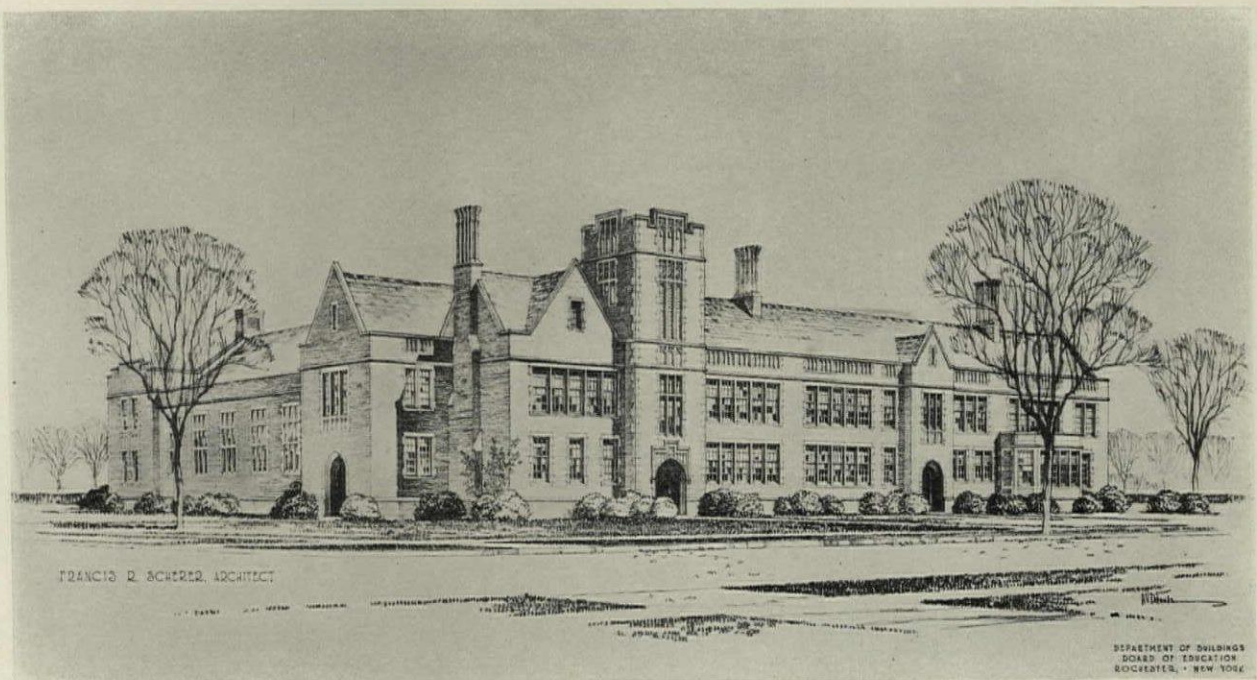
Here and there, of course, we find certain evidences of an awakening. There was once an Allied Architects Association, quite severely frowned upon by the Institute; there was once a national advertising and publicity campaign started within the ranks of the Institute, and promptly put to the torch by the Savonarolas who identified modern methods with heresy; and there is still an Architects' Small House Service Bureau, which goes ahead popularizing and publicising the profession and broadcasting the advantages of disinterested architectural service, in spite of personal loss to its members, and in spite of a certain amount of old-school opposition.

Our friend the Statistician told us in further detail, about the Architects' Small House Service Bureau, but at the same time explained that this example was given more as an illustration of the clinic

idea than the idea of the modern professional merger. He further explained that he did not regard the merger in itself as a panacea for obsolescence. He did not even recommend that the six of us who were now drinking in his words as chasers for what had gone before, combine into a modern Amalgamated Architectural Association with illustrated circulars and high-powered salesmen, full-page advertisements, calendars, and radio-hours featuring Tony the Rivetter.

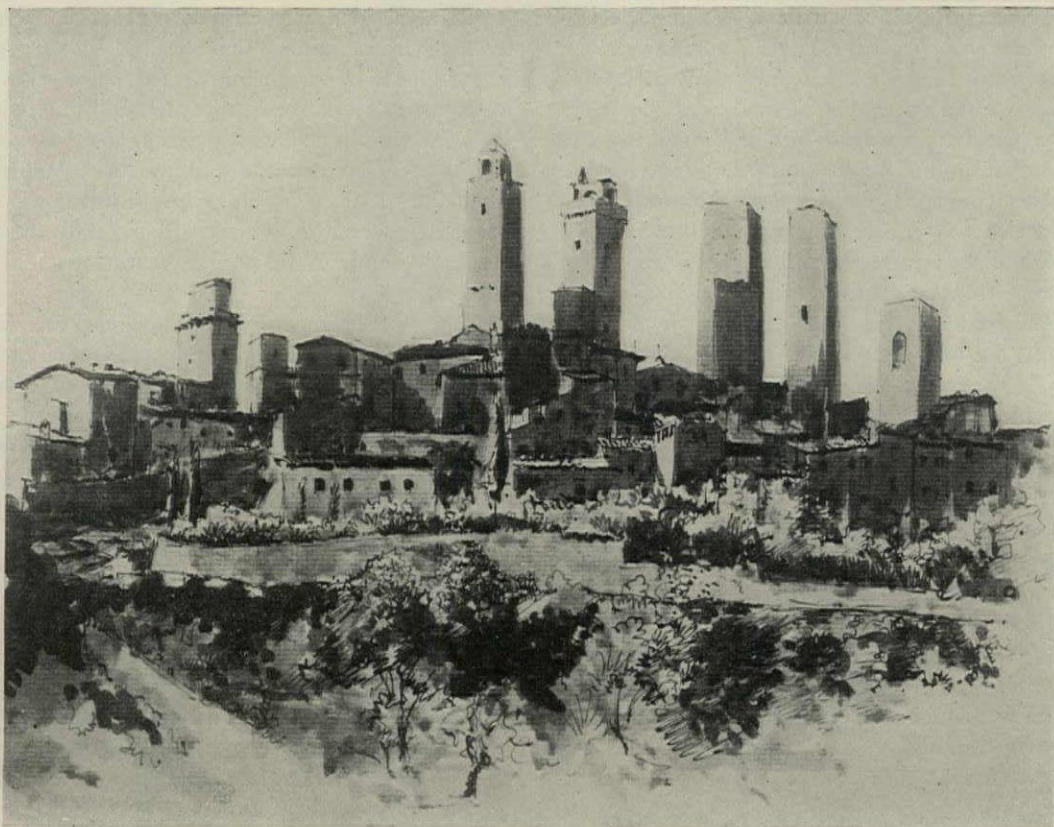
What he did recommend, however, was that we stop talking and thinking about being obsolete, and instead that we find ways and means to follow the trend of the day; that we organize outside of our offices, into service groups and clinics for architectural advice in each community, as a *paid* professional activity, not only to give the public some of the benefit of our training but also to give an idea of its practical value; that we find out what the Architects' Small House Service Bureau is doing, and learn how we may make it the nucleus of a scheme for "Selling the Architect to the Public"; that we learn what the architectural magazines are doing, through merging their own ideas for the advance of the profession; and that we cooperate with the advertisers, the builders, manufacturers, and material men, under the light of a new standard of ethics, to spread the slogan of professional service still further afield. He dared even mention this word "slogan," and, strangely enough, not one of us batted an eyelash.

Perhaps, however, this was because we were already too far gone,—in the way of Alexander.



RENDERING BY A. V. DE FONDS—CHARLES CARROLL SCHOOL NUMBER 6, ROCHESTER, N. Y.

Francis R. Scherer, Architect



SEPIA WASH DRAWING BY JOVAN DE ROCCO—SAN GIMIGNANO



WATER COLOR SKETCH BY JOVAN DE ROCCO—WHITEHALL, LONDON

ADVENTURES OF AN ARCHITECT

7—ANGELS UNAWARES

By Rossel E. Mitchell

"IS MR. HALLORAN IN?"

The assistant to the President of the Straight Line Railroad looked me over quickly but without the least appearance of having done so.

"He is. Who is this, please?"

I handed him my card.

"Mr. Halloran is engaged just now. If you will wait I am sure he will see you."

I waited about ten minutes. A secretary came out of the inner sanctum, was handed my card, disappeared, returned instantly and ushered me into the spacious office of this man who was the successful chief executive of a great railroad system. Mr. Halloran greeted me pleasantly, seemed to be in no hurry at all, listened carefully to what I had to say and replied in the same quiet, unhurried tones. His demeanor invited me to state my proposition; his answers were clear-cut and decisive. I secured the information wanted, thanked him, and was bidden a pleasant adieu. The entire interview did not consume more than four minutes, yet when I left his office I felt as though I knew Mr. Halloran, despite this being our first interview. He left me with the feeling that he knew me, respected me as I did him, and that we were friends.

It had required a certain amount of courage for me, then a young man, to solicit a personal interview with a busy executive whom I had never met, and who probably had never heard of me. Believing the first-hand information I wanted could best be secured from him personally, I mustered up my courage with the result above indicated.

I have found it is a great mistake to take up important business with an underling if there is any possible way to reach the head. Unless the matter you have in hand is of obvious importance to the organization you are taking it up with, a subordinate will nearly always put you off in some fashion. More than once, when compelled by circumstances to discuss matters with an assistant to the man I really should see, the assistant has taken upon himself authority to discourage the proposition, while the chief, when later reached, was interested.

It is my observation also, that a really "big" man is always simple and direct, easily accessible to anyone having a valid reason for seeing him. Your small potato is not so. The most inaccessible men in the world are the small fellows who happen to "occupy" big jobs.

I shall not forget my attempt to see a certain merchant one day, in his new store. He had expanded from a one-story to a large three-story building at one jump, and the change seemed to have gone to his head. Calling at his office I was greeted by a kalsomined and frescoed lass who informed me "Mr.

Schneider was very busy." Handing her my card, I asked if I could secure an appointment.

"Why, really, I don't think you can, today!" smiling sweetly.

"Will you be good enough to hand him my card?"

"Why, I couldn't possibly disturb Mr. Schneider just now. He is in conference."

Knowing something of the character of a clothing man's conferences, I departed, wasting no more time trying to see the suddenly-great Mr. Schneider, with whom I had a familiar speaking acquaintance. Not long afterward I heard sarcastic comments from others about Mr. Schneider's methods of seeing people. In less than a year he was bankrupt for a large sum.

Taking the example of the railroad president for my pattern, rather than the clothing merchant, I early determined to give every man who called on me a hearing, if at all possible to do so.

In very large architectural offices, the handling of calls by people having something to sell, is systematized. Callers are directed to the persons who are in charge of the matters the caller is interested in, and the burden is lifted from the shoulders of the senior architects. But the great majority of architectural offices are small ones, and in these the burden of necessary interviews sometimes becomes terrific.

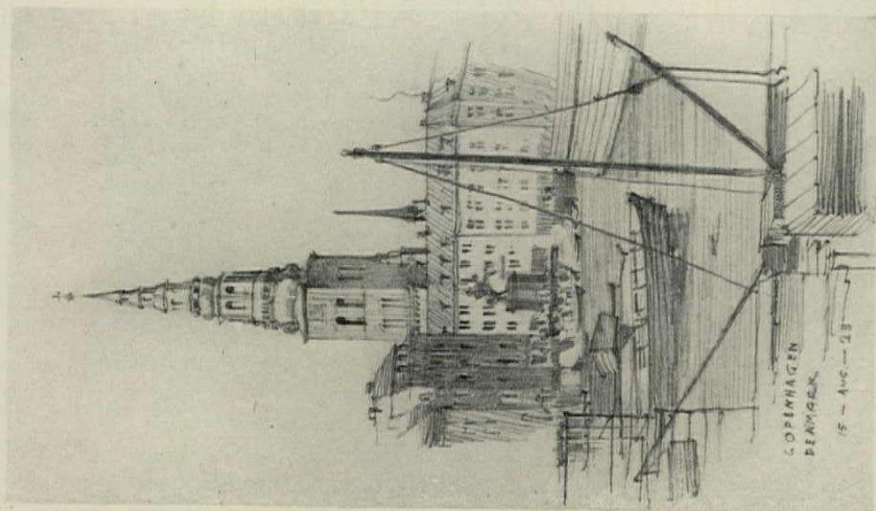
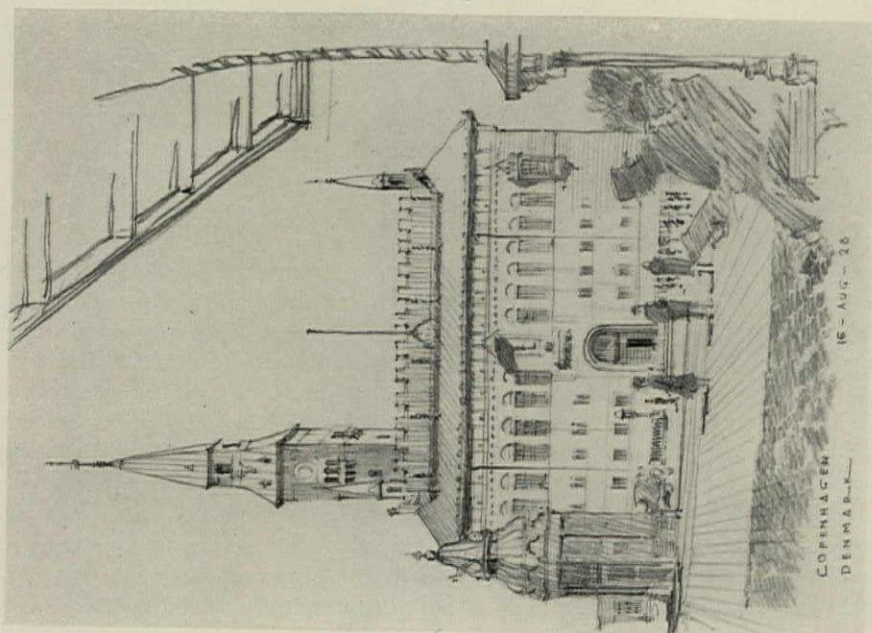
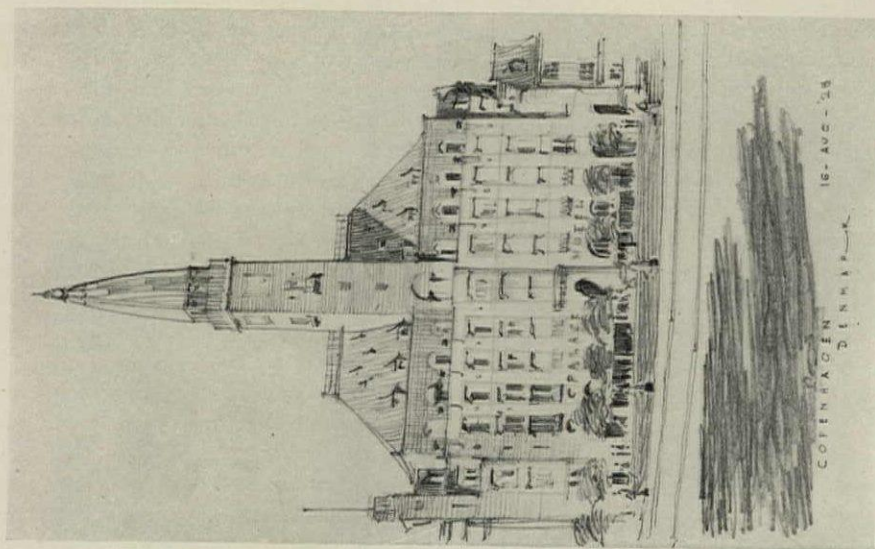
When business is brisk and the office force enlarged, it becomes impossible for an architect to interview all the fine gentleman salesmen who wish to personally emphasize the good points of their specialties. Neither can he afford to employ a specification writer and permit him to spend his days with such interviews. Architects are put to it to devise means by which they can keep up with the numberless devices and new materials constantly appearing, and yet devote their best thought to the sciences of arrangement of space and construction, the art of design and embellishment, the study of comfort and economy.

If one could afford to take the attitude of a certain English architect with whom I was associated once, things would be more simple. A manufacturer's salesman entered and showed him and me, two draftsmen, a new type of door lock. Locks always were interesting and mysterious things to me. My English friend looked it over quizzically but did not touch it.

"It looks very tricky," quoth he, "but I'm altogether satisfied with what we're using."

The lock in question was the "unit" lock, one of the greatest improvements ever made in modern builders' hardware.

And I here and now confess that a large hunk of what architectural education I possess was derived directly from well-informed manufacturers' salesmen. Catalogues and printed matter go only so far, even with architects, and no method has yet been de-



THREE PENCIL SKETCHES BY ALBERT E. BARNARD—THE SPIRES OF COPENHAGEN
PAGES FROM THE TRAVEL NOTEBOOK OF AN AUSTRALIAN ARCHITECTURAL STUDENT AND DRAFTSMAN

vised that will altogether replace an ocular demonstration of a complicated device.

It has therefore seemed to me a duty to give every man who had something worth while a moment or two. He, also, is trying to make a living! This policy, adopted through combined motives of courtesy and self-interest, brought once a most unexpected reward.

It was War Time. Business, shriveled by the outbreak of the Great War in Europe, had been still harder hit by the entry of the United States. Building must give way to "essential industries." Manufacturing was everything; the great building industry nothing. My office force had dwindled and shrunk until it reached the level of myself and a secretary on half pay. Other architects had either thrown up the sponge or entered military service. The latter expedient was impossible to a man having a growing family dependent on his labors. Things got bluer and still more blue. I was beginning to feel the effects of the anxiety, and could see no way out if the thing kept up much longer.

One day a salesman's card was handed me. It bore a French surname, and the name of a large manufacturer of plastering materials. My first reaction was, What's the use talking plaster, or paint, or anything else when they won't let you build a dog house? But true to my rule, I admitted the man, and having little to do, gave him a chair and let him chat.

We discussed plaster a little, and the inability to get anything to plaster, more. He was an attractive young man, pleasant to talk to. I frankly told him I was alarmed at the prospect of another year without work enough to pay expenses.

He drew out a little book, and asked if I had investigated the coming Government projects.

I confessed that such were entirely outside the range of my customary avenues of information.

He then advised me of departments, their heads, and the projects contemplated, many of which would demand architectural service. He gave me inside information as to whom to approach and why. Realizing the possibilities inherent in his data, I almost wished to terminate the interview in my impatience to get busy.

We finally parted pleasantly, and I invited him to come to see me every time he came to that city. Without wasting a moment I rushed to my home for a change of clothing and made a dash for the next train to Washington. Arriving at the Capital, I first interviewed the Senator from my State, secured a letter of introduction and went to work. For my first interview I had to sit cooling my heels from 9:30 a. m. until 5:20 p. m. with 15 minutes out to lunch. My letter from the Senator went in immediately, but apparently had no effect. By 5:00 p. m. nearly the entire personnel in the building had left, and I began to wonder if the chief had slipped out a back way. I confess to feeling rather slighted to have seen people walk in and out of the sanctum sanctorium all day long, obviously without letters from Senators, while I was completely ignored. Finally a rather squat man

with brilliant black eyes ambled to the door.

"You want to see me?"

Instinctively I knew this was my man.

"I do. Did you get the letter from Senator——?"

"Senator——? Come in. I don't know. I get so many letters I can't keep up with them."

This sounded so human I felt better.

"What do you want to see me about?"

"I want to build one of those industrial towns."

"Ever built any towns?"

"No, only houses!"

Here followed a rapid fire of questions and answers for fully five minutes.

Rising from his chair, with his black eyes still fixed on me as they had been from the first, he said:

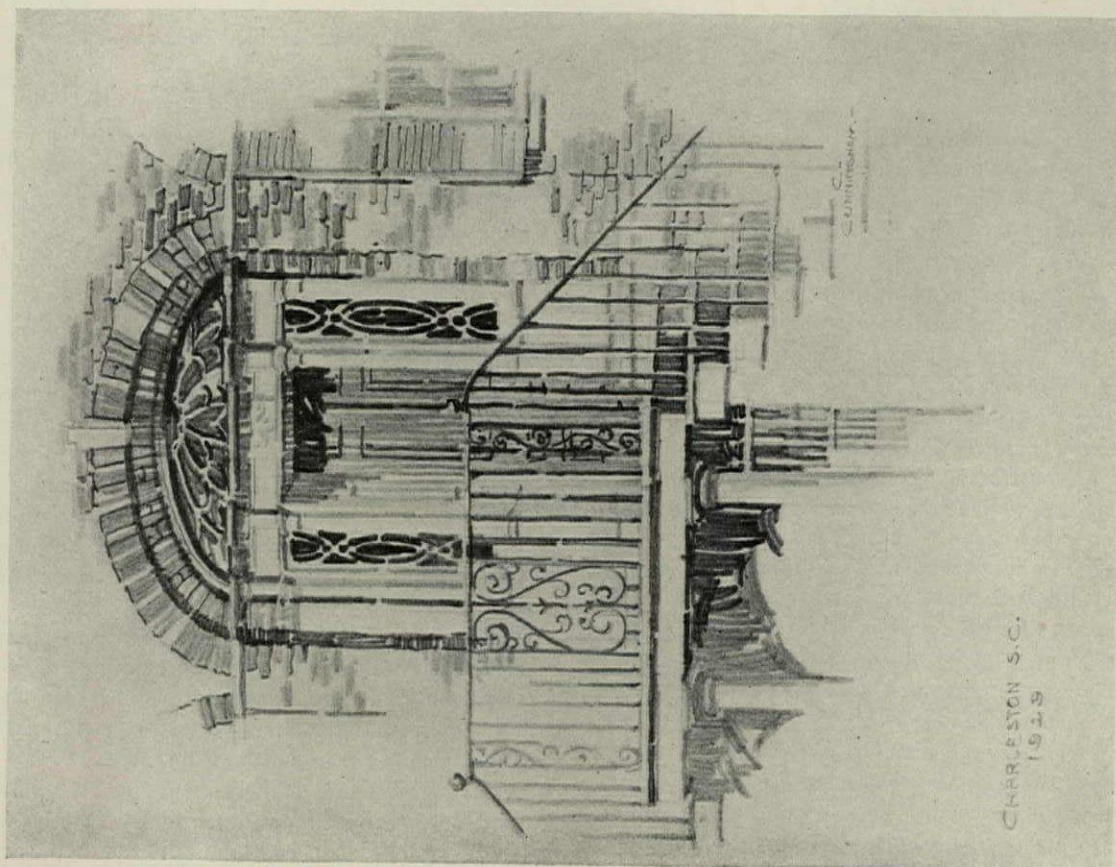
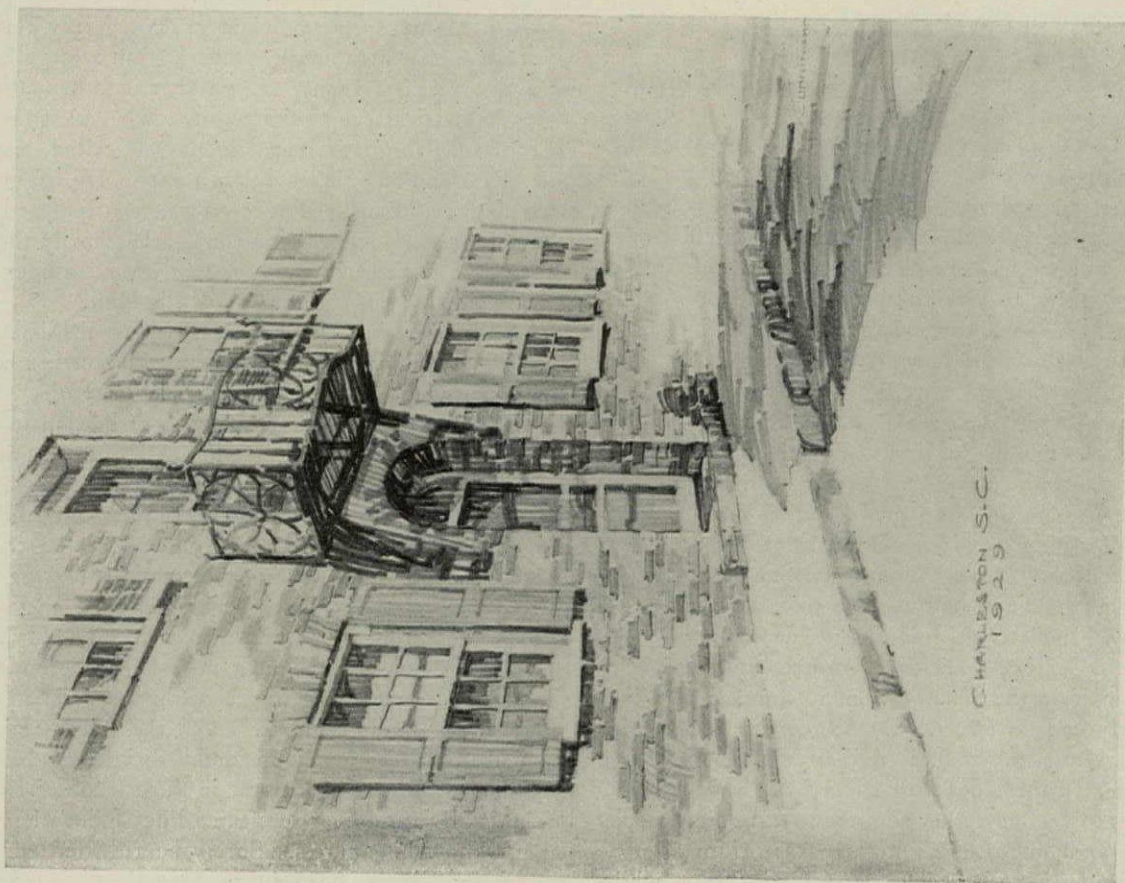
"I like you. Go to that Navy Yard nearest your city and make me a report and recommendation as to just what should be built there for industrial housing. Let me have it in five days."

This was pie for me. Housing and town planning I had delved into several years previously, as a new development that a live architect should keep abreast of. I had spent long hours poring over the plans of real and dream cities here and abroad.

Besides, my work had kept me pretty well informed as to real estate values, and I knew the wants of the kind of labor available in my own section. The report was ready on time and covered every phase asked for, and some not asked for. I fortified it with interviews with the heads of the labor unions and unofficial labor leaders.

Much to my surprise, when presented, my report was confronted with another report from a large firm in a distant city, many of whose recommendations were diametrically opposite to my own. A conference of officials in the department was called, and I had to defend my theses from a rapid fire of questions and criticisms. The conference adjourned to secure facts from still other sources, and shortly thereafter I had the enjoyment of seeing my recommendations adopted, even to the price of the land.

This commission carried me through the balance of the War and beyond. The compensation was very small, considering the magnitude of the project, but that was regarded properly as our contribution to the cause. It gave me a living when a living was all I wanted. It also brought me much prestige, and the pleasure of feeling that I was contributing my mite to the Great Cause. Only one thing about the entire transaction has been a disappointment. During all these years I have never seen or heard of that fine chap who put me wise to the opportunity. I have made many inquiries, but to no avail. Perhaps he sleeps "where poppies grow, beneath the crosses, row on row, in Flanders Fields." All these years I have been wanting to thank him for his disinterested kindness that meant so much to me in those troubled times. If he is alive and ever sees these lines I hope he will let me know his address. Surely he fulfilled for me the adage: "Be not forgetful to entertain strangers, for thereby some have entertained angels unawares."



TWO OLD CHARLESTON DOORWAYS AS SKETCHED IN PENCIL BY CORNELIA CUNNINGHAM

A CHISEL-POINTED PENCIL WAS EMPLOYED HERE SUCCESSFULLY TO GET A CRISP, CLEAN-CUT EFFECT WITH ECONOMY OF EFFORT



Fred Weoley Wentworth Architect

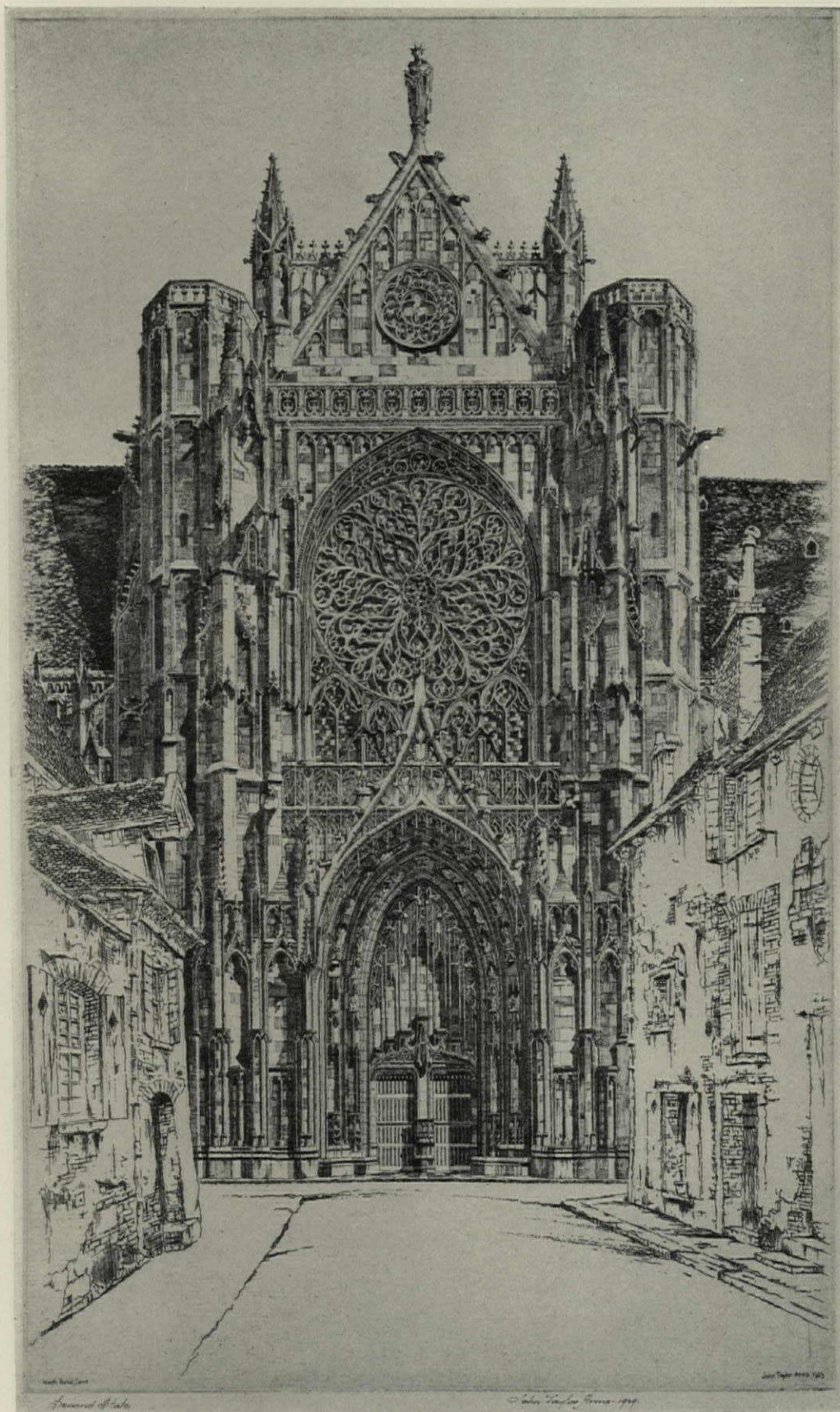
A COMPETITION DESIGN FOR A PROPOSED BANK BUILDING—FRED W. WENTWORTH, ARCHITECT

FROM A WATER COLOR RENDERING BY PAUL F. WATKEYS

PENCIL POINTS
(May, 1930)

PENCIL POINTS SERIES
of
COLOR PLATES

In the reproduction shown on this plate a rendering by Paul Watkeys has been reduced from 25¾" x 20" which is the size of the original. It was drawn in pencil on a sheet of white illustrators' board and the color was applied in washes of transparent water color. A good deal of pencil work was done over the washes to work up the shadows and the darks of the window and door openings, thus giving value to the light washes on the building. The sky was washed and blown. A little Chinese white was used to bring out highlights. It should be pointed out that the building is not rectangular, the angle of the lot towards the observer being somewhat more than ninety degrees. The perspective is correct.



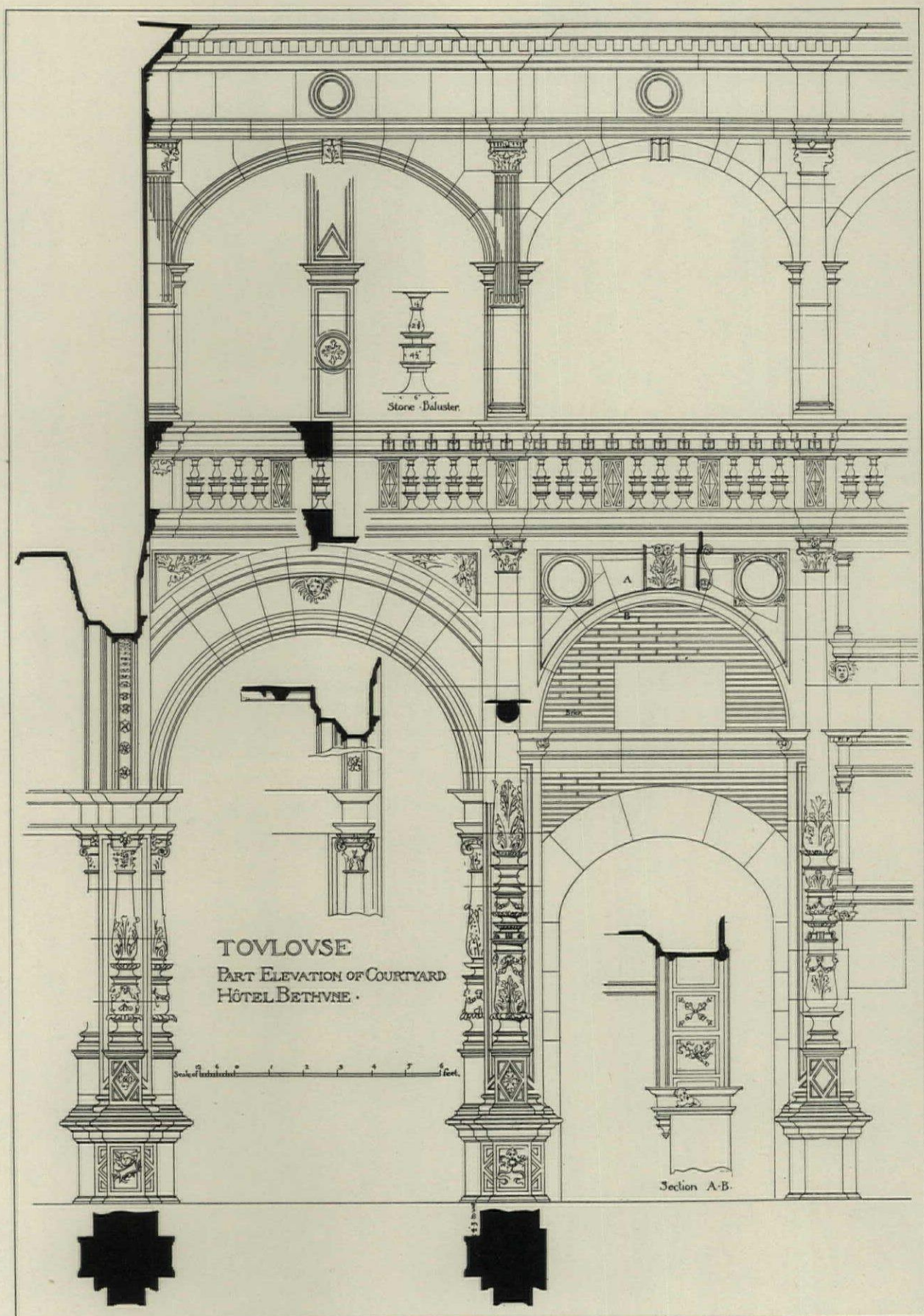
FROM AN ETCHING BY JOHN TAYLOR ARMS
"GOTHIC GLORY"

PENCIL POINTS FOR MAY, 1930

VOLUME XI

NUMBER 5

This exquisitely wrought print by John Taylor Arms shows the North Portal at Sens. The artist's superb craftsmanship is nowhere more evident than in this delineation of an intricate piece of Gothic lacework in stone. The original print measured 9" x 15 $\frac{1}{4}$ ". It was selected by the American Institute of Graphic Arts as one of the Fifty Prints of the Year to be sent on their annual traveling exhibition.



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

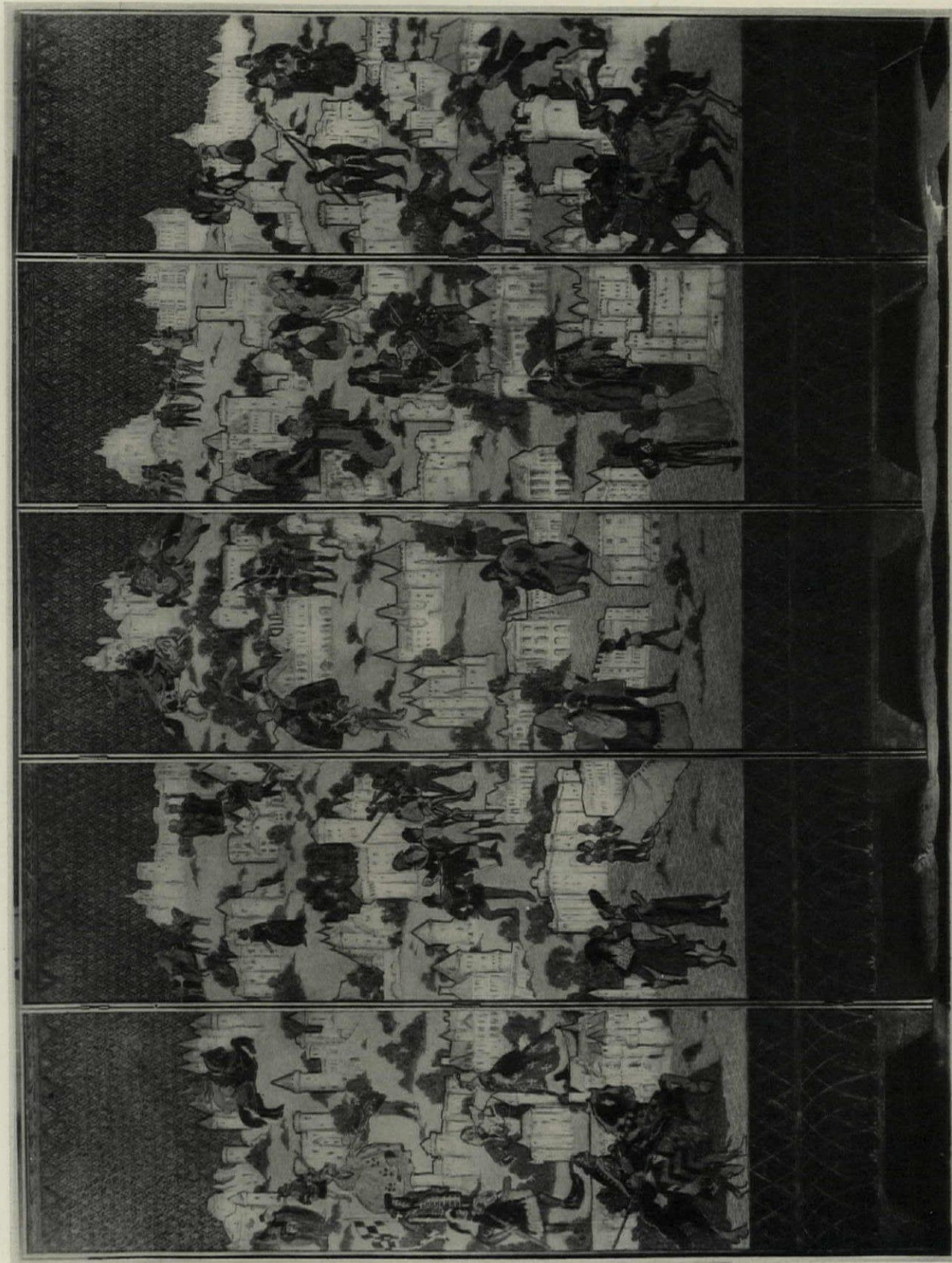
PENCIL POINTS FOR MAY, 1930

VOLUME XI

NUMBER 5

"The details and general lines of this elevation are quite Spanish in feeling, and there is no doubt the builder must have been influenced by Plateresque models. The drawing shows the side elevation of the courtyard of a building which is now used as the Lycée Imperial of Toulouse. It was originally built by one Jean Bernui as a town residence. The small windows to the left of the doorway light a staircase communicating with the gallery above. The curious stone balusters and details of the pilasters are worthy of observation."

A. N. PRENTICE.



FROM A DECORATIVE SCREEN BY LEROY DANIEL MACMORRIS
"LES CHÂTEAUX DE LA FRANCE"

PENCIL POINTS

PENCIL POINTS FOR MAY, 1930

VOLUME XI

NUMBER 5

The large five-paneled screen shown on this plate measures 8 feet wide by 6 feet high. It was painted with watercolors on parchment paper securely glued to mahogany panels and later glazed with lacquers. In general tone it is golden, the entire field of flower forms in a geometric pattern having been painted in a golden yellow over a pale green and lavender ground. The design includes representations of all the principal mediæval châteaux of France.



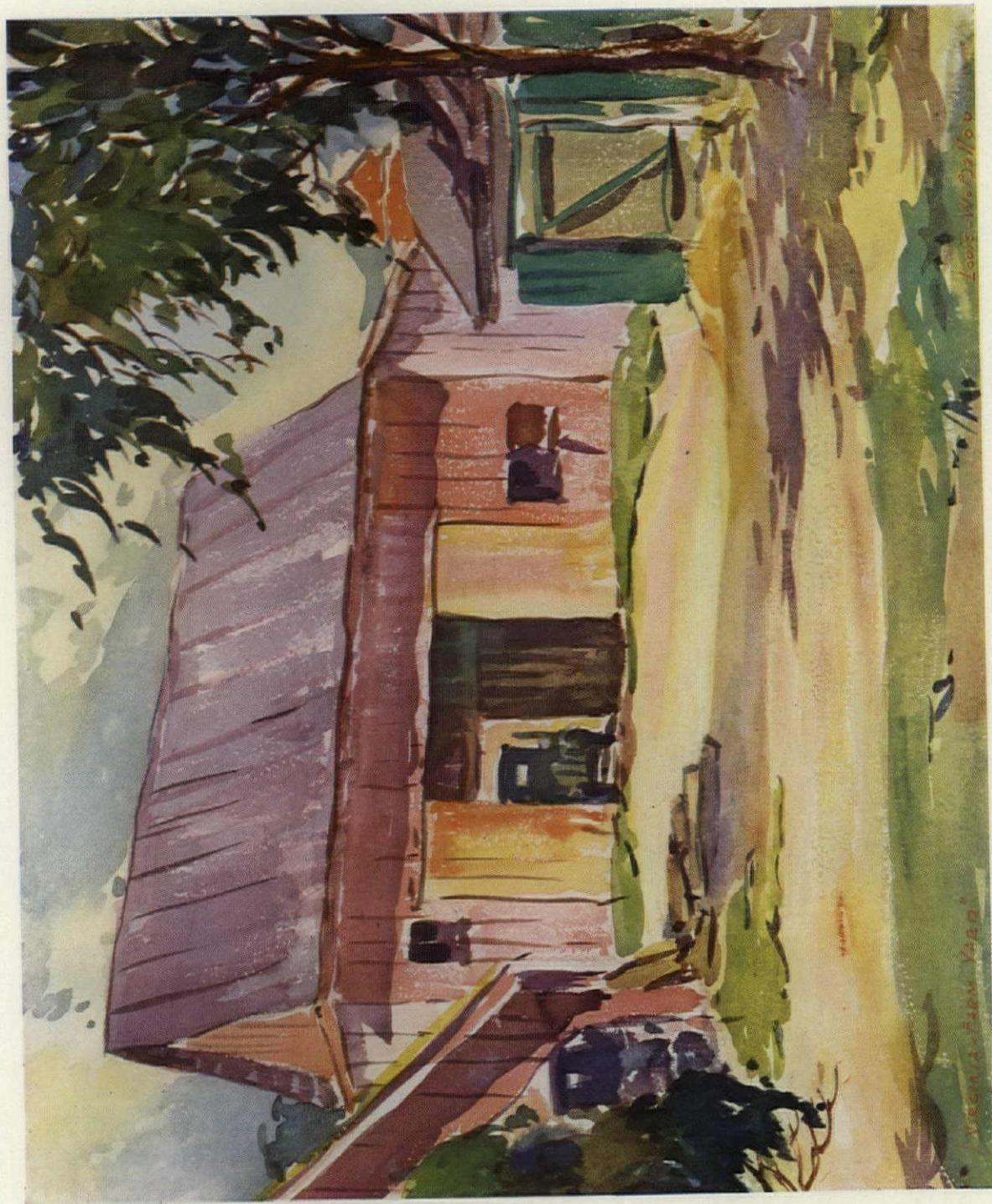
DECORATIVE PANEL FOR AN OVERMANTEL BY GAETANO CECERE, SCULPTOR
"THE HUNTERS"

PENCIL POINTS FOR MAY, 1930

VOLUME XI

NUMBER 5

This piece of relief sculpture was included in a recent exhibition of the artist's work held from April 1 to April 12 at the Grand Central Art Galleries in New York. It was executed in Rome while Mr. Cecere was pursuing his studies as a Fellow of the American Academy.



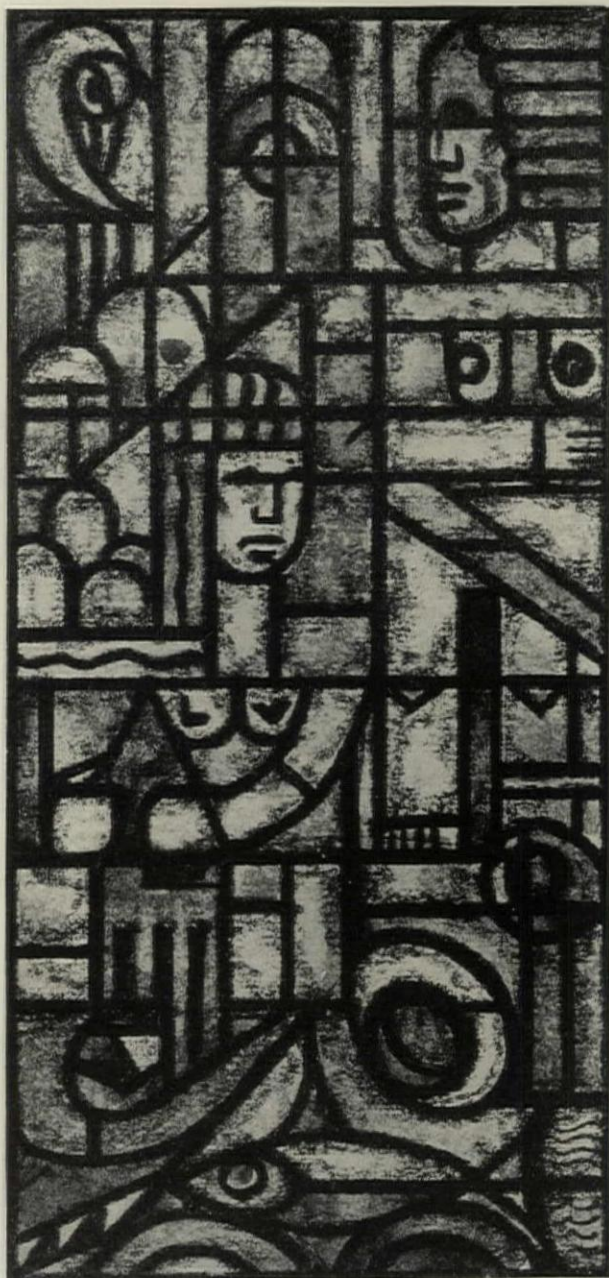
"A VIRGINIA FARMYARD"

FROM A WATER COLOR SKETCH BY LOUIS W. BALLOU

PENCIL POINTS
(May, 1930)

PENCIL POINTS SERIES of COLOR PLATES

This water color sketch was made by Louis W. Ballou who is connected with the firm of Lee, Smith, and Vandervoort of Richmond, Virginia. The drawing was outlined with a 2 H pencil in a very light line and then painted with transparent tube colors applied with a number 12 brush. The use of a semi-dry brush to express the texture of old or worn paint on the barn may be seen by inspection of the drawing. Most of the colors were applied in one wash and not gone over a second time. The earth in the foreground was touched up lightly with colors slightly opaqued with Chinese white. Mr. Ballou uses the following colors in his work: — Vermilion, Burnt Sienna, Light Red, Orange Vermilion, Rose Madder, Venetian Red, Alizarin Crimson, Aureolin, Lemon Yellow, Cadmium Yellow, Naples Yellow, Yellow Ochre, Cerulean Blue, Cobalt Blue, French Ultramarine, New Blue, Antwerp Blue, Emerald Green, Viridian, Sap Green.



A WINDOW DESIGNED BY NICKELSEN

A MODERN STAINED GLASS DESIGNER

RALPH E. NICKELSEN, or, as he prefers to be known, just Nickelsen, is a designer of stained glass. In taking up this work he followed in the footsteps of his father who maintained a studio in Hamburg, Germany. The son received his first training in his father's studio in 1915 at the age of twelve years and has been at it ever since. Since 1922 he has been in New York where for several years he worked under Mr. A. L. Brink, the well-known stained glass craftsman and designer.

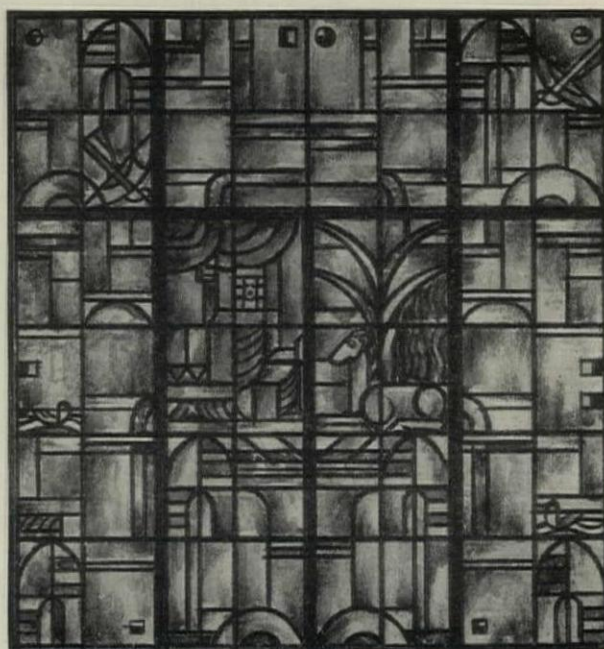
Some of Nickelsen's designs shown here give evidence of his ability and demonstrate the possibilities that lie in treating this decorative medium in a modern way.

Nickelsen believes that there is no better interpretation of the objective of the stained glass craft than that uttered by Ralph Adams Cram in an address before the "Stained Glass Association of America" in 1926. This statement was as follows:—"What we desire is glass of the quality,

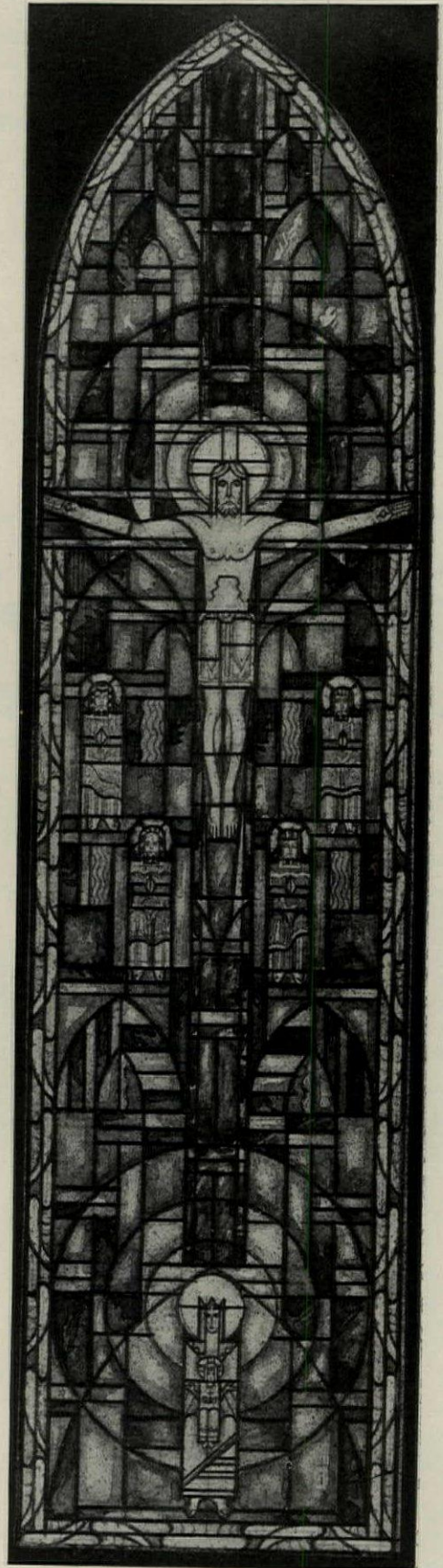
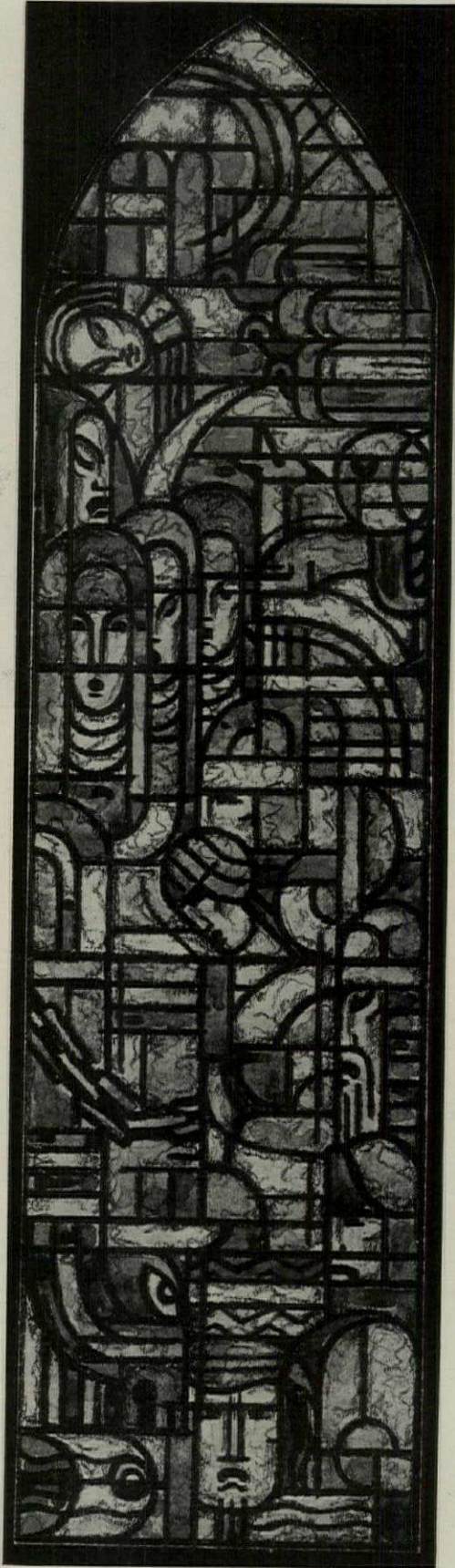


RALPH E. NICKELSEN

ultimately of the nobility and the perfection of the glass of the thirteenth, fourteenth, and fifteenth centuries. That does not mean that we want copies or imitations of that glass. One of the greatest errors I think we architects make is that good architecture is reproduction of old architecture. It is not. You have got to have a base to work on; but if you rest upon that basis, that springboard, you get nowhere. You must use that as your point of departure." It was with this principle in mind that the designs shown on these pages were made.



STUDY FOR MODERN STAINED GLASS BY NICKELSEN



TWO MODERN DESIGNS FOR STAINED GLASS WINDOWS BY NICKELSEN (SEE PAGE 365)

ARCHITECTURAL ABLUTIONS AND OTHERWISE

By "An Ablutionist"

THE HIGHLY ENTERTAINING essay on architectural ablutions by William Williams which recently graced the pages of this magazine contained much food for thought, even though we do not all necessarily agree with the conclusions he reaches. Differences of opinion on the need for washing originate rather early in childhood, if we remember correctly, particularly with the male of the species. There would be much to be said in favor of an argument on the part of any about-to-be-washed small boy that in his normally grimy condition "he fitted into his surroundings much better than when washed and polished."

The impartial bystander observing the small boy's behavior during and after the cleaning operation would be led on the basis of this one viewpoint to dispute the saying that "Cleanliness is next to godliness"—or he would if the small boy he was observing was anything like the small boys I have seen under comparable circumstances.

After all, isn't it a fact that washing is one of those things that one has "to be able to take or let alone" as they used to say about certain pre-war fluids, not ordinarily used for cleaning purposes (unless for taking the varnish off the tops of desks and tables in nice circles just the size of a tumbler bottom). There is, as yet, no prohibition law to decree that buildings shall not be left dirty if the owner so desires.

And that word "dirty." It reminds me of the question that Harry Saylor asked in the "Editor's Diary" a month or so ago anent the present condition of the once-white marble of the New York Public Library:—"When does a building have *patine* and when is it just plain dirty?" A civic monument located at a distance from the railroad yards or an industrial center may indeed mellow pleasantly and acquire a *patine* which fits it even more agreeably into its surroundings than the hand of the designer was able to do. Or, sad and awful to relate, it may be so located that on its roof it collects every year thirty-odd tons of dirt and soot as it is said the Art Institute on Michigan Avenue, Chicago, used to do before the electrification of the nearby railroad.

Even the most confirmed enthusiasts on *patine* will hardly be likely to shed a rapturous tear over the Art Institute's present condition, as compared with the mellowness acquired by its historic prototypes in Italy without benefit of soft coal smoke and city grime. It is hard to conceive of the building in its present condition as adding anything to the beauty of its side of Michigan Avenue, save, shall we say, as one of those jet black points of emphasis that helps so much

when one is engaged in dressing up a pencil sketch.

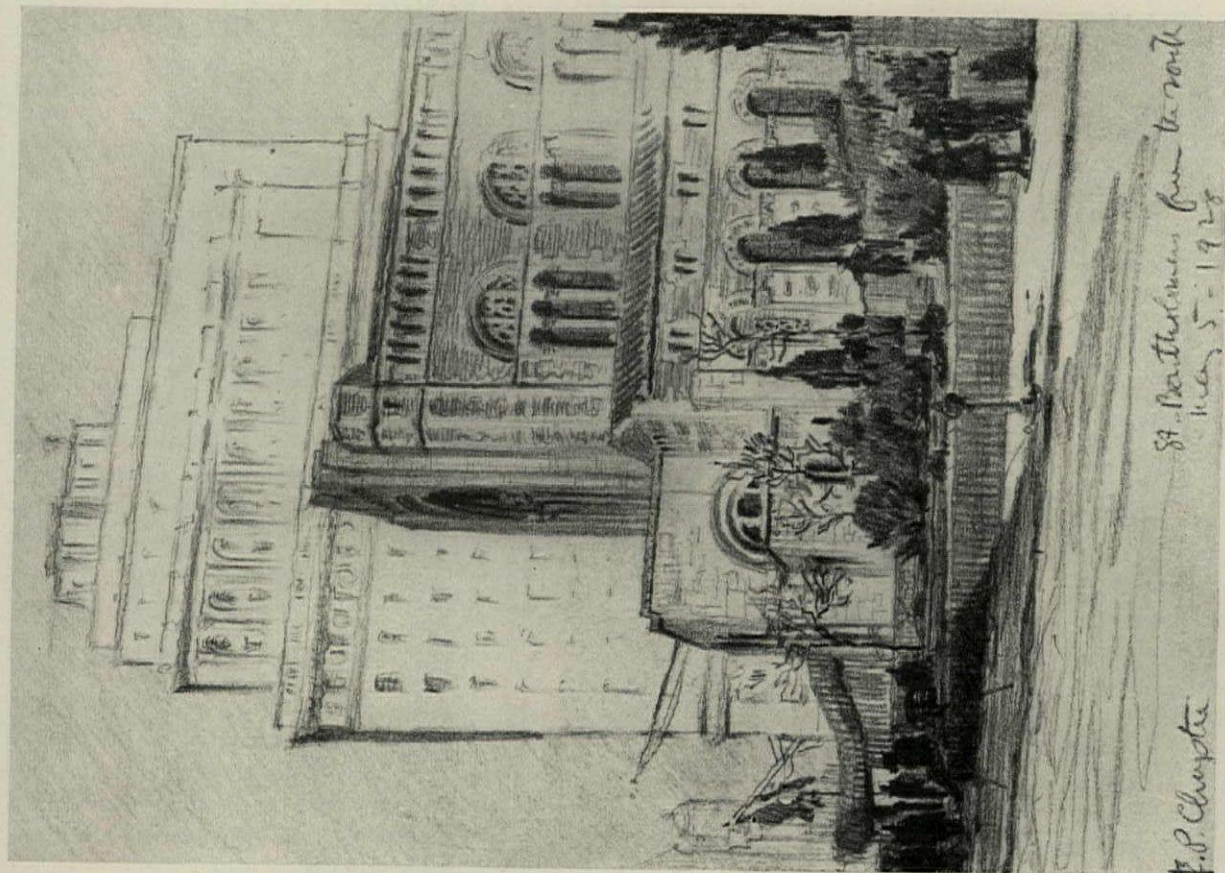
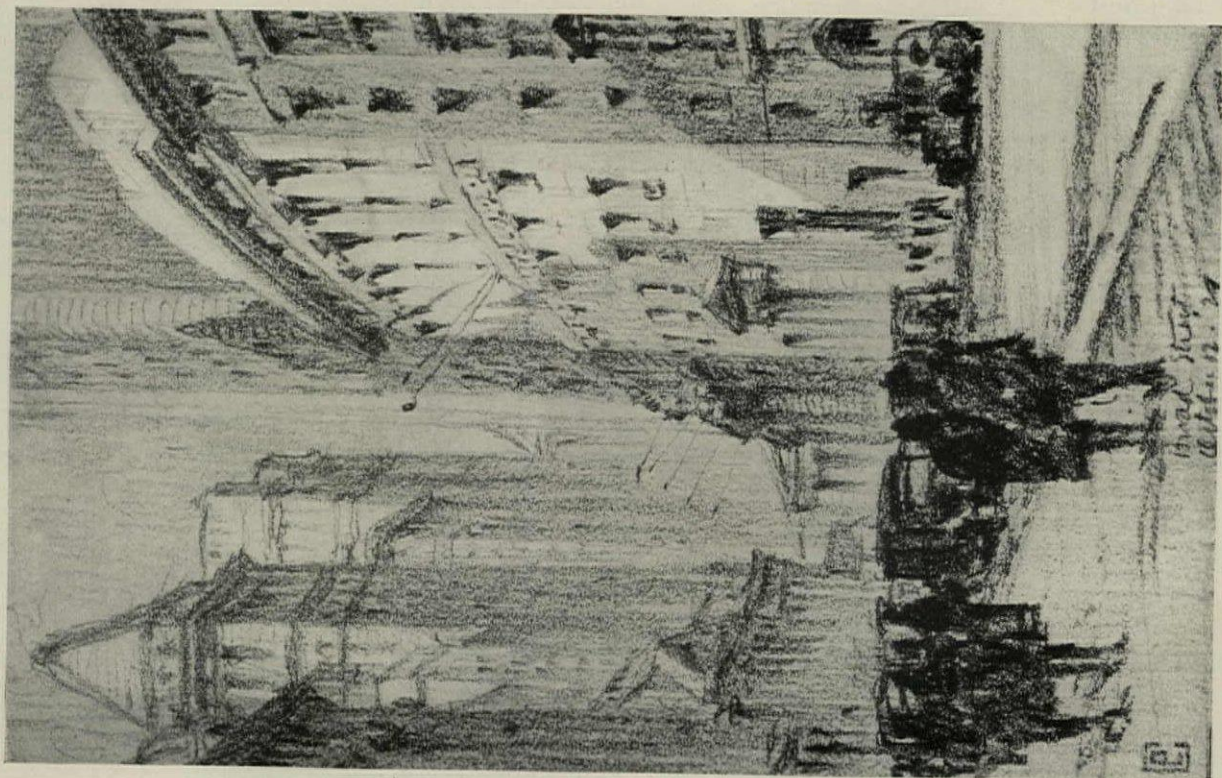
Perhaps there is considerable truth in the hypothesis "If after all, architecture has nothing to do with its surroundings . . . let them sandblast the thing."

It is undoubtedly true that monumental architecture should have (though actually it often hasn't) everything to do with its surroundings, and even a confirmed architectural ablutionist will concede that fact and agree to say with the anti-ablutionists "Washman, spare that building" if said building has acquired a true *patine* and been improved by it. (Mebbe that's what is needed by a lot of buildings we know, but we always thought just plain good design would have helped a lot.)

On the other hand, the writer is almost distressingly familiar with most of the major American cities from Coast to Coast, and it is difficult to go down the streets of the business section of any of them and prove that many individual commercial structures have anything to do with their immediate surroundings, architecturally at least.

This, again, may be as wrong as several of our well-known laws are supposed to be, but it is a fact, and it is questionable whether or not washing or cleaning makes the case any worse. On the whole it is the writer's personal feeling that perhaps the judicious application of soap and water, to the buildings that can be cleaned in that way, or the use of sandblast or steam jet on the materials that need it, is not altogether detrimental to the tone of the neighborhood. It sort of keeps things policed up—on their toes in the way that the polished buttons of a peacetime uniform do.

And after all should the worst come to pass, and an overwhelming desire for external as well as internal cleanliness seize upon the Nation, the anti-ablutionist has one grain of comfort left. If he is half the designer that we are sure he is, and knows as he must the capabilities of the materials at his disposal, he will, without violating any of his finer perceptions, use the materials, surface textures, colors and glazes which will give him the *patine* he wants, *right off the bat*, (technically speaking). Thus he will make his building fit into its surroundings—even though they don't surround it—and enjoy the unholy glee of knowing that in spite of all that can be done with soap and water or steam jet his building even when painfully clean will still have the appearance of age—if he can find an owner foolish enough to want to put up an "old" building to compete with the obviously new ones on every side.



TWO PENCIL SKETCHES BY EDWARD P. CHRYSTIE OF NEW YORK

AT THE LEFT, A FAMILIAR VIEW OF BROAD STREET DONE WITH LITHOGRAPH PENCIL—AT THE RIGHT, ST. BARTHOLOMEW'S IN GRAPHIC PENCIL.

ARCHITECTURAL REGISTRATION

AN ADDRESS DELIVERED TO THE A.I.A. REGIONAL CONFERENCE OF THE THIRD DISTRICT AT BALTIMORE, MARYLAND

By Clarence W. Brazer

EDITOR'S NOTE: Mr. Brazer is President of the National Council of Architectural Registration Boards, President of the Pennsylvania State Board of Examiners of Architects, a member of the A.I.A. Committee on Uniform Registration Laws, a member of the Executive Committee of the Philadelphia Chapter A.I.A.

Director Ingham and gentlemen: This Conference is composed of the representatives of architects in several neighboring States. I assume, therefore, that the reason why the President of the National Council of Architectural Registration Boards is asked to speak here today is to explain to the architects of these States the facilities that exist, to make it easier for us to live and work together happily, not only in our own States, but in neighboring States.

New Jersey in 1902, Pennsylvania in 1919, West Virginia and the District of Columbia all in this District, have passed registration laws which set up levels of attainment that a person must have to be called an "ARCHITECT" or a "REGISTERED ARCHITECT." There are some 28 or 30 States that have similar laws. These laws are not uniform, perhaps never can be, because practice varies so much in the various States. Practice in a large State like New York, Illinois, or Pennsylvania is quite different from practice in the smaller States on the frontier of architecture, so that perhaps we will never be able to attain the ideal uniform registration laws that the Institute tries to obtain through its Committee on Uniform Registration Laws. However, if we can eventually obtain laws which are fairly uniform in all States, it will do a great deal to make practice easier for all of us, not only those in the States that do not yet have registration laws, but those who have their office in States where practice is regulated.

Unfortunately, Delaware and Maryland, in this district, do not yet have such registration laws and the architects in those States are under a considerable handicap when they have a client who wishes to erect a building in another State where these restrictions and regulations set up barriers they must hurdle in some way before they may legally serve their clients.

THE NATIONAL COUNCIL

There has been a lot of misunderstanding and some little complaint by architects in some States who do not know the facilities that are provided to make it easier for them to practice in other States. Architects really have it easy in this connection, compared with lawyers. In Pennsylvania the Bar Association in each county may make its own rules, and if a Philadelphia lawyer wants to practice in Delaware County (which adjoins Philadelphia) he must associate himself with a Delaware County lawyer and cannot practice there without doing so. So, architectural practice is not quite so difficult as it might be, but in an effort to eliminate such difficulties, the National Council of Architectural Registration Boards was formed in 1920. It is composed of the members of the Registration Boards in the various States, and most of the States having Registration Laws are members of this National Council. New York, I think, is the one big exception. There the law (while they have a State Board of Examiners of Architects) is under the administration primarily of the

University of the State of New York, and the State Board of Examiners is only a portion of that great University, and the University itself has not seen its way clear to join the National Council.

The object of the National Council, to quote from its Constitution, is "*To foster the enactment of uniform architectural laws; quality or standard in examination of applicants for State registration or licensing, and the establishment and maintenance of reciprocal registration between States having registration laws.*" That object is endorsed by the first article of its By-laws which states in furtherance of its object, as set forth in the Constitution, "*to facilitate the reciprocal transfer of registration to any State of an applicant who is registered by examination in the State from which he applies.*"

REGISTERED BY EXAMINATION

There are several ways in which an architect is registered. The one mainly set up by registration laws is by a written examination. In Pennsylvania, anyone may take the written examination who is 25 years of age, and a citizen, having equivalent education of a high school graduate. Other States require more education than that before one may take the written examination, and in such States the written examinations do not have to be so severe as they do in Pennsylvania. Where you have to take all comers the examination must sort out the chaff from the wheat. If you have only wheat to examine, your examination does not have to be so stiff. That is one reason why we try to be so careful in Pennsylvania.

The architects who have passed a written examination in any State have little difficulty in practicing in another State if they apply through the National Council. Write to Mr. Emery Hall, the Secretary of the National Council, at 175 West Jackson Boulevard, Chicago, and obtain an application blank. A fee of \$20 is required, and this application blank is filled out by the applicant. Questions are asked as to a number of subjects that are required in various States. These blanks are prepared in order to furnish the information required to the Boards in various States. It is a standard blank, and when you once furnish that information and it is investigated (as it is very carefully) then there is on file with the National Council a tabulation of a man's abilities as of the date that he applied.

Whenever an Architect who is Registered with the National Council wishes to practice in another State, he simply forwards a fee of \$10 to the National Council and requests them to forward this information and his new State application which he has to fill out with the necessary State fee, to the Board in the State in which he desires to practice. It is the custom of most of the State Boards that maintain membership in the Council, upon the receipt of such an application and information from the National Council . . . secretary's office, not waiting for

a regular meeting of the Board, which in some States only occurs once a year and in some States more often . . . that information is transmitted to each of the members of the Board. They take a letter ballot, and if a majority of the members vote for the passing of that applicant, he is immediately passed, and the action is formally approved at the next meeting of the Board, so that it is a quick way after the information is once on file.

Careful investigation is necessary in order to assure reliable information, and in order to prevent fraud—there are applicants who try to obtain their certificates by fraud. They may use the name and the practice of someone who has died. They may use other means. And for such reason this application blank is very searching in its questions. A photograph is required and there are other requirements that may seem irksome at the time, but when once complied with make it very easy thereafter. It takes, on an average, about three months to get that information and get it thoroughly investigated, because the National Council writes to everyone that is referred to. They write to the examining authorities in the applicant's home State, to the registrars of the schools he attended, to former employers, to three of his clients, to three architects, and to professional and technical societies that he belongs to, and everything that he states is verified before that information is transmitted to the other States. However, that is practically the end of his troubles.

REGISTERED BY EXEMPTION

The architect who was in practice prior to the passage of these respective State laws was, for constitutional reasons, entitled to continue to practice under certain restrictions as an Architect because it is unconstitutional to take his means of livelihood away from him, and he was therefore registered by what we call exemption. Or in New Jersey he may be "Registered by Exemption" because he is a member of the A.I.A. An architect registered by exemption may have been a man with only a carpenter's ability at the time, but if he had called himself an architect for a number of years and was serving in his community without much trouble, the laws made it possible that he could continue to practice as an Architect and in some cases as a Registered Architect. For that reason, an "Architect" or a "Registered Architect" by exemption is not generally accepted in another State. If you are "Registered by exemption" your troubles are hard unless you apply to your State Board for "Registration by examination."

If an Architect has been in practice more than ten years, he may take what is called the National Council "Senior examination." That examination consists of the submission of about 18 photographs of examples of the varying character of a man's work during the ten years or more that he has been in practice, and then he is asked to bring three or more sets of drawings and specifications to the Board in his home State, and generally is asked to explain his mode of procedure and practice in the erection of that building, and as to his particular knowledge and part in that work. The National Council requires that such a man be examined in each of the five fundamental parts of practice, so that a man cannot very well get passed by Senior Examination by Registration Boards unless he has a pretty fair, general all-round knowledge of the practice of Architecture.

So if a man passes the senior examination of his home State Board where his record is known, then he may apply to another State as Registered by Examination.

The man who has not been ten years in practice, and therefore cannot claim to be a senior architect, is ineligible

to practice in another State under most laws without taking a written examination of that State and in some States some Boards still insist upon an applicant from another State personally appearing before the Board in that distant State. This National Council method, where it is adopted, makes that unnecessary.

GRADUATE APPLICANTS FOR REGISTRATION

If we can bring up and train the younger men to take the written examinations rather than the oral examinations which Register them by Exemption, we will do a great deal toward making their way easier in the future. The college graduate today, with three years' experience in an architect's office during which he is supposed to obtain a certain amount of practical experience, may then apply for registration by means of a half hour oral examination, which is a partial exemption. He may take the written examination in Pennsylvania without any experience either before or after graduation. I think that is a mistake, and most of the States require two, three, or four years of practical experience in addition to any theoretical training that he may have. But this term of "practical experience" is one that has had various interpretations, and for this reason the National Council last year appointed a committee to define practical experience. I want to read you that definition:

"BE IT RESOLVED THAT"

"'Practical Experience' shall constitute at least three years active participation as assistant to a legally practicing Architect, two years of which must be subsequent to graduation from an accredited architectural school.

"Such experience shall include at least six months' participation in each of the five fundamental functions of an Architect, including

- a—preparation of preliminary studies and sketches.
- b—preparation of working drawings as a job captain.
- c—preparation of detail drawings and checking of shop drawings.
- d—participation as clerk of the works, the auditing of Contractor's accounts for issuance of certificates, and authority over contractors in responsible charge under his principal on at least one non-fireproof, and one fireproof building, each costing over \$25,000.
- e—preparation of specifications and contracts.

"Written evidence of the above shall be submitted in the form of an affidavit, from his employer or employers.

"BE IT FURTHER RESOLVED THAT:"

"A copy of the above two resolutions be forwarded to the Board of Directors of the American Institute of Architects with the suggestion that it be referred to the Committee on Ethics for consideration as to the duty of the Architect towards his assistants with view to advising the Architect to permit his assistants to obtain such practical experience upon their request."

That is going to take five times six or thirty months as a minimum, even if he jumps immediately at the end of each six months. Most of the members of examining boards believe that it is a very exceptional architectural graduate that can become a rounded, practicing architect within three years after graduation. Few of them can do so in five years and New York is one of the States wherein they require five years.

I believe that Pennsylvania should in time raise that requirement to five years. You would be surprised at the large number who just come up to try to get a bird's-eye view of what they will be asked, and then keep coming and coming every six months, or a year, as we give them a chance. In that way they sometimes learn enough, eventually, to pass.

In the Oral Examination general leading questions are asked to find out whether the applicant is fully qualified and competent to practice with credit to himself and to the profession, whether he is competent to serve and fully protect his client, the public, and himself. Whether he is competent to direct and assume responsibility for engineers he may employ, competent to electrically light and protect a building and also about heating and safe construction. In Washington, at the National Council conferences, we get some idea of what other Boards are asking and in that way there is a certain uniformity established. If one State would not be so particular, their Registered Architects would not be accepted in other States where the laws require that reciprocity shall only be extended to those where the requirements are equal. For instance Pennsylvania does not consider certain States as having the equal of the requirements of the Pennsylvania law. The standards set up by some State laws would not be equal to those set up by the Pennsylvania law, and therefore the Pennsylvania Board is unable to accept a man from such a State until he furnishes evidence that he has attainments equal to those required by the Pennsylvania law.

A man who is primarily only a picture maker is a dangerous man for an architectural registration board who must certify that he is thoroughly competent and qualified to design and erect a building. It was because of such cases that architectural registration laws became necessary.

The failure of the theatre roof in Brooklyn under a heavy snow load and a similar one in Washington, where a number of people were killed because of inefficiency, caused the legislatures of several States to accept the architects' plea for laws establishing rules and regulations for attainment necessary to enter Architectural Practice.

As we all know, many large architectural offices are conducted on a system that rather exploits the man. If he is a good water color or perspective man, he is kept at that and not given much experience in supervision or specifications. If he is a good specification man, he is not given an opportunity to design, etc. One object of this resolution is to endeavor to impress upon the architects of the country that they have a duty to their draftsmen, who are the coming architects, to properly train and make them ready to practice their profession. Without it, the profession of architecture is not likely to improve as much as it will with it, and some offices in which this system is in effect have remarkable results when their men come up before State Boards of Examiners. Dr. Paul Cret's office is one of those that comes to mind. In that office a college graduate after sufficient drafting-room experience is made the job captain. He may have several assistants, but works it up from its initial stages. He prepares the design under criticism of the principal. He carries through the working drawings and details and writes specifications which are submitted to the principal and then he is given an opportunity to go out on the job and inspect it and handle both client and contractor right straight through. Now, when such men come up before a State Board of Examiners they are generally able to prove that they are rounded men, that at that time at least they have a rounded knowledge and are competent to practice.

After a man is registered, there is perhaps no reason why he should not specialize in the one branch that is easiest and best for him, but at the time he is registered he must satisfy the State Board that he is competent to practice on his own ability without help from anybody else, exactly as he must pass his final college examinations before he may be graduated.

The main plea I wish to make here is to ask architects

generally to adopt this fatherly interest in the young fellows in their offices, and if they will point out to them how desirable it is, and give them the opportunity, to get six months' experience in each of the five functions of an architect, when they do take their examinations they will be rounded men and a credit to the office from which they are graduated.

"RACKET" OF THE REGISTRATION OF ARCHITECTS

SURELY THE LETTER of Mr. Sullivan Jones, which appears on page 206 of your March issue, headed *A Letter from Sullivan W. Jones to Charles Butler*, deserved a more conspicuous position and a more arresting headline. It seems to me a *very* important document and one of far more interest to the vast body of architects who carry on their "profession," frankly as a business service, than to those who, like myself, are more interested in the subject of architecture and care little how the "trade" is regulated, or by whom, but who believe in free interstate commerce.

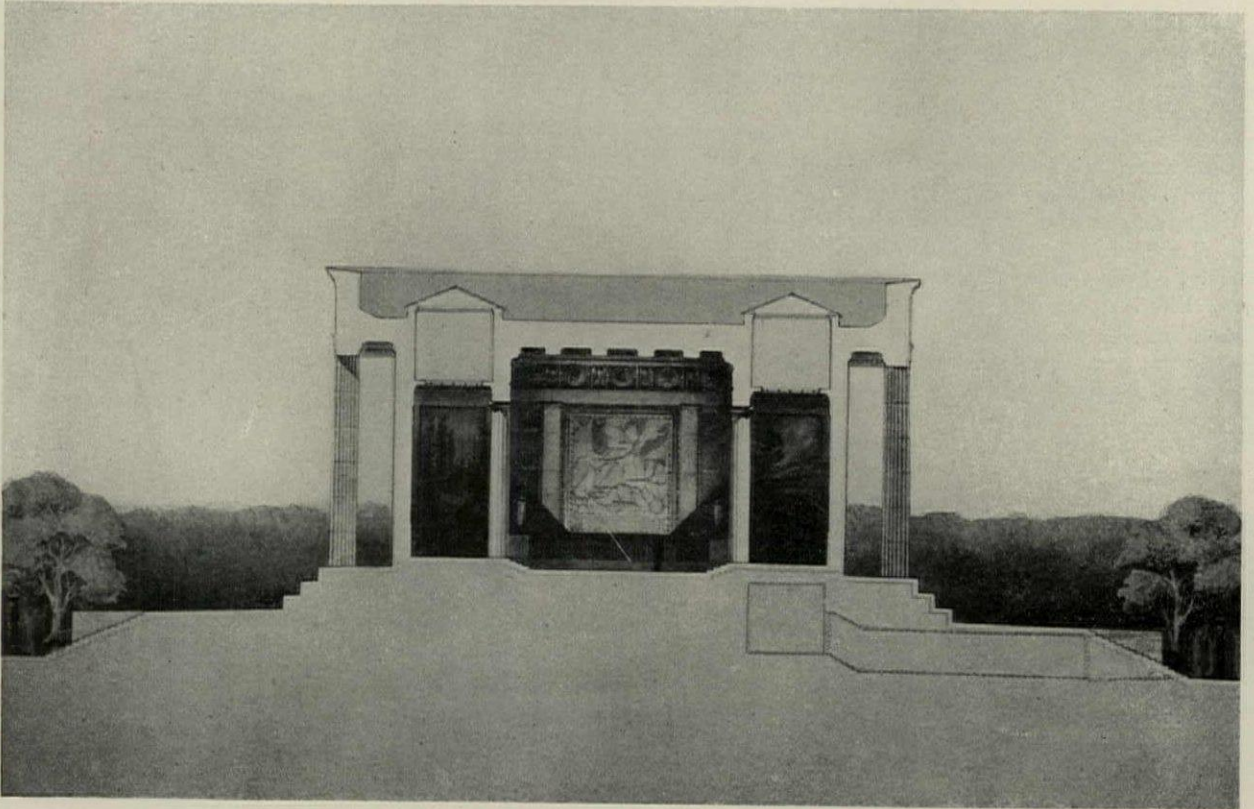
Mr. Jones focuses many individual opinions in stating that the situation under "the so-called Architects' Law in the State of New York" is over-ripe for a "racket." The fact that the law *is a racket and is not honest in its purposes* is but hinted at; which is all, perhaps, that is necessary to enable any intelligent person to comprehend "the situation," and that the law in toto ought to be amended into "innocuous desuetude."

Mr. Jones suggests amendments to liberalize the law, and points to the provisions for more drastic application in the future, and to the evident fallacies of theory underlying such provisions. Briefly that the law creates a profession of "aristocrats" and "a precise curriculum for the preparation of an architect," and violates "the principle of equal opportunity."

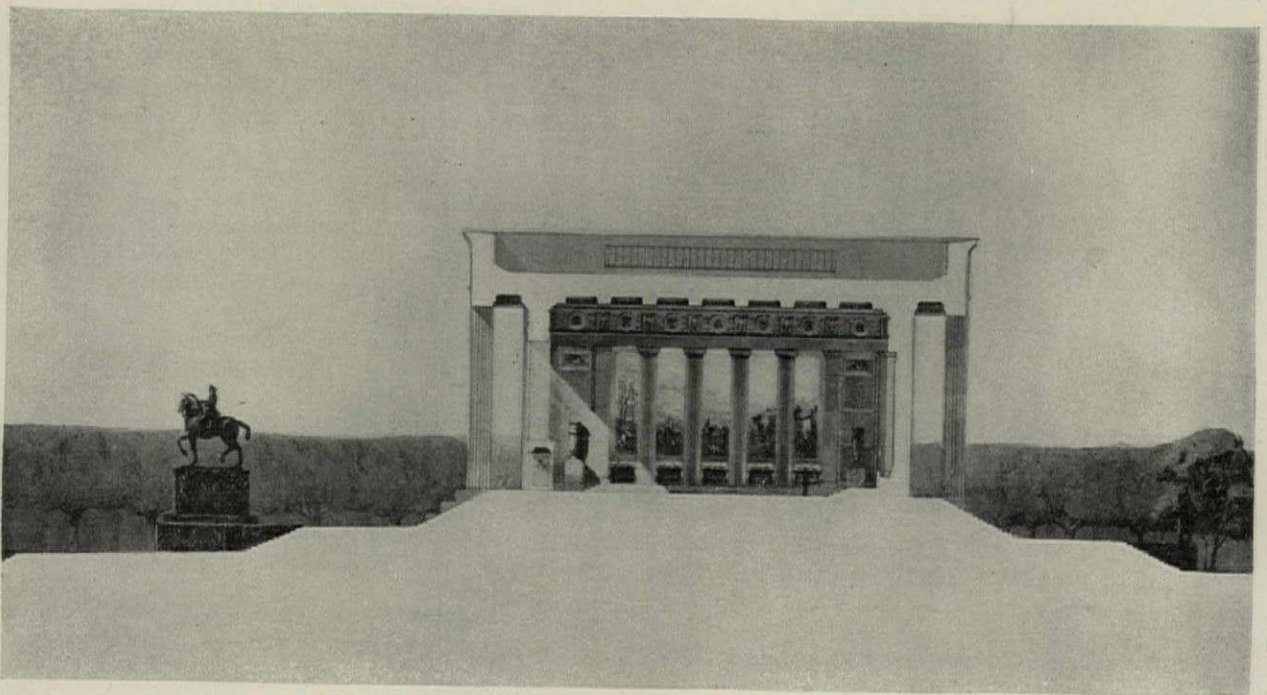
"We architects are interested primarily . . . not in the mechanics of the applicant's education but in his qualifications to practice his profession at the time of his application," and "any law which arbitrarily debars an applicant from taking an examination to demonstrate his ability to pursue his chosen vocation is bad law, whether it be constitutional or unconstitutional," are statements by Mr. Jones which, assuming the law to be intended for the public welfare, are beyond dispute. But is it the "qualifications" of our would-be *confrères* in which "we architects are interested primarily?" Are not "we architects" somewhat interested *primarily* in *keeping out extreme competition*? Have not the personages who have been most active in promulgating the registration laws been of the types most affected by young, strong, and ambitious talent? And, if the arguments they have used in obtaining the passage of such laws are true or reasonable, should not they *themselves* be "examined," and, if found wanting, be excluded from practicing? Is not any law, the passage of which is obtained by obviously false and misleading preambles, or statements of purpose, a "bad law?" And is not the total effect of the law, in any form, to "bring down upon the profession the scorn and ridicule of the public?"

Mr. Jones makes some very good points in stating that "Legislation affecting the practice of architecture should be initiated by the Profession" (the whole body of architects, regardless of membership in the A.I.A.). "If it is not so initiated someone or some group will certainly capitalize the opportunity. I need not remind you or the Conference that there is a real danger of that happening."

(Continued on page 99, Advertising Section)

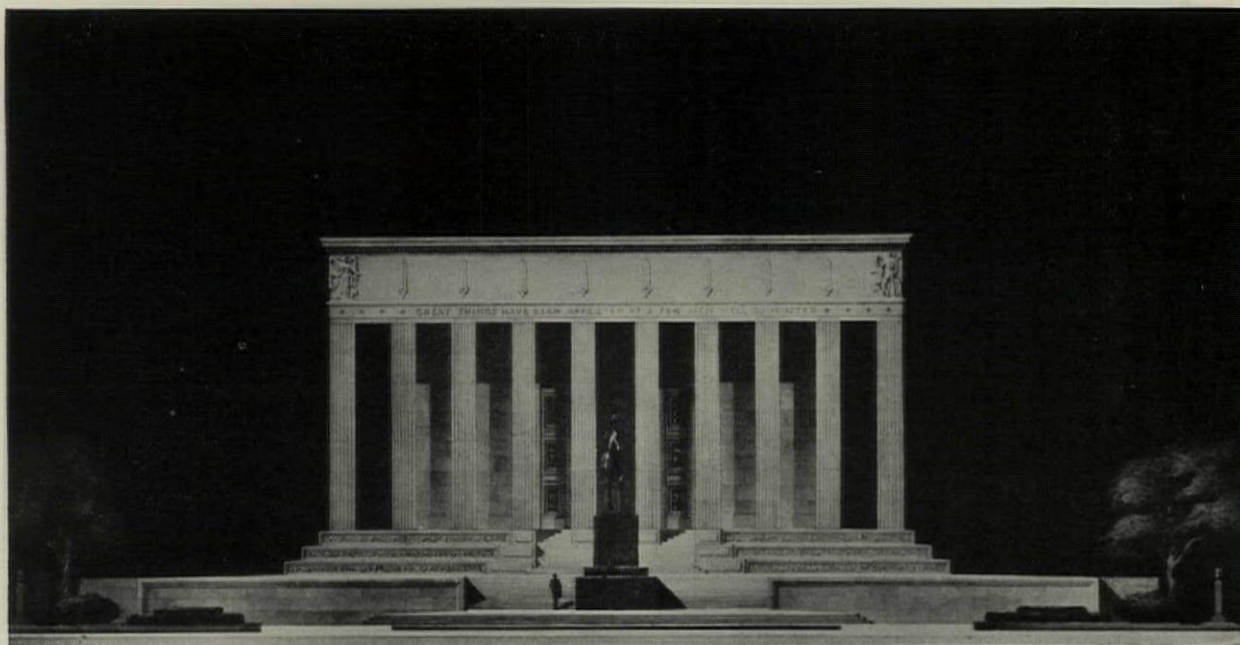


TRANSVERSE SECTION



LONGITUDINAL SECTION

DESIGN SUBMITTED BY PAUL P. CRET, AND ZANTZINGER, BORIE, AND MEDARY, ARCHITECTS
COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL



DESIGN SUBMITTED BY PAUL P. CRET, AND ZANTZINGER, BORIE, AND MEDARY, ARCHITECTS

COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL

REPORT OF THE JURY OF AWARD

IN THE APRIL issue we presented the Winning Design by Hiron and Mellor, Architects, for the George Rogers Clark Memorial and in that same issue a brief résumé of the program was published on page 295. In this issue we show some of the other designs submitted, together with the Jury Report which follows:

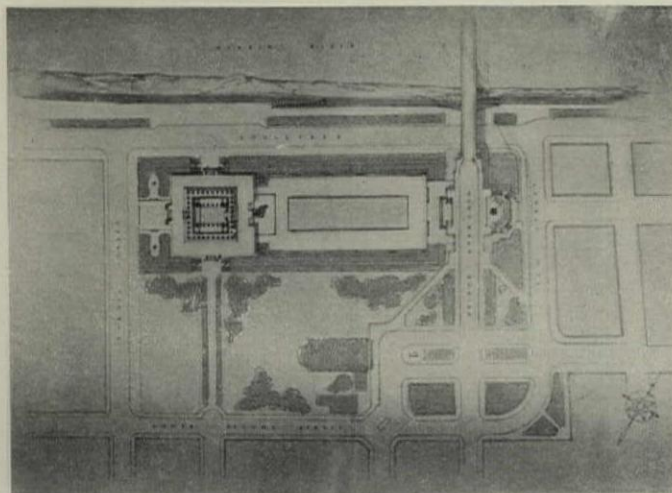
"In conformity with the requirements of the program, the Jury begs to submit its report covering the selection of the design for the George Rogers Clark Memorial.

"The Jury convened February 3, 1930, at 2:00 P. M. and continued its study of fifty-one designs submitted, until the afternoon of February 5th.

"The Jury wishes to record its gratification with respect to the high order of technical excellence that characterized the designs submitted. The Jury first examined the site and became fully acquainted with the surrounding conditions. This study served to establish a criterion with respect to plan and mass. The location is such that the structure will be clearly seen from many points of view. While it must serve as an adequate terminal motive of a composition, the long axis of which runs

through First Street, it should appear equally impressive when viewed from any angle.

"In approaching the problem of final selection the Jury had before it a considerable number of designs that would yield commemorative structures highly satisfactory in respect to both mass and detail. In making the final selection the Jury turned to a design that not only satisfied the technical requirements of good mass and detail but proclaimed in no uncertain terms its commemorative function with the same simplicity and vigor that characterized the men and events which it is the purpose of the structure to recall.



PLOT PLAN OF DESIGN BY PAUL P. CRET, AND ZANTZINGER, BORIE, AND MEDARY, ARCHITECTS

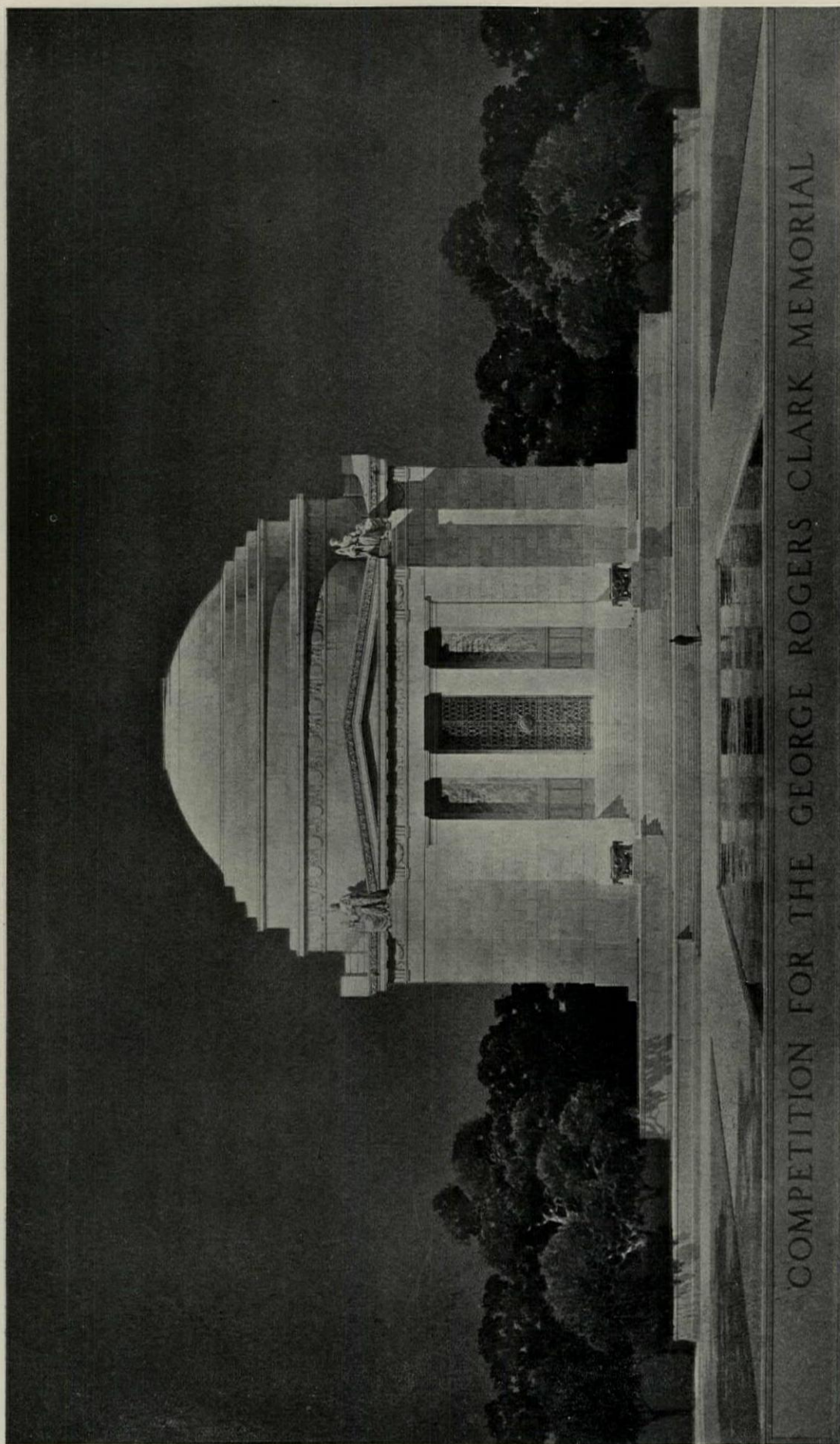
"The Jury by majority vote in accordance with the conditions of the program has selected design No. 28 [by Hiron and Mellor].

Respectfully
submitted,

D. FRANK CULBERTSON
LUTHER E. SMITH
LEE BURNS
FREDERICK L. ACKERMAN
WILLIAM MITCHELL
KENDALL, *Chairman.*"

The memorial will be erected at or near the site of Fort Sackville, in the City of Vincennes, Indiana.

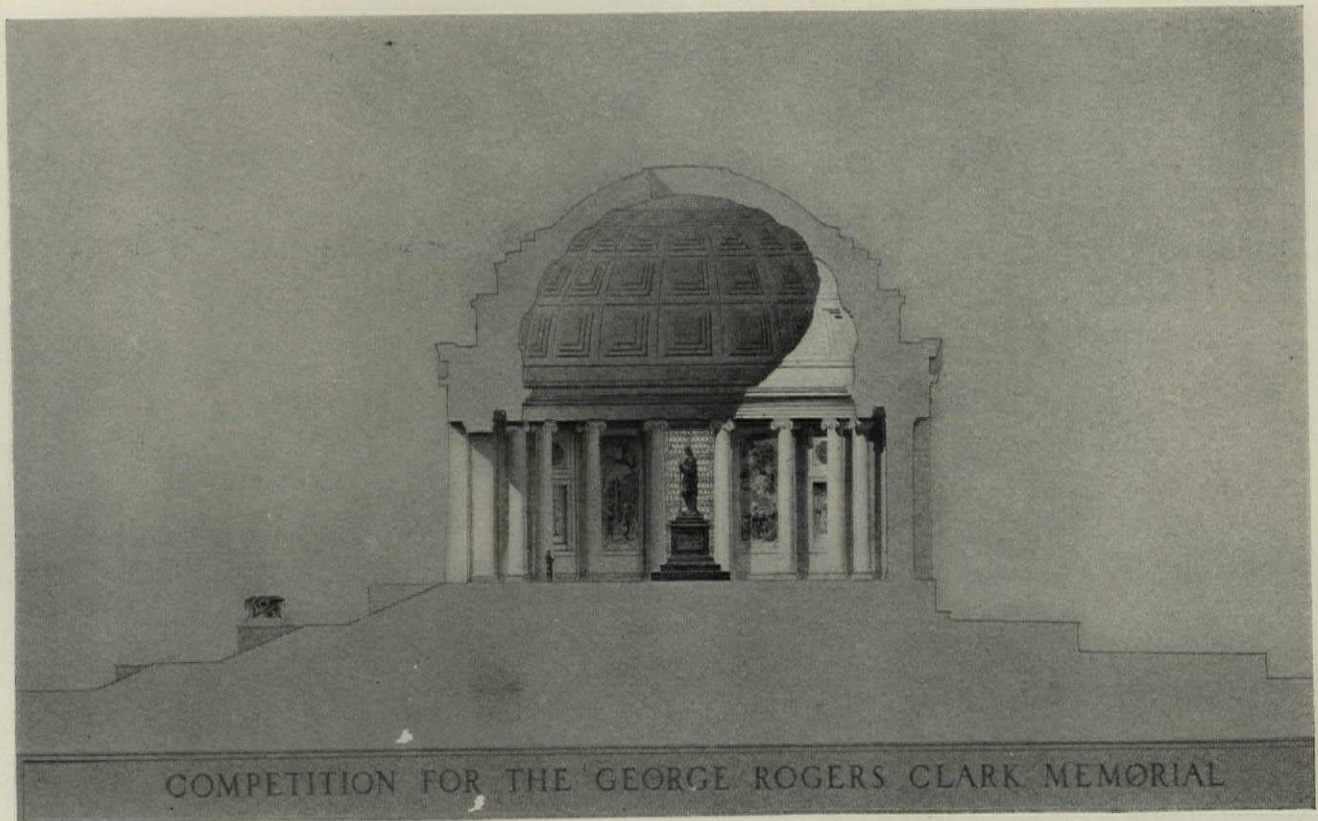
PENCIL POINTS FOR MAY, 1930



COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL

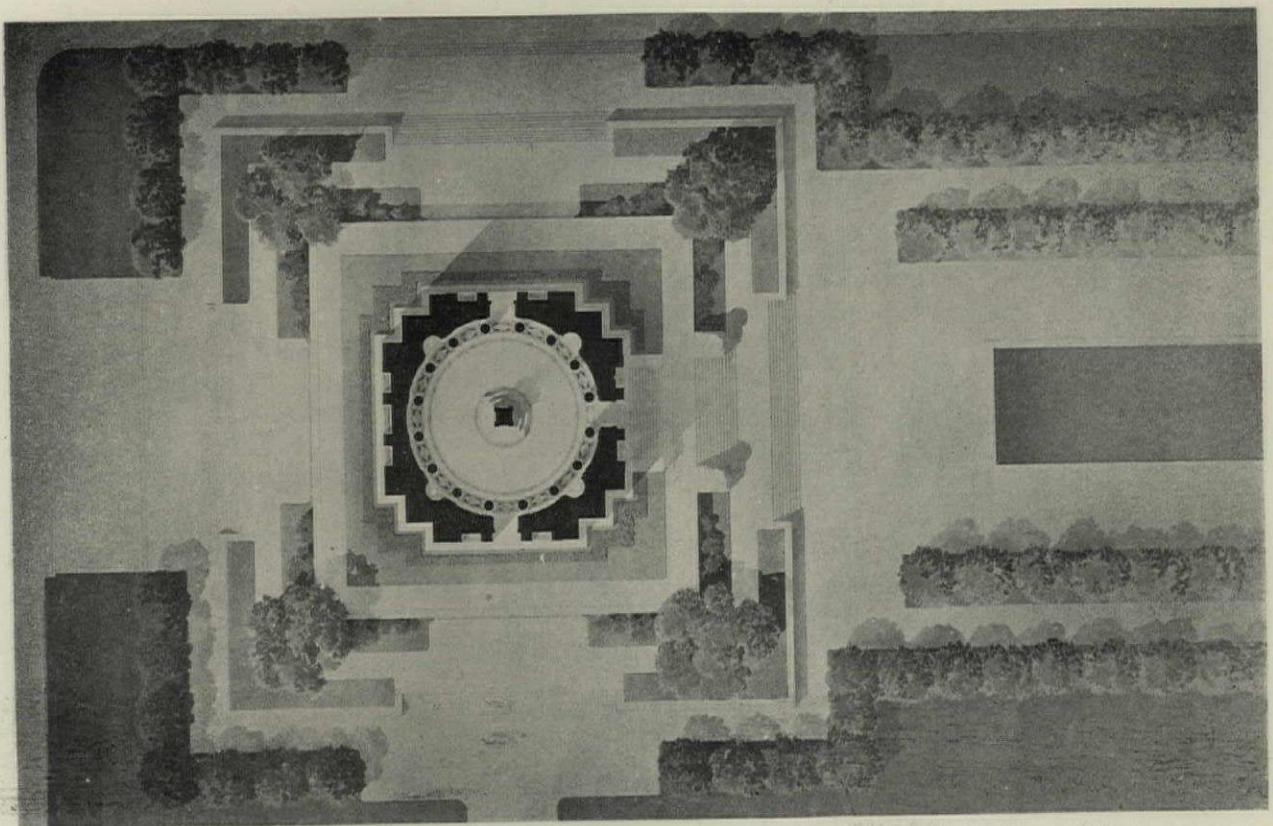
DESIGN SUBMITTED BY THE OFFICE OF JOHN RUSSELL POPE, ARCHITECT
COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL

(See Jury Report on page 373, and text on page 295, April issue)



COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL

SECTION

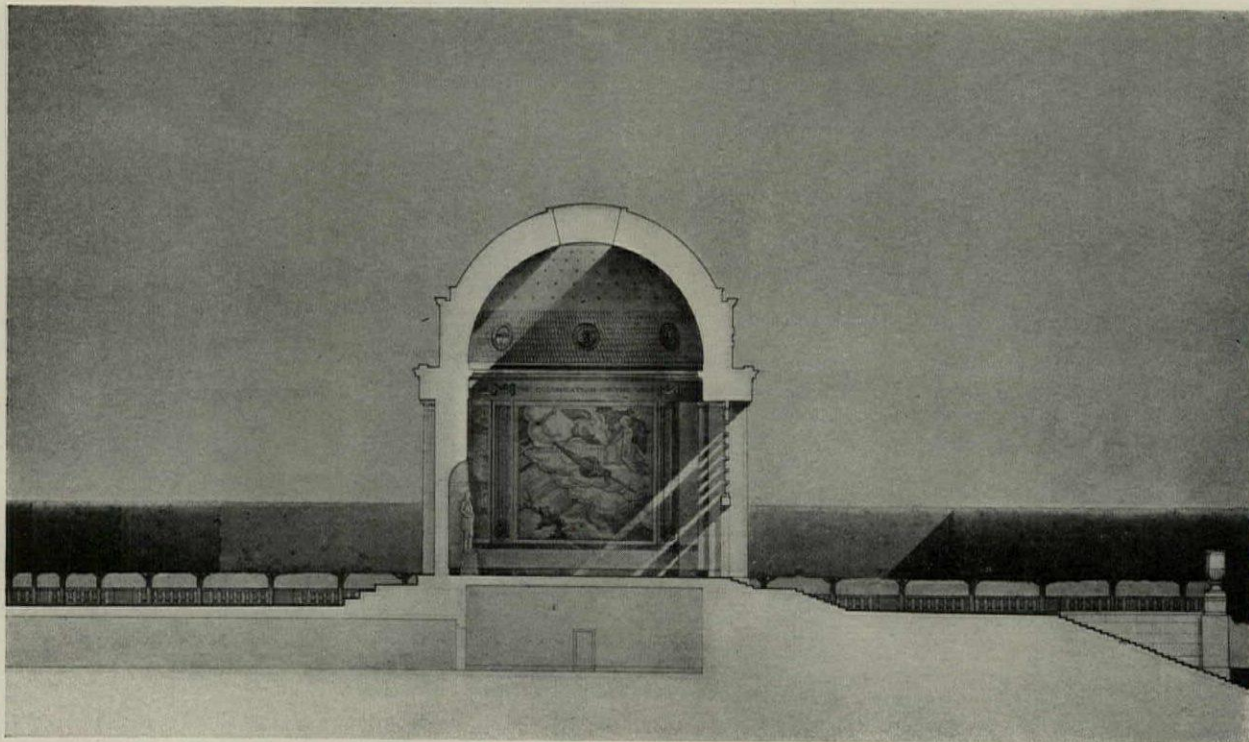


PLAN

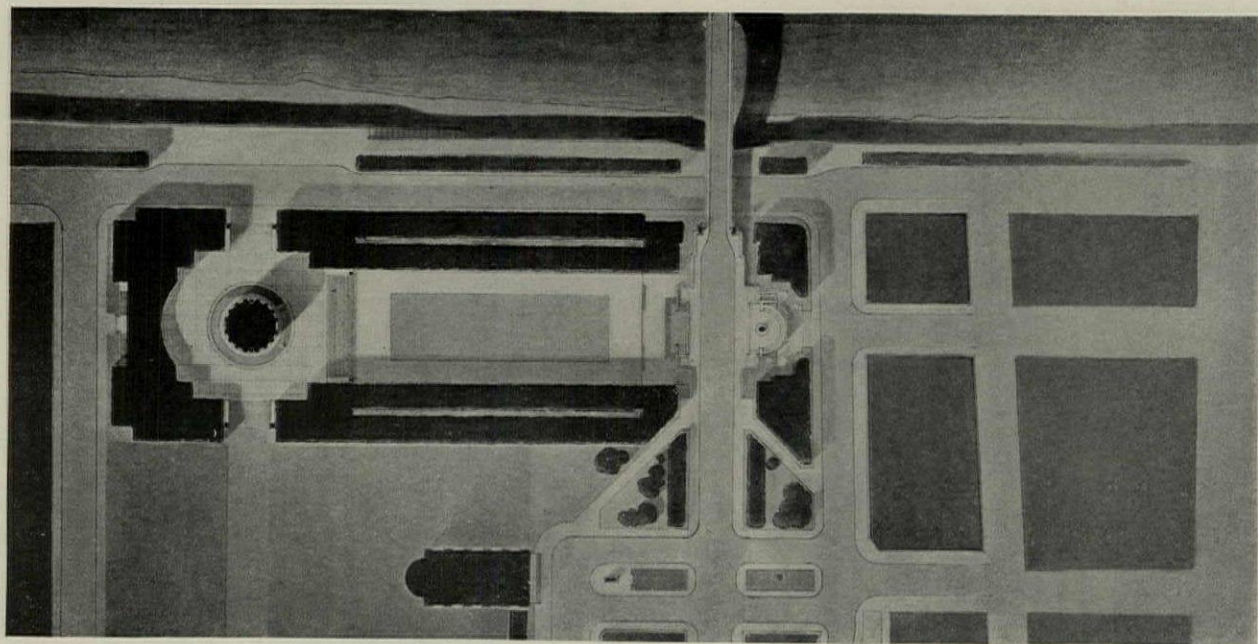
DESIGN SUBMITTED BY THE OFFICE OF JOHN RUSSELL POPE, ARCHITECT

COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL

(See Jury Report on page 373, and text on page 295, April issue)



SECTION



PLOT PLAN

DESIGN SUBMITTED BY THOMAS HARLAN ELLETT, ARCHITECT
(See Jury Report on page 373, and text on page 295, April issue)



DESIGN SUBMITTED BY THOMAS HARLAN ELLETT, ARCHITECT
COMPETITION FOR THE GEORGE ROGERS CLARK MEMORIAL
(See Jury Report on page 373, and text on page 295, April issue)

CONSTRUCTION SURVEY CONTRACT AGREEMENT

COPYRIGHT 1929 BY THE CONSTRUCTION SURVEY CO.

ACCEPTANCE

IN FIRMATION THAT, the Construction Management Co., of New York, N. Y., the Seller, agrees to manage the erection of items written or drawn in the contract documents of the Investment Building, at New York, New York for the prices quoted in an itemized construction survey contract proposal herewith attached, dated the Twenty-First day of February, A. D. 1930.

AND

IN CONSIDERATION THEREOF, the Investment Co., of New York, New York, the Buyer, agrees to pay the Seller on or about the 15th day of each month the quoted prices for the items erected in the structure during the current month upon a requisition verified by the Construction Surveyor and certified by the Designer.

DOCUMENTS

THE EXECUTION OF THIS AGREEMENT is based upon the hereinafter enumerated contract documents:—

- (a) Construction Survey, pages dated; 1-10 inclusive: Feb. 1, 1930
- (b) Drawings, numbers dated; 1-8 " ; Jan. 20, "
- (c) Specifications, pages dated; 1-40 " ; " 20, "
- (d) Revisions, numbers dated; 8-10 " ; " 25, "
- (e) Supplements, pages dated; 41-45 " ; " "

AND

THE SELLER AND BUYER for themselves, their heirs, successors, administrators, executors, and assigns hereby agree to the full performance of the covenants herein contained.

EXECUTION

IN WITNESS WHEREOF they have executed this agreement on the Twenty-Fifth day of February, A. D. 1930 at New York, N. Y.

Construction Survey Co. SURVEYOR Construction Management Co. SELLER
By G. Szmak, Mgr. By W. C. Hart, Mgr.

Construction Design Co. DESIGNER Investment Company BUYER
By Philip Pavia, Archt. By W. E. Burbank, Pres.

STATE OF NEW YORK
ss. City of New York, on the 25th day of February, A. D. 1930.
COUNTY OF NEW YORK

W. E. Burbank, Pres. personally appeared before me and has acknowledged to be the Buyer having executed the foregoing agreement in the absence of any other witness.

John Jones, Notary
SEAL

CONSTRUCTION SURVEY CONTRACT SPECIFICATION

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INSTRUCTIONS TO BIDDERS

Instrument of Purchase
The basis of this purchase is a construction survey, which shall be an integral part of the contract documents. It is therefore unnecessary for the bidder to prepare a survey.

Definition
A construction survey is the scientific analysis of the parts for assuring the economic value of the structure.

Method of Analysis
The quantity and quality of each item is measured and tabulated as drawn and specified or as it physically exists in the structure.

Form of Proposal
The construction survey is furnished in duplicate to each bidder and one copy shall be submitted as the formal proposal. The bidder shall insert separate direct unit costs for material and labor opposite each item of the survey. At the end of each division of work, the bidder shall state a definite percentage fee for indirect cost including general conditions, construction survey, insurance, surety, management and profit.

Adjustment
Items added or increased, subtracted or decreased for any reason shall be paid for or eliminated at the prices quoted. Operation shall not commence on any item without a proposal.

Function of Surveyor
(a) The construction surveyor shall furnish the designer with preliminary cost data, construction surveys and appraisals for assuring economical design.

(b) Verify the drawings and specifications against errors and omissions affecting the cost of structure.

(c) Prepare the construction survey in the required number of copies.

(d) Oversee and tabulate the proposals.

(e) Supervise and adjust the difference in quantity, quality and price of items as the construction progresses.

Payment for Survey
Each bidder shall include one and one-half (1½) percent for the construction survey as part of the indirect cost. The awarded bidder shall pay this amount to the construction surveyor within 10 days after execution of the agreement and shall also pay the same percentage on work accrued from increases to the direct cost within 10 days after completion of all work.

Responsibility of Purchaser
All work shall be awarded on the construction survey basis. In event that no agreement is executed for any reason, the construction surveyor shall be paid three-quarters (¾) percent for the survey within 30 days of its completion, on the basis of a preliminary appraisal. The construction surveyor shall be paid three (3) percent for surveys reducing the cost of structure based on value of the revision within 10 days of its completion.

Rights of Purchaser
The purchaser reserves the right to add or subtract items, increase or decrease the quantity, or quality of items, or to reject any or all bids, or to accept any bid.

Information
Further information concerning the construction survey contract proposal will be furnished by the surveyor upon request.

THE CONSTRUCTION SURVEY CONTRACT—By G. Szrnak

A GOOD DEAL has been said and written about the irresponsible buyer and seller of construction. This fact not only indicates a problem but also the urgent need of a solution. While it is impossible to eliminate unfair practice entirely, yet it is very easy to increase fairness by encouragement. Catch phrases, slogans and cooperative movements to improve ethics, however, do not increase fairness while inefficient methods of doing business remain in use.

Through research in the field of contracting better methods are continually being developed to improve the equity between buyer and seller. This advance is made by utilizing the merits and scrapping the demerits of the present forms of contract.

Although used extensively, it is continually proven by fact that lump-sum contracts do not protect either buyer or seller. Which one gains or loses is a matter of more or less conscience as the information upon which lump-sum contracts are usually based is not sufficiently positive to afford full protection. Thus extras are the rule rather than the exception under this form of contract.

The cost-plus contract is another form that has been used by some of the larger buyers of construction. This method has at least one distinct advantage. It eliminates the entire risk of the seller while the buyer assumes payment for all material and labor required to erect the structure plus a definite percentage fee for contractor's management and profit. The seller's risk having been eliminated, the contractor is free to concentrate upon producing a good piece of work. Unfortunately, or otherwise, not every buyer is willing or can afford to pay for construction at an indefinite price.

A third and more recent form is the construction survey contract which is universal for the reason that it eliminates the risk of both buyer and seller. This form of contract is based upon a construction survey which reveals in advance the exact quantity, quality and price of each part of the structure so that the entire transaction is open for examination at all times. Under this method the buyer is enabled to know precisely the cost of each item in advance, compare the cost of a certain item by different bidders and also the cost of one item against another to find the most suitable economical construction.

The total actual cost of the project is determined more positively under this method than any other because every survey contract is supported by a preliminary estimate prepared by the construction surveyor as well as by the contractors' final estimates.

NEW HAVEN
BRIDGEPORT
STAMFORD
NEW YORK

6-3422
MAR 1950
3-0412
CAL 7317

725 PAGE 1
DATE ENG 2-21-50
CLASSIF. B-A-A
ANALYST G.S.

CONSTRUCTION SURVEY CONTRACT PROPOSAL

PURCHASER

The Investment Company, of New York, N. Y.

BIDDER

Construction Management Company, of New York, N. Y.

SERVICE

Proposes to expedite and direct the material and labor for the erection of
General and Mechanical
Investment Buildings,

DIVISION

at
New York, N. Y.

PROJECT

in accordance with the construction survey by
and design by
Construction Survey Co., of New York, N. Y.,
Construction Design Co., of New York, N. Y.,
for the direct costs and the indirect cost as follows:-

LOCATION

at
New York, N. Y.

SURVEYOR

Construction Survey Co., of New York, N. Y.,

DESIGNER

Construction Design Co., of New York, N. Y.,

QUOTATION

for the direct costs and the indirect cost as follows:-

ITEM	MATERIAL	LABOR	PRODUCT	QUANTITY	UNIT	MATERIAL COST	UNIT	LABOR COST	UNIT	LEADS COST	
1	Earth	7'4 Bsm't. Exg. & Disp.	3'x1'w/ptg. " "	607 S	42 49	.07		.08		48 66	
2	Exc. Rat.	12" Rd. W. Backfill	240 L					.15		36	
3	Sel. C. Br.	Exterior Veneer	721 S					.02		14 42	
4	Com. Brick	8" wall	400 S					.10		40	
5	Hyd. Bst.	SS Mort. Br. Joints	1525 S					.30		457 50	
6	Flas. Comp. Ext. Dr. W.	Pr. Caulk.	335 C					.10		33 50	
7	1:2:2 50 Con.	34" x 12" w/ Footings	92 L					.10		9 20	
8	" " " "	12" Found. Walls	240 L					.34		81 60	
9	" " " "	4" O. G. Fl. Slab	540 S					.39		456	
10	St. B. Ist.	8" x 8" w/ at. Table	38 L					.35		13 20	
11	" " " "	6" Ashlar Veneer	45 S					.35		15 75	
12	Steel 122.8#	6" H. Columns	110 L					.45		51 30	
13	" " " "	31.8# 12" I Beam & Girder	114 L					.3		34	
14	Majestic	23x170 Coal Chute	1 U					.20		20	
15	Bronze	6" x 1" Ent. Threshold	6 L					.10		6	
16	V. G. Slate	6" x 8" Cop. Flashing	1400 S					.15		210	
17	16oz. Cop.	6" Cap	5 L					.025		125	
18	IC Tin	Flat Seam. Finish	940 S					.07		65 80	
19	Bost. 4.5#	Ceiling Lath	705 S					.06		42 30	
20	Flime Pl.	3ct. " Finish	1350 S					.06		81	
21	" " " "	" " wall	195 L					.15		29 25	
22	6x10 Fir	Floor Joists	1960 S					.03		58 80	
23	2x8	16" cc Pl. Lining	1280 S					.03		38 40	
24	7/8x5 WCP	1" Floor Lining	1280 S					.03		38 40	
25	" & Gl.	3'x8x5 Ash Trans. & Ft.	5 U					.10		50	
26	" As Let.	12'x24' Ext. Cornice	30 L					.75		22 50	
27	1-1/16x2 1/2	Oak Str. Fl. Finish	1280 S					.16		204 80	
28	S. T. Glass	10'x20' St. Sash Panes	3 U					.30		90	
29	Lead 20 lb	3ct. Ext. Metal Fin.	1350 S					.025		33 75	
30	Oil Stain	" Int. "d. Finish	375 S					.03		11 25	
31	T. C.	6" Sewer Line	180 L					.15		27	
32	Cast Iron	6" House Drain	5 L					.40		2	
33	S. T. Oth.	17" x 19" P4205 Lav.	1 U					9.50		9 50	
34	Heggie Simps	2828 team Boil. & Equipmt.	1 U					300		300	
35	FE&P Co.	26" x 20" Radiators	2 U					20		40	
36	" Metal	Switch & Box	1 U					7.50		7 50	
37	G. Elect.	1-wy Tumb. Switch & Fin.	6 U					.30		1 80	
38	" Labor	Twin Recept. & w	4 U					.75		3 00	
39	" TOTAL							15%		3 397 11	
40	" TOTAL									2 367 96	
41	ASSURED	CONSTRUCTION								5 765 07	
42	DIVISION	CUBAGE								864 73	
										TOTAL	6 629 80
										%	

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LC-LESSER COST

U-S UNITS

L-S LINEAL FEET

S-SQUARE FEET

C-CUBIC FEET

AC-ADDITIONAL COST

IC-DEFINITE COST

AN OPPORTUNITY FOR ARCHITECTS

MORE MONEY IS NOW AVAILABLE FOR RESIDENTIAL CONSTRUCTION

THE NATIONAL BUILDING SURVEY CONFERENCE, organized as a result of the general business conference called by President Hoover last fall, and which has been studying ways and means for encouraging the construction industry as the surest method of improving business in general, has recently disclosed a set of conditions which indicate the possibility of a quick resumption of activity, particularly in the residential field. Up until a few weeks ago the building of homes throughout the land was practically at a standstill, and money was not readily available for loaning on this type of building projects. Almost overnight a change has taken place and there has been a rapid flow of funds from the Wall Street money market towards the real estate mortgage field. We now have millions of dollars in the hands of building and loan associations, savings banks, and other financial organizations in almost every part of the country—money which it is vital to these institutions to

place in the form of building and real estate mortgages, at reasonable rates of interest. The result of this is that responsible people who are desirous of building homes can at this time secure mortgage loans on very favorable terms. If they take advantage of this situation it will mean an early and widespread resumption of home building—which should be news of extreme interest to all architects who do this type of work.

In order that this movement may gain headway it is essential that all architects should use every possible means of discovering people who have an inclination to build and who are in the proper position to do so and then urge these people to take advantage of the present favorable conditions. Widespread dissemination of this information can result in great benefit to the building public and incidentally to the architectural profession, and we therefore urge every architect to do his bit towards helping the profession and himself in this way.



MEMBERS OF THE SOCIETY OF CHINESE ARCHITECTS AT THEIR ANNUAL MEETING IN SHANGHAI
F. T. Lau, C. K. Li, C. Y. Moo, Poy G. Lee, President, T. Chuang, S. Chao, Kipaul Liu, and S. S. Loo.

Similar method of flashing used for any number of flues and any type chimney.

Flue tile and brick or stone facing to be laid in cement mortar with f joints

Slate covered cricket behind chimney

Metal flashing to be carried over edges of flue and down into flue a distance of 1 inch. Following piece of flue lining set on mortar bed over flashing

This height varies depending how flue tile works out at this point above roof

Trough to run up cricket

Roof covering

Rounded valley in slate or tile

Flashing

Brick broken away to show method of flashing

Edge of flashing turned back to get as stop for water that might overflow trough

Line of trough

Flashing

Brick broken away to show method of flashing

Last course next to last course

Metal trough

Slate, tile etc

Slate to be nailed using copper nails. Where a slate just covers flashing and cannot be nailed it should be fastened to slate under, with roofers' or Portland cement.

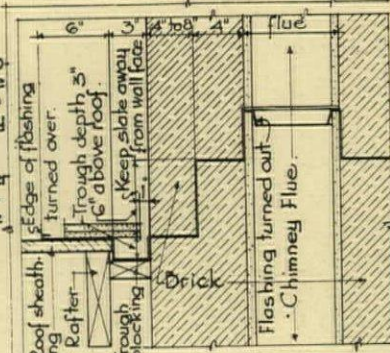
This width determined by type of facing. Shall be 4" for brick and 6" for stone.

6" minimum height above any point of roof pitch.

Flashing of either 3# lead, 24 gauge copper, or galv. iron. quality in order given.

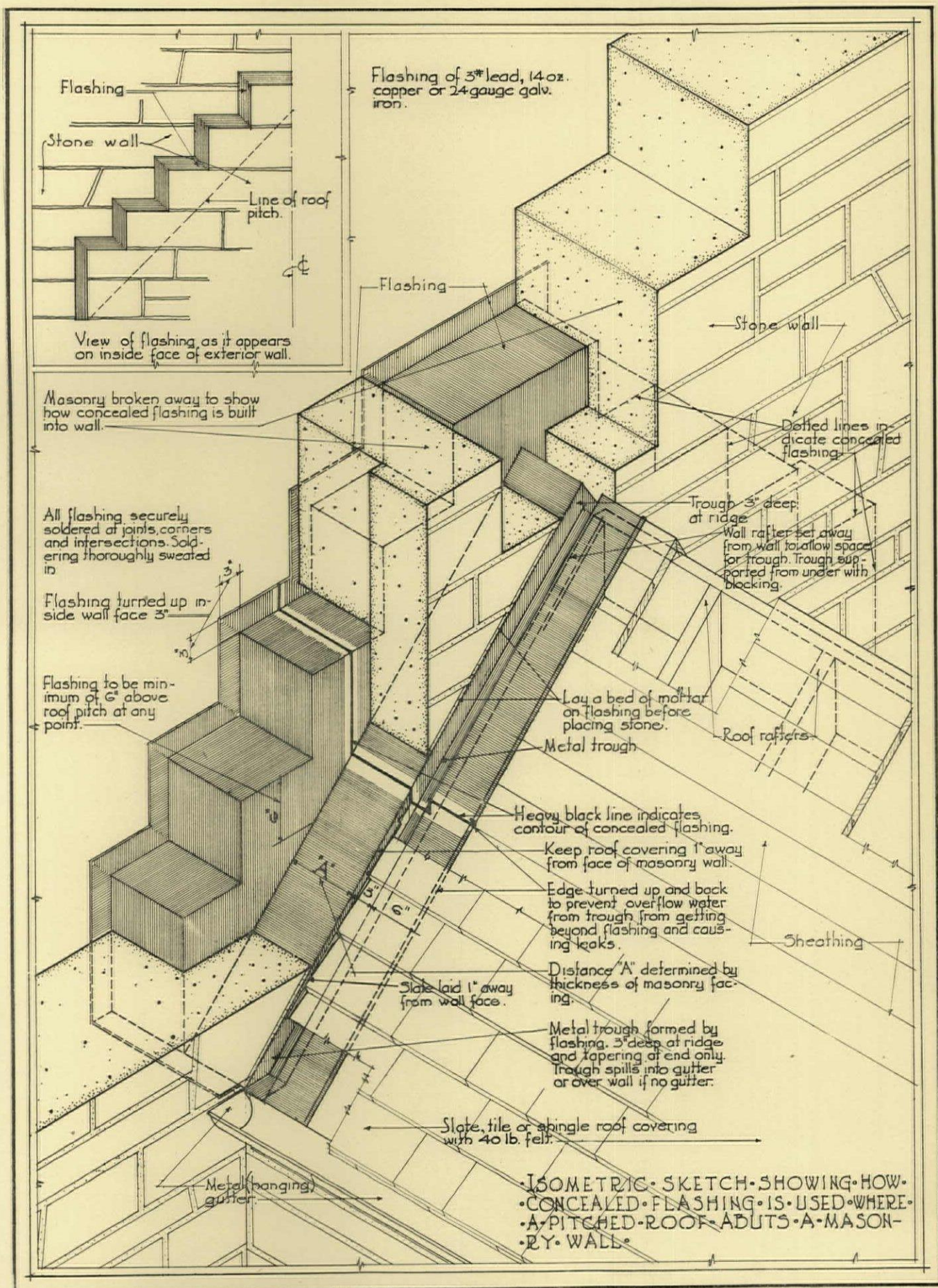
Apron flashing lays on top of next to last slate course covered with last course. No metal shows in the completed work.

Metal trough terminates at the same point as the apron flashing. In this way any water running down trough will emerge from under slate and continue down surface of roof.



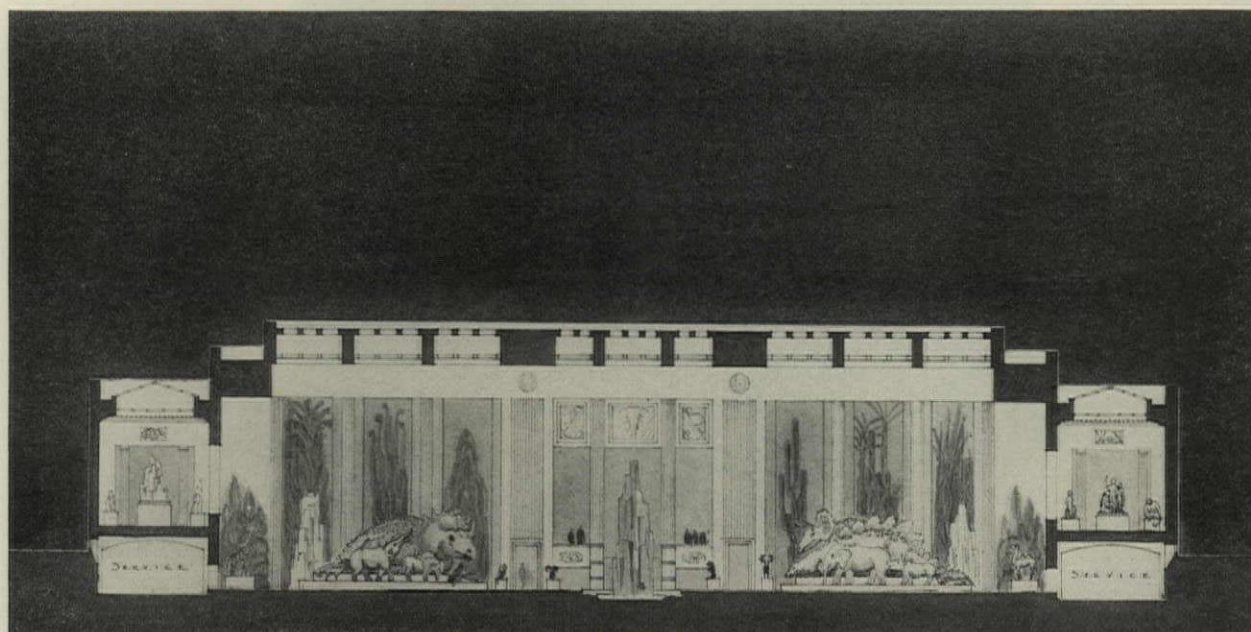
ISOMETRIC SKETCH SHOWING METHOD OF USING CONCEALED FLASHING AROUND THE CHIMNEY.

Section thru chimney side, concealed flashing & trough.



GOOD PRACTICE IN CONSTRUCTION—CONCEALED FLASHING—DRAWN BY PHILIP G. KNOBLOCH

PENCIL POINTS
May, 1930



SECTION OF WINNING DESIGN BY JOSEPH B. WERTZ

THE LE BRUN TRAVELING SCHOLARSHIP—1930

REPORT OF THE JURY OF AWARD

THE JURY OF AWARD met on March 28th and again on March 29th and after careful study of the drawings the Scholarship was awarded to Mr. Joseph B. Wertz, author of the design marked No. 23, with First Honorable Mention to Richard J. Pearce, Second Honorable Mention to (Miss) Jean Brand, and Third Honorable Mention to N. J. Sapienza. Decisions on all awards were unanimous.

The prize-winner was selected, first, because the plan is direct and well knit. The arrangement of the levels with the galleries overlooking the central hall at the ends is interesting, and the spacious central hall itself, with niches for life-size models around it, is well arranged. The lecture hall and dependencies are also excellently placed. The elevation is dignified and the whole design carefully studied throughout and admirably presented.

The design by Richard J. Pearce, receiving First Honorable Mention, shows qualities of imagination and ingenuity; it is well in scale, except for the extravagant and unarchitectural sculpture. The plan is interesting and the façades are treated in such a way as to fit naturally into the gardens which surround them, and the drawings show great skill in presentation.

The Second Honorable Mention has an excellently arranged and organic plan both as regards the central hall and the galleries partly above it, and the lecture halls. The elevation, however, seems to the Jury to lack the architectural quality to be desired in a building of this character and in this location. The working out of this project shows unusual ingenuity.

The Third Honorable Mention has a plan which is direct and straightforward, and the rear entrance to the lecture rooms is an admirable feature. The main elevation, except for a regrettable lapse in the draftsmanship of the roof, is dignified and in admirable scale.

The drawings as a whole indicate considerable resource and skill, but it must be stated that a large proportion of them show a livelier interest in the presentation, especially

of the plan, than in the working out of it as an organic whole.

The high standard of the competition has been well maintained. The number of entrants exceeded that of last year and the average quality of the drawings exhibited was excellent.

Respectfully submitted,

LE BRUN TRAVELING SCHOLARSHIP COMMITTEE

Oliver Reagan Richard H. Dana, Jr.

D. Everett Waide Eric Gugler

Chester H. Aldrich, *Chairman*

The subject of the competition was *A Natural History Museum*. The program stated that:

A Natural History Museum is to be erected in a public park in a moderate-sized city. The site is on a ridge at the end of an avenue sloping gently up toward the building, across the front of which may be a terrace on which may be shown such exhibits as meteorites and large fossils. The space available for the building measures 250 feet wide and 180 feet deep. The building is to contain:

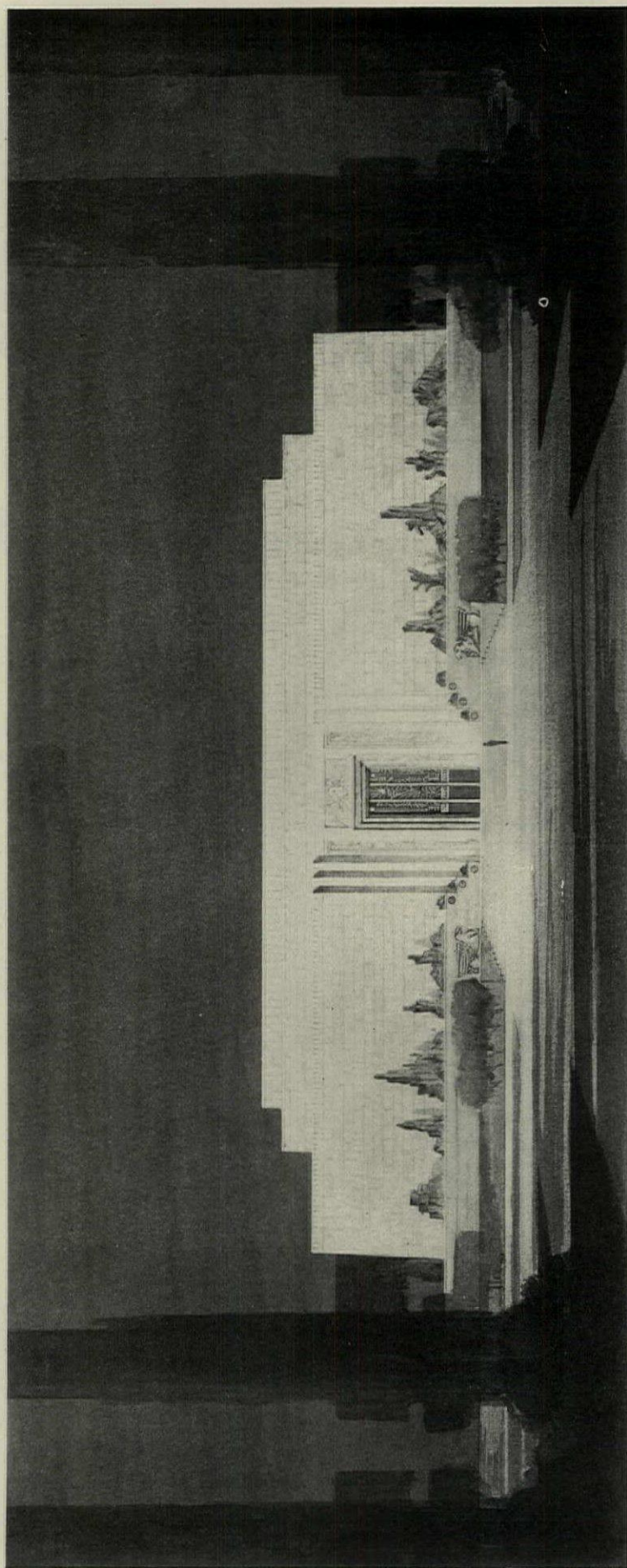
A large rotunda or main exhibition hall lighted from above with space around the sides for life-size models illustrating the habitat of various flora and fauna.

Four connecting galleries, also lighted from above, to house collections illustrating geology, botany, zoology, and anthropology.

A large lecture hall, seating 400, with ante-room for lecturer, a small room for preparing specimens, etc. A small lecture room to seat 100. Two or three workshops for the preparing of specimens. The necessary offices for a curator, assistant curator, and two secretaries. The necessary public toilets. The basement may be utilized for some of these service rooms.

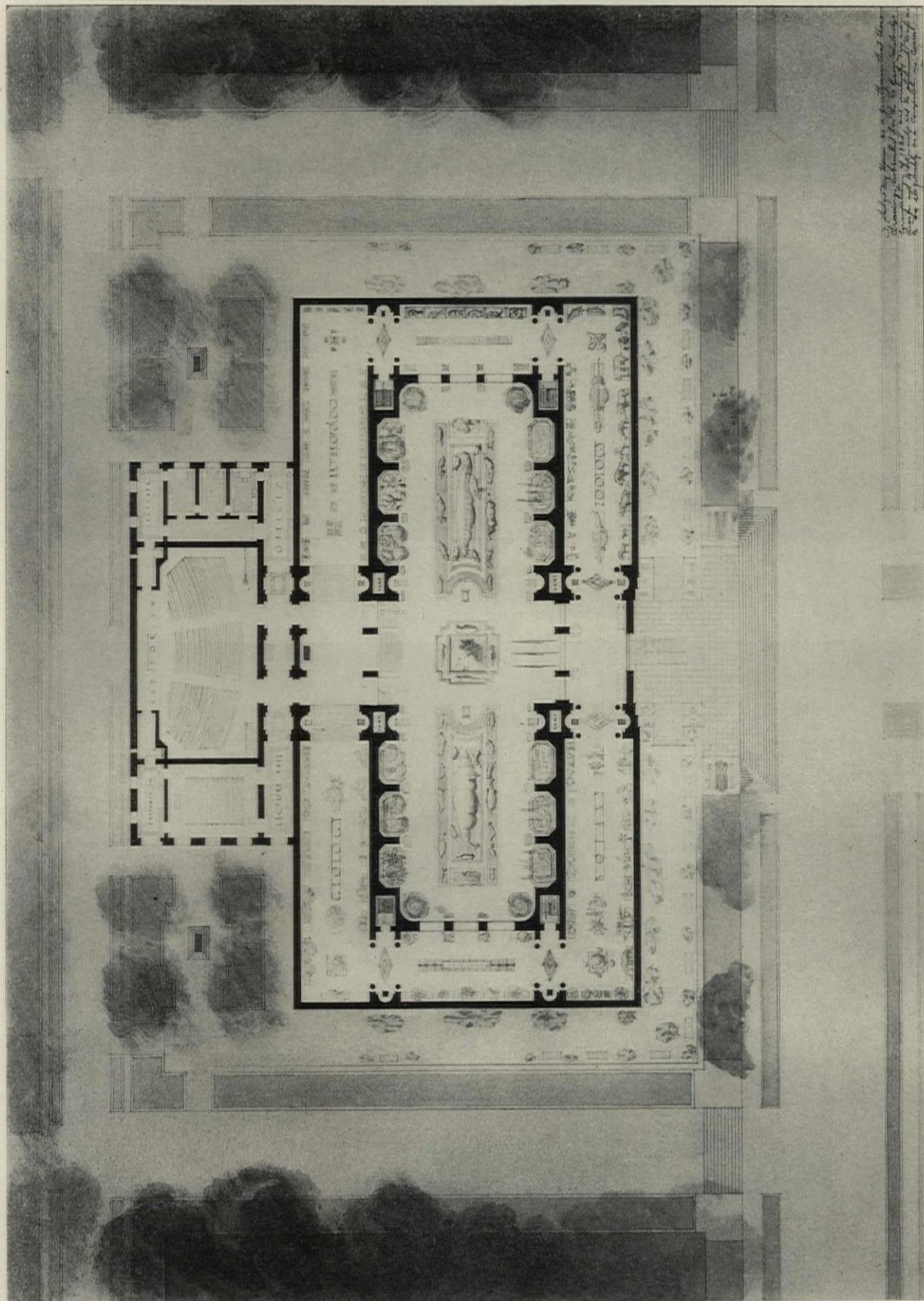
The prize-winning design is shown above and on the following pages. Those placed second and third will be published in the June issue of PENCIL POINTS.

PENCIL POINTS FOR MAY, 1930

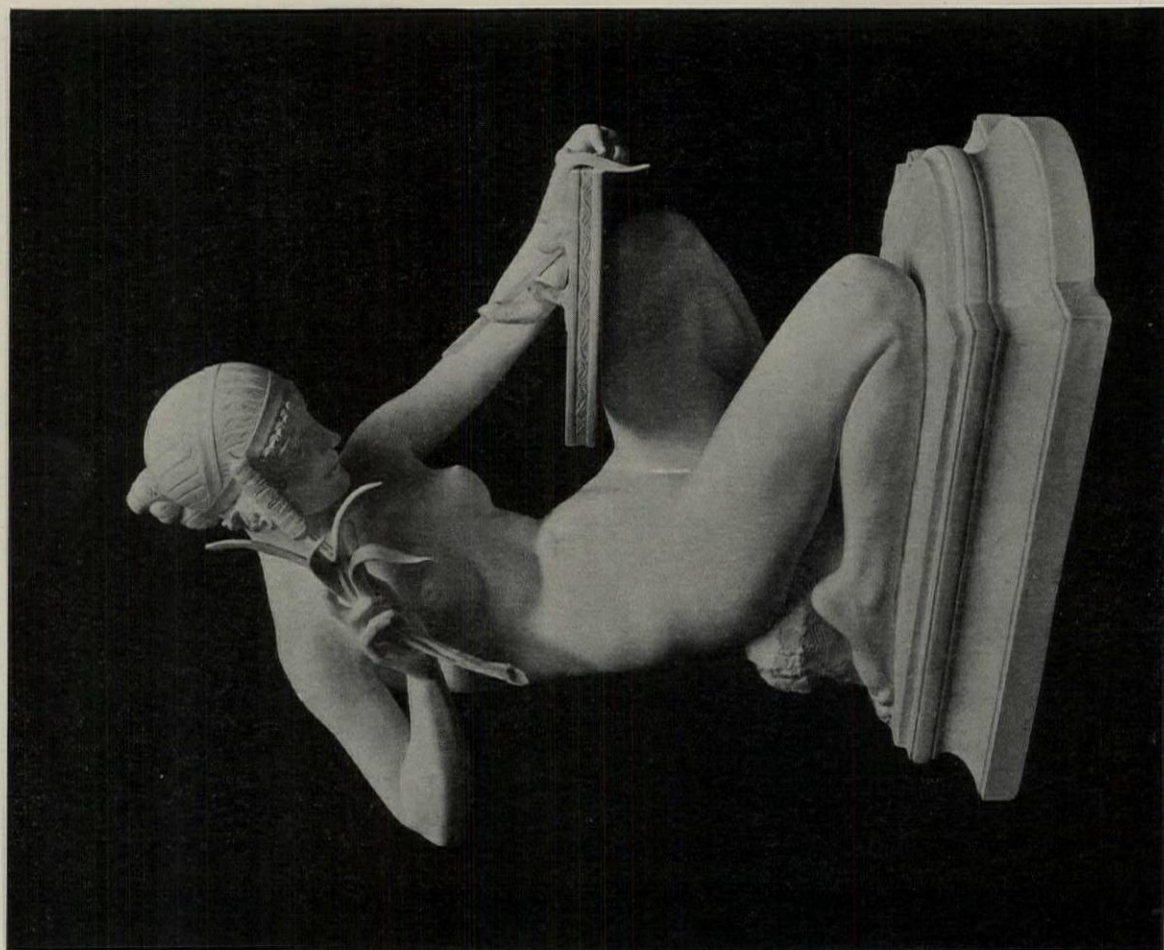


ELEVATION OF WINNING DESIGN FOR "A NATURAL HISTORY MUSEUM," BY JOSEPH B. WERTZ
LE BRUN TRAVELING SCHOLARSHIP FOR 1930

PENCIL POINTS FOR MAY, 1930



PLAN OF WINNING DESIGN FOR "A NATURAL HISTORY MUSEUM," BY JOSEPH B. WERTZ
LE BRUN TRAVELING SCHOLARSHIP FOR 1930



SUNDIAL AND STUDY FOR HEAD, GEORG LOBER, SCULPTOR
SHOWN IN NEW YORK AT A RECENT EXHIBITION OF MR. LOBER'S WORK

It is interesting to know that the head of the figure was modelled separately, as shown above, later being added to the finished figure.

LOS ANGELES ARCHITECTURAL CLUB

THE LOS ANGELES ARCHITECTURAL CLUB gave its first Annual Dishonor Awards at the Elite Café, Tuesday night, March 25th.

Prominent architects sat awestruck in the audience and watched their cherished idols shattered by the cold-hearted, analytical judges who discussed their work as it was thrown on the screen.

The chairman of the evening, Carleton M. Winslow, introduced the three distinguished judges, Sumner Spaulding, Julian Garnsey, and J. E. Stanton.

Talks on Art and Culture were given by Myron Hunt, impersonated by A. E. Hedrick, and Orra Monnette, characterized by J. L. Brady. Mr. Hunt, sitting among the guests, seemed to enjoy the interpretation of himself in the highest degree.

A Spanish dance by Senorita Morales, or lack of Morales, as Mr. Winslow introduced her, was given by Edward Mussa. J. Donald Prouty, as a most distinguished lady of known religious activity, was the climax of the evening.

Beneath the raillery and friendly banter a serious object lesson was given. Photographs proved conclusively that some of our best architecture was ruined by lax zoning supervision and heedless, selfish disregard of civic beauty by adjacent property owners. St. Paul's Cathedral, Reginald Johnson, Architect; The B'Nai B'Rith Synagogue, A. M. Edelman and David Allison, Architects; The Ambassador Hotel, Myron Hunt, Architect; and the Wilshire Blvd. Christian Church, Robert Orr, Architect, were outstanding examples of this type of vandalism.

SAMUEL CHAMBERLAIN

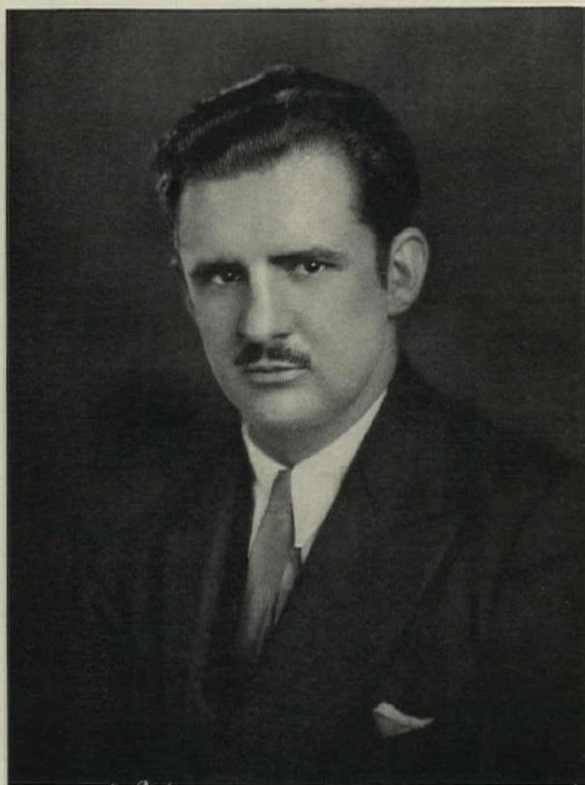
SAMUEL CHAMBERLAIN, one of whose drypoints is reproduced as a frontispiece in this issue, was born at Cresco, Iowa, in 1895. He was educated at the University of Washington, 1913-15; Massachusetts Institute of Technology, 1915-17, 1919-20; American Field Service Fellowship, 1923-24. He studied etching with Monsieur Edouard Leon in 1925. During this year Mr. Chamberlain made his first etching and produced a number of interesting plates, some of which were remarkably successful and others of which were obviously "feelers," with the stamp of inexperience clearly prominent.

"His interest in drawing, however, dates back to the time when as a boy, he found magazine advertisements a mine of material for the budding draftsman. His scrapbook of this time probably contained few notes on Rembrandt, and was not flush with representations of the genius of Whistler, yet it must have suggested an interest which was uncommon to youngsters of his age.

"Chamberlain has the ability to draw correctly and the confidence in execution which are necessary to more than ordinary performances. His drypoint plates have a maturity of viewpoint and a skillfulness of handling that tell of past experience and give promise for the future." —from *Samuel Chamberlain, Etcher and Lithographer*, by Charles D. Childs.

THE KNOBLOCH DETAIL SHEETS

THE TWO CONSTRUCTION detail plates by Philip G. Knobloch for this month deal with the subject of concealed flashing. They were worked up from data kindly supplied by Raymond D. Ritchie of the Guthy-Ritchie Corporation of New York. Comments and discussion are invited. Next month the subject of the plates will be Confessionals such as are used in Catholic Churches.



JOSEPH B. WERTZ

JOSEPH BELTON WERTZ, winner of the competition for the Le Brun Traveling Scholarship for 1930, is the first Southerner to achieve this distinction. He was born in Greenville, South Carolina, in 1903.

His early training came under Prof. Rudolph E. Lee of the Clemson Agricultural and Mechanical College from which he graduated with B. S. degree in 1924.

The same year, while studying at the Ecole des Beaux Arts of Fontainebleau, France, Mr. Wertz became a follower of Lloyd Morgan who, he feels, has given him a deeper understanding of things architectural than any other single influence in his entire training.

In New York Mr. Wertz has worked with the B. G. Goodhue Associates and Pelton, Allen, and Collens, also having done Beaux-Arts work at the Atelier Licht.

Later he worked in Cleveland, Ohio, with Fischer and Jirouch, and in Durham, N. C., with George Watts Carr.

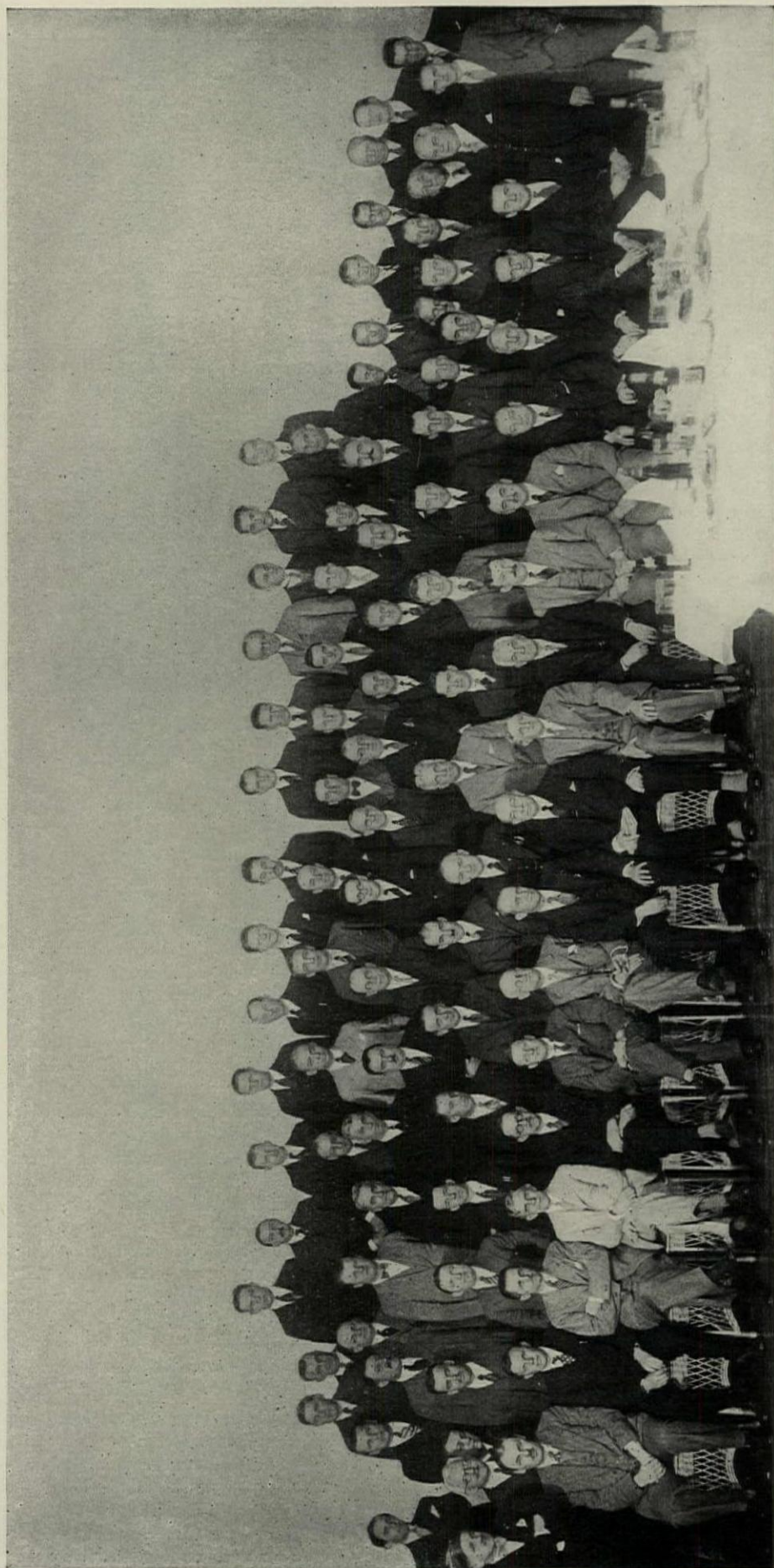
In 1927, Mr. Wertz won a scholarship to the Massachusetts Institute of Technology where he spent one year in Graduate Design under Prof. Jacques Carlu to whom he also owes much.

Mr. Wertz plans to spend six months travelling and studying in such countries as Denmark, Sweden, Belgium, France, Germany, Italy and Spain. He will sail for England about the first of June.

PRIZES AWARDED BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION

THREE STUDENTS at the University of Illinois won the three cash prizes of 1930 offered by the American Institute of Steel Construction for the most beautiful design of a steel bridge submitted by architectural students. These prizes, amounting to \$500, \$250, and \$100 respectively, were made through the Beaux-Arts Institute of Design.

The prizes were awarded at the final judgment to George D. Recher, first; Russel O. Deeter, second, and Don P. Ayres, third.



MEMBERS AND GUESTS OF THE ARCHITECTS' LEAGUE OF NORTHERN NEW JERSEY AT THEIR ANNUAL DINNER

FIRST ROW SEATED: Lauren V. Pohlman, Harry Lucht, Secy., A.L.N.N.J., Seymour Williams, Gilbert C. Higby, C. V. R. Bogert, Pres., N.J.S.A., C. W. Fairweather, Secy., N.J.S.A., Robert Dixon, Ernest H. Fougner, Henry Baechlin, Dudley S. Van Antwerp, Albert M. Beall, George V. Harvey, Robert Jahelka, Anton L. Vegliante, Theo. S. Holmes, C. H. Tabor, Jr., Pres., A.L.N.N.J., Edwin A. A. Muller. OTHERS IN THE PHOTOGRAPH ARE: V. Wentworth Wright, John H. Liebau, G. W. Stephenson, C. Schumacher, Floyd H. Ward, H. J. Grabe, J. K. Krutter, W. A. Sevee, C. B. Blackley, Henry Barrett Crosby, C. H. Christie, H. B. Blauvelt, Chester Simon, Fred Holt, Richard Doscher, Herbert G. A. Muller, Charles H. A. Muller, A. Ower, Harold G. Anderson, Bernard F. McGuire, Saul Shaw, Joseph Weber, John Weber, P. A. Viarttas, Pres., A.C.N.H., Chris. Holzinger, Luigi Vivoli, A. Fullerton, A. Donaldson, F. S. Smith, H. R. Buntin, H. Stickle, B. Hase, Marcel Villanueva, Charles G. Eichholz, Jr., Charles Haerter, Andrew Palmieri, Anthony P. Nieser, Emil Ammann, A. Walker, Arthur Ward, Jr., Frank M. Pollard, David Samuels, A. G. Steier, Harvey Robertson. The following men were also present but arrived too late to get into the photo. George Willaredt, David Kuentzler, John Helmar, A. Sifred, Henry Gubler, Jr., Leslie A. Florence, Frank Effert, Leo Seannwick, Conrad Gerish, John Sarubbi, and John Delaney.

REUNION OF ATELIER HORNBOSTEL

HENRY HORNBOSTEL, patron of the Atelier Hornbostel, New York City, 1904-1914, was the guest of honor at a dinner tendered by his former students held at the Architectural League Club in New York on Tuesday, March 25th, 1930.

The esteem and regard in which the beloved patron is held by the architectural fraternity was clearly demonstrated when the "boys" turned out from various cities to do honor to the man whose influence had helped to shape their careers.

Mr. Hornbostel journeyed from Pittsburgh, where, in addition to his practice, he holds the Chair of Professor of Architecture at the Carnegie Institute of Technology.

The old-time spirit of camaraderie asserted itself from the beginning of the festivities to the end. Julian Holland, as toastmaster, paid many glowing tributes to the generosity, character, and creative artistry of the patron guest. Mr. Hornbostel in an earnest acknowledgment reviewed the men and work of the period when the Atelier flourished. His extended remarks on past, present, and future architectural tendencies along with his humorous fog and gas stories and his experience as Major on the West Front were received with sincere appreciation.

A lively entertainment followed the dinner in which the boys furnished their own talent just as they did in the old days when they celebrated the close of a competition. A tap-dance specialty performed by "Red" Sam Jones and a dramatic recital, *The Other One was Booth*, by Jimmy Sheeran, an allied artist, were features of the program.

To the Committee on Arrangements, Earl B. McKinney, Chairman, Julian Holland, correspondence, Edward Lehman, commissary, and Charles Romer, who designed the souvenir menu reproduced above, is due the credit of the dinner's success.

A permanent committee was formed to make the event an annual affair. The Hornbostel Alumni, together with some of the Masqueray anciens, turned out in force to the number of 64 including our first massier, Mortimer Foster. There were also a number of Carnegie Tech Alumni representing the atelier in Pittsburgh. We hope to reach through PENCIL POINTS all the former members of the Atelier who are now scattered throughout the country and any such who read this notice are invited to write to Charles Romer, 10 East 43rd St., New York, so that notices of future events may be sent to all.



SOUTHERN CALIFORNIA'S FLORADORA FROLIC

THE PRINTS ILLUSTRATED were made by students of the University of Southern California School of Architecture to advertise their Floradora Frolic. They were printed from 7 x 10 linoleum blocks on cheap, colored newspaper stock, each series being on a different colored paper. Four hundred prints of each block were literally plastered over the entire campus. The question mark was the first one posted and was followed at three day intervals by the others.

To start enthusiasm for the forthcoming Mardi Gras on the part of the whole University rather than the School of Architecture alone was the underlying purpose of the Floradora Frolic. Although supposedly a dance it was also in part vaudeville. The theme of the entertainment and decorations was the "Gay Nineties." Fortunately everyone present entered into the spirit of the

evening which was in an extremely light and humorous vein. Highlights of the evening were the production of the super dramatic melodrama, *Dirty Work at the Cross Roads*, and the appearance of the famous Floradora Sextette, both of which were 100% all male and all architect productions. Both productions made such a hit that special performances were staged for Fox Movietone News recording and newspaper photographers.

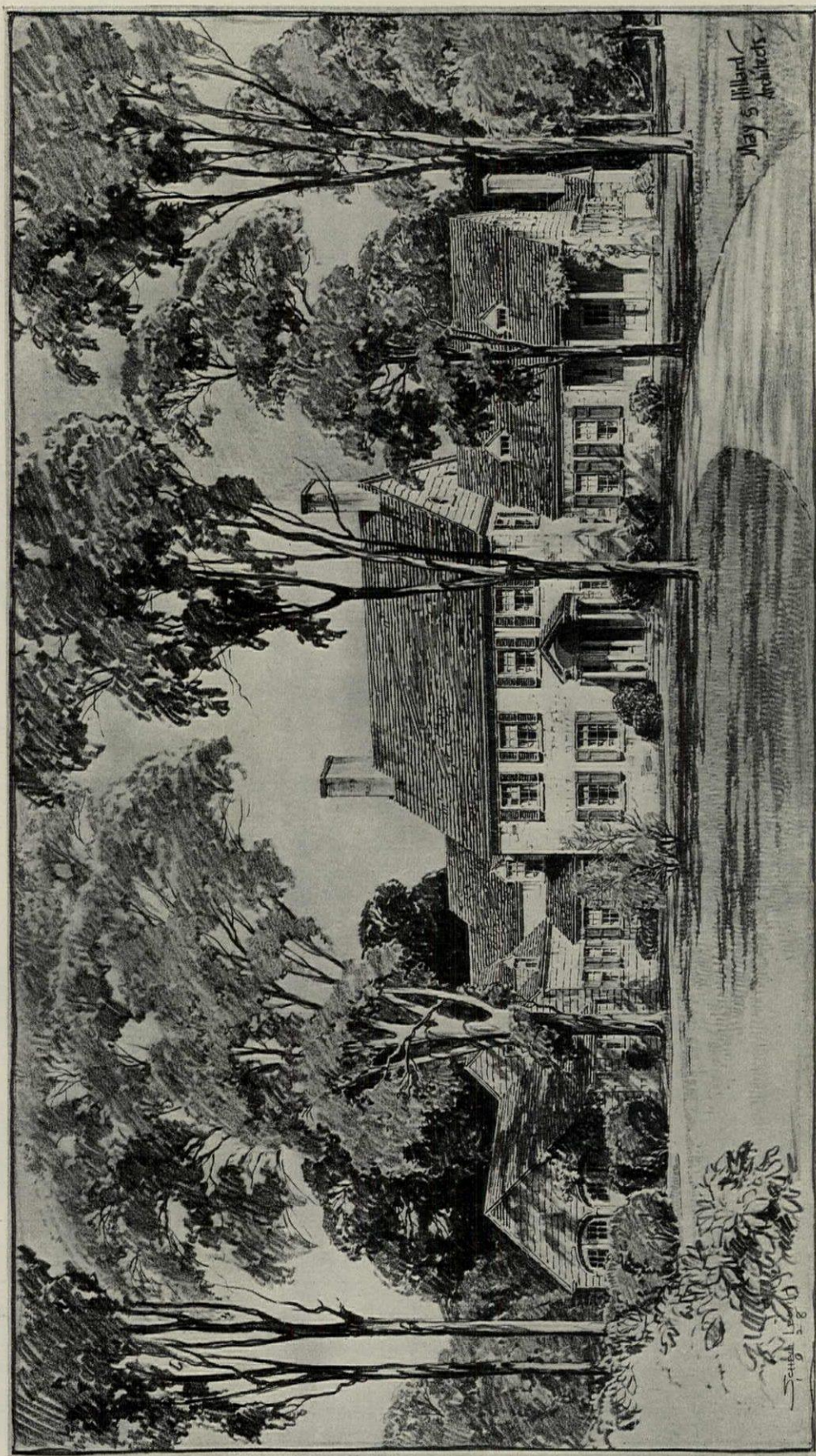
The reaction to this party was precisely as hoped for. The entire University is now looking forward to the forthcoming Mardi Gras and the largest turnout in the history of this annual Ball given by the University of Southern California Architects is assured.



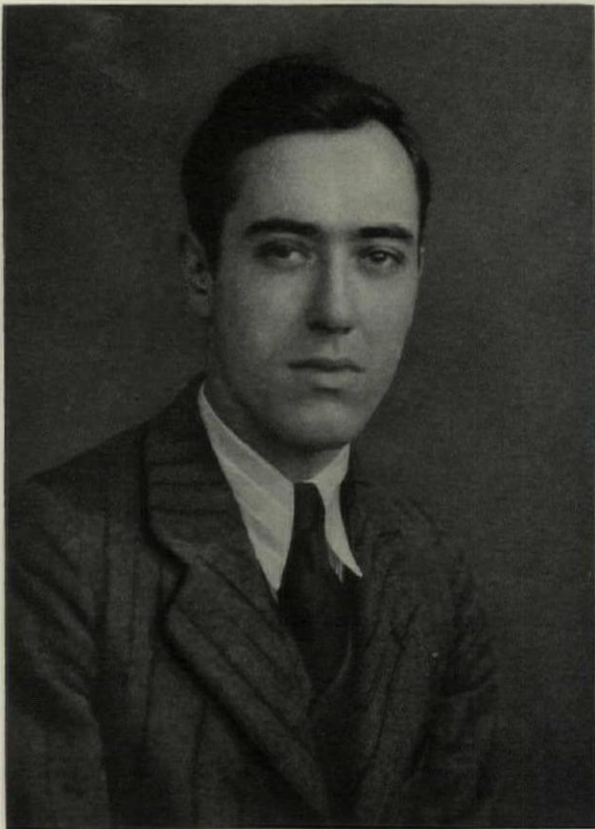
NEW SERIES OF DETAIL PLATES

Two series of architectural detail plates, Terra Cotta Standard Construction and Moderne Ornament; four plates of ornament, 8 1/2" x 11"; four plates of construction details, 9 1/2" x 12 1/2"; sent free to architects, published by the National Terra Cotta Society, 230 Park Avenue, New York.

PENCIL POINTS FOR MAY, 1930



PENCIL RENDERING BY SCHELL LEWIS—FRONT VIEW OF PROPOSED HOUSE IN DUTCHESS COUNTY, NEW YORK
MAY AND HILLARD, ARCHITECTS



J. ROWLAND SNYDER

J. ROWLAND SNYDER is the winner of the Henry Gillette Woodman Scholarship for 1930 of the University of Pennsylvania. This scholarship was founded in memory of the son of George B. Woodman and provides for the payment of expenses of a student or graduate of the Department of Architecture of the University of Pennsylvania towards one year's travel in Europe. The candidate is selected by the Faculty Committee on Prizes, on the basis of scholastic record, character, and promise, and not by means of a competition.

Mr. Snyder sailed for Europe last month and plans to stay at least a year, making drawings and studies on his travels through France, Germany, and Italy. He is particularly anxious to go to Scandinavia and England before returning to this country.

COMPETITION FOR THE DESIGN OF A PRIVATE MEMORIAL

THE MEMORIAL CRAFTS INSTITUTE, Inc., of New York [509 Fifth Avenue], having in mind the trend of Modern Art in the realms of Architecture, Sculpture, Decoration, Music, and Painting, and with the thought that memorial design ought to reflect the spirit of the time in which it is created, offers to all designers an opportunity to compete in accordance with the following program:—

Assumed: That a prominent person wishes to erect a Memorial as a tribute to his Father and Mother, with the thought also that the work will serve as a family Memorial, and the four surviving members of the family will eventually be interred on the plot. The client is a great admirer of what is called "Modern Art," and one of the requirements is that the design must be of the most modern

and striking character, and still retain the dignity of a Memorial.

The Site: The cemetery plot is 25 feet wide and 40 feet deep; level, and fronts on a wide avenue. Other plots adjoin on sides and rear.

The Material: The Memorial must be designed for execution in natural stone or bronze or a combination of both. No perishable materials are to be used.

The Drawings: A front elevation at three-quarter-inch scale; a plan at one-quarter-inch scale. Both drawings are to be on a single sheet of white paper, mounted (or on illustration board). Outside dimensions of paper to be 20" x 30" with 1/2" border. Drawings may be in line or rendered in color, or black and white; with accessories such as shrubbery, walks, etc.

Time of Delivery: All drawings must be delivered at the National Academy of Design, 215 West 57th Street, New York City, before 1 P. M., May 15th, 1930, addressed to Memorial Crafts Institute, Inc.

ANONYMITY OF DRAWINGS: All drawings must have the competitor's name and address on the rear, covered by a paster to permit removal after the jury of award has acted.

Awards: The design placed first will receive a prize of \$200.00. The design placed second will receive a prize of \$100.00. The design placed third will receive a prize of \$75.00. Prize winning designs will become the property of the Memorial Crafts Institute. All others will be held for the competitor until called for; if not called for within 10 days after May 31st, 1930, they will be sent collect to the competitor.

Jury: Members of the jury are as follows: Edward F. Allodi, Architect, Oronzio Maldarelli, Sculptor, Wm. Henry Deacy, Architect (Member Memorial Crafts Inst.).

DETROIT ARCHITECTURAL BOWLING LEAGUE

ON THE FINAL NIGHT of the season McGrath & Dohmen stepped out and won the pennant by the best exhibition of bowling ever seen in the League. They rolled 1065 in the first game and 2990 total for the evening, and McGrath rolled 269 in the last game, thus breaking three records and several hearts.

The lineup at the finish follows:

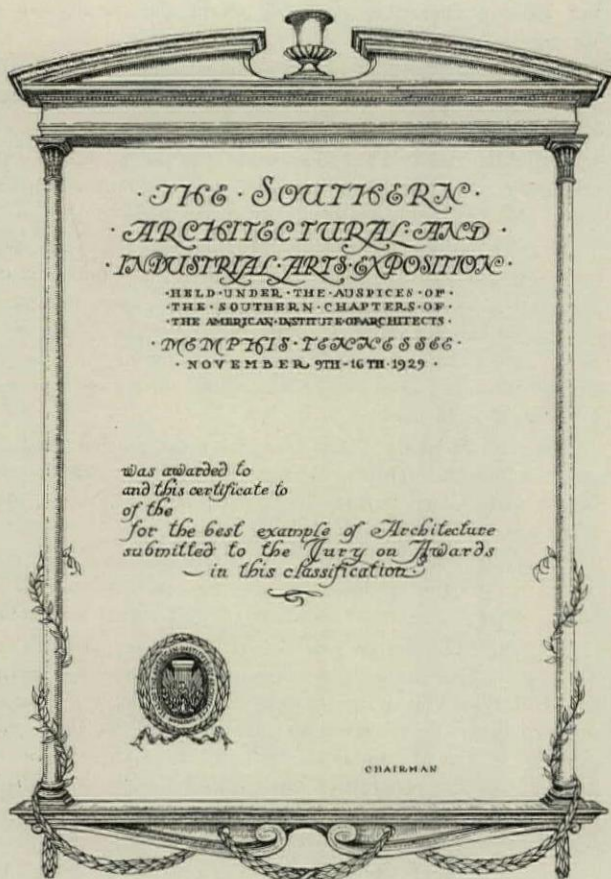
	W.	L.
1—McGrath & Dohmen	52	28
2—Robert O. Derrick, Inc.	50	31
3—Albert Kahn	47	34
4—Smith, Hinchman & Grylls	45	36
5—Mueller & Krecke	45	36
6—Donaldson & Meier	39	42
7—Malcomson & Higginbotham	37	44
8—VanLeyen, Schilling & Keough	36	45
9—Louis Kamper	27	54
10—Weston & Ellington	27	54

And the team and individual champions:

Most 200 scores—Kalsched (A.K.)	—26
High Single Game—McGrath (McG.&D.)	—269
High Three Games—Jolson (R.O.D.)	—684
High Team Single—McGrath & Dohmen	—1065
High Team Three Games—McGrath & Dohmen	—2990

On April 3 we had our annual banquet at the Barlum Hotel and methinks everyone will agree that it was the best yet.

And now—FORE!



WINNING DESIGN FOR CERTIFICATE
BY NOLAN VAN POWELL

COMPETITION FOR A CERTIFICATE OF AWARD

IN CONNECTION WITH the medals and awards given at the Southern Architectural and Industrial Arts Exposition, which was held in Memphis last November under the auspices of the Southern Chapters of the American Institute of Architects, a certificate was presented to both the architects and the owners of the buildings who, in the opinion of the Jury of Award, were entitled to receive them.

For the purpose of selecting a suitable certificate a competition was held among the local architects and draftsmen and a cash prize was awarded. Nolan Van Powell submitted, in the opinion of the Jury, the best design and his drawing reproduced above was used for the certificates.

Estes Mann's design in a humorous vein shows that even an undertaking demanding as much time and effort as this Exposition can and did furnish fun and amusement to those who have a sense of humor.

The local members of the profession responded to every call of the Chairman and, as we worked far into the night in cataloging and hanging the exhibits, naturally the

Chairman had to supply sandwiches and refreshments in order to keep the boys on the job. Hence the word "eat" at the top of the certificate, while the words "that's good" refer to an incident that occurred when the drawings and photographs were judged and it happened that the writer [M. H. Furbringer] was selecting the material to be hung and the particular group of exhibits was that of his own firm, so in passing on the quality and fitness of the material I used the expression incorporated in the lower part of the design.

The profile and the seal in the center of the certificate drew unfavorable comments from the wife of the Chairman who remarked that an architect should confine himself to designs of buildings and not attempt to draw portraits.

All this goes to show that we can do something worth while in life and have great fun doing it.

NEW YORK UNIVERSITY SUMMER SCHOOL

THE SUMMER SESSION of the Department of Architecture, New York University, will begin June 9th, and will continue until July 19th, 1930. The Department of Architecture has moved to its new quarters at 801 Second Avenue (43rd Street) at which address the Summer School will be held. The course will extend over a period of six weeks and the school will be open for classes from 6:00 to 10:00 p. m., so that students can gain practical experience by working in architects' offices during the day.

The degree course in Architecture, leading to the degree of Bachelor of Architecture, is approved by the New York State Board of Regents. Credit is given for work done at other institutions and for professional work which corresponds to the required courses.

Degree credit for any of the courses given during the summer will be allowed to students who have been properly matriculated and have completed the requirements.

The courses to be given include *Design, Elements of Architecture I and II, Descriptive Geometry and Shades and Shadows and Perspective, Freehand Drawing (Pencil and Charcoal), Water Color, Algebra, Trigonometry and Analytical Geometry, English and French.*

The registration date for the course in Design will be on Wednesday, May 7th, and the registration dates for the other courses will be on Tuesday and Wednesday, May 27th and 28th. For information address the Department of Architecture, New York University, 801 Second Avenue, New York.



DESIGN BY ESTES MANN



THE TWO DESIGNS shown above were submitted in a recent competition for a seal for the Westchester County [New York] Society of Architects. The winning design by William C. Halbert, Jr., is shown on the left and that placed second, by William H. Jones, on the right.

HERE AND THERE AND THIS AND THAT

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

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

OUR HEADING this month was drawn by Anthony Hartig of Ridgewood, L. I. The prize winners in our regular monthly competitions have been awarded as follows:

Class I—Eunice V. Nielson of Minneapolis, Minn., for the delightful water color reproduced below.

Class II—John M. Kerr of Buffalo, New York, is the winner in this division. We think all our readers will agree that Mr. Kerr has at least the makings of a great poet and author.

Class III—J. H. Bell of Birmingham, Ala.

Class IV—L. C. Sherwood of San Diego, California, for the interesting letter and drawings shown on page 397.

Don't forget to send in your anecdotes; any entertaining experience with a client! Also someone suggested that we award a monthly prize for MISTAKES I ALMOST

MADE AND WHAT THE RESULT WOULD HAVE BEEN. Sounds like a good idea. What do you contributors think of it?

AN ARCHITECTURAL COMPETITION

By John M. Kerr

(PRIZE—Class Two—April Competition)

ARGUMENT: The competition is for a Temple along the Appian Way, some couple of thousand years ago, when Architects were many, and jobs scarce (even as you and I). The programme in this case is irrelevant, as the drawings are all in.

The Jury of Award has just finished a seventeen course dinner at the Villa of Fadus, situated on the banks of the Tiber, and are considering taking a few minutes off to judge the competition. The personnel of the Jury is as follows:—

CHROMEPLATUS, *The Architectural Adviser*, credited with designing the most magnificent aqueduct in all Rome which, unfortunately, did not go ahead.

FADUS, *Chairman of the Board*. A wealthy dealer in suburban real estate, and an amateur charioteer.

ATWATERKENTUS, a big fig and artichoke man, and secretary to the Chamber of Commerce.

PHILCOTUS, a Politician on Cæsar's side of the House.

SUPERHETRODYNUS, Captain of the Gate, and what *he* didn't know was *nobody's business*.

THE STRANGER, an Architect with business acumen. (You will hear more of him later.)

The scene is laid in an inner chamber off the banquet hall. The Architecture is reminiscent of Pompeian, and if the color scheme hits one like a load of bricks, the credit all belongs to Madam Fadus, who affected a flair for interior decoration with the usual results.

Now go on with the story.

FADUS:

"Dear friends and Romans, now that we've been fed,
And quaffed the sparkling wine so richly red;
We should get down to business right away
And let Chromeplatus have his little say.
Forsooth! I know not peristyle from base;
But, because I won the chariot race,
You made me chairman of your august Board
To make the Architectural award.
So, men, let's go and judge the competish:
Sans Fear, and Favour, is my earnest wish."

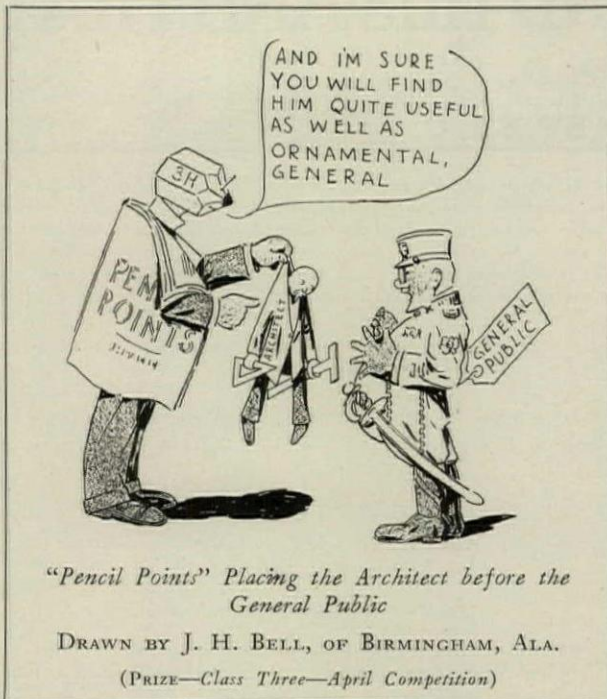
CHROMEPLATUS:

"From out of all the entries we received,
I picked out five, the ones which I believed
Would meet with favour in your august eyes:
For I was sure that you would all despise
Those efforts, born of culture somewhat low;
The awful junk that's known as 'Art Nouveau'—"



WATER COLOR BY EUNICE V. NIELSON
"A Street in Miami"

(PRIZE—Class One—April Competition)



PHILCOTUS:

"Nay, Nay! Tut, Tut! I do not deem it fair
That you should undertake to give the air
To efforts, we, the Jury have not seen:
You gotta show me, Bo!"

ATWATERKENTUS:

"God save the Queen!
You said a mouthful Phil—We'll watch our P's
And Q's—the Hoi Polloi are quick to seize
A chance to razz us; one can never tell
When up for re-election, what the—"

SUPERHETRODYNUS:

"Well,
Excuse me men, if I appear to yawn;
I didn't get to bed till early dawn.
Go right ahead—I'm happy as can be—
I'll keep the negus company—"

FADUS:

"Oh, Gee!
You boys would try the patience of June—
By the Gods above us, what do you know
Of Architecture, Symmetry, Esquisse?
Come! Let's get done and P. D. Q.—"
"POLICE!"

The door swung wide, and bursting into view
Trooped twenty husky lads, in armour new.
(I guess old Fadus' Lares Penates et
Ain't never seen the likes o' this—you bet.)
"Halt! At Ease!" the orders rapped out sharply,
And arms akimbo, the leader darkly
Spake out thus, to 'Platus, "Listen, Chappie,
You ain't lame—Go hang those drawings—snappy!"
The Jury, all, were silent as could be,
While 'Platus handled thumb tacks carefully.
Three score and ten were placed upon the wall,
A number, too, he gave to one and all.
(Thirty minutes later)

THE STRANGER:

"Sirs, now we'll leave you as you meditate,
But look ye well on number TWENTY-EIGHT.
For, if you don't—" he fairly seemed to gloat
As slowly drawing knife across his throat,
He fixed the Jury with his beady frown,
And gave the Roman gesture—TWO THUMBS DOWN.
So saying then, he, and his men withdrew,
And left the Board with duty still to do.
(Five minutes later)

Chromeplatus' brow was furrowed, in deepest cogitation;
Things he saw upon the wall defied imagination.
He thought of Palatinus, and the white porch of his shack;

Architectural Jurisprudence—a dagger in his back.
He cleared his throat, and speaking, said to Fadus, stout, and
straight,

"We could not do much better than agree on TWENTY-EIGHT!"
Philcotus looked at Super' in a funny sort of way—
Atwaterkentus seemed as tho he'd nothing more to say.
Old Fadus just kept wishin' that he'd stuck to real estate—
Perhaps it wasn't "Arty"—it was safe, at any rate.
He scratched his head, and, suddenly a gleam came in his eyes;
He roared out loud a hearty laugh, and slapped his husky thighs.
"Bring in that brigand bold," said he, "we won't take Chrome's
advice—"

If that guy has a drop of blood, we'll settle this with dice."
"How now?" the Stranger greeted him with college campus glee,
"I trust you've chosen twenty-eight—and—that, of course, is me."
"You're right, my lad, but first of all, a little proposition;
I wish to know for certain that you're worthy the position.
Your methods are unethical, tho forceful, goodness knows—
If only you can beat me out at 'Roman Dominoes'
I'll second Platus' motion, and we'll let you go ahead."
"Just gimme them there dice, old top," the Stranger softly said.

The rules were very simple, just as simple as could be—
One throw apiece, and highest dice would win the victory.
The Board were all atwitter, now, with pep, and animation;
The Stranger shook them cubes—an' how—a rolling undulation—
Hot Dog! By all the Gods above, so plain for eye to see,
He must have been an amateur—he only shot a three.
Old Fadus grabbed the dice away, and started warming up.
(The wine was Oh, so bitter in the Stranger's drinking cup.)
He got down there upon his knees, his toga all awry—
"Come on now Bones—be good to me—" his supplicating cry
To "Lady Luck" for "Seven" was a paean of perfect bliss.
(Horatius was never in a tighter spot than this.)
The dice, they started rolling, started rolling on the floor,
And all that Roman company, in wonderment, and awe,
Just held their breath in anguish—the Stranger stood enrapt—
When, Lo! Behold!—The Master—just went ahead and crapped.

Old Fadus sadly shook his head, and bade the Stranger go—
Just binding all to secrecy, that Rome should never know,
Just how the competition, for a Temple to the Sun,
Was maybe—well, a *little* bit, unethically won.



PENCIL DRAWING BY DANIEL DOHN, JR.,
OF ST. LOUIS, MISSOURI

HERE AND THERE AND THIS AND THAT



"AN OLD ADOBE BUILDING"

THE FOLLOWING LETTER from L. C. Sherwood, of San Diego, California, together with the accompanying illustrations by the author, carries off the prize in Class IV.

DEAR PENCIL POINTS:

Today I am sending you an illustration of an old adobe building. I am very well acquainted with this building as I was born there and spent my childhood days playing near its protecting walls.

It still stands intact, although a hundred years old. The walls are four feet thick—rafters are round and redwood, taken directly from the mountains—fifty miles away in the Santa Cruz country—sheathing is constructed from small willow boughs plastered with mud—the roof is of homemade clay tiles, all the same size but no two alike, and the colors of the tiles vary from orange to deep reds and in places are yellow and green with moss—very rich and beautiful, very old and calm, and an old, old friend. There are no nails—all rafters tied together with rawhide thongs.

The place is in Monterey county near Salinas and on the main highway between Los Angeles and San Francisco, California. It is all that remains of the old Spanish Grant El Sausal Rancho and some time when you are motoring in California, and especially if you are an architect or artist, drop in and see it—the owner will be glad to show you through it—he lives there and he is my brother.

Since my small-boy days I have lived in the city and worked as an architectural draftsman and became an architect.

There is another illustration also that I am sending to you. It portrays an old Spanish California cook telling a story to a small boy; the boy was myself and it was at the same rancho.

He said when he was a young man he and his chum rode over to Monterey, a coast town not far away from the

rancho. They had plenty of good wine and lots of fun and it was late when they mounted their mustangs and headed home—"Vamos la rancho."

The road passed by a graveyard and they approached it at midnight. They saw something white—a bundle in the middle of the road and at the same time heard wailing and crying. Upon investigating, the bundle proved to contain a baby.

Of course, the horses were acting up, but the Spanish-Californians were superb horsemen and they were soon riding away toward the rancho. The bundle and its contents, still wailing and crying, was held securely by one of the partners. The other suggested lighting a match, which they did, and on looking at the baby, were startled by its suddenly letting out a yell and saying, "I'm a little baby, eh? Look at my big eyes and long teeth!"

Thereupon they dropped it, put spurs to their horses and arrived at the rancho *my pronto!*

A nice bedtime story for a kid to listen to. However, I mention it because, like the Tamale, it has a Spanish flavor.

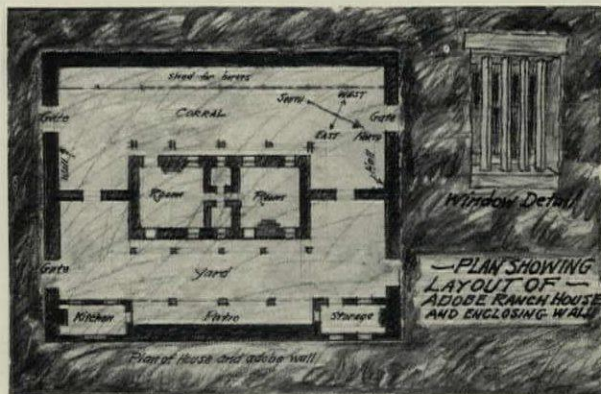
Adios,

L. C. SHERWOOD.



"AN OLD SPANISH CALIFORNIA COOK"

of quality as well as quantity." If you see him tell him he has friends up this-a-way that would like to hear from him.



"PLAN LAYOUT OF ADOBE RANCH HOUSE AND ENCLOSING WALL"



THE FOURTH IN A SERIES OF CARTOONS BY ARTHUR F. BAER, DEPICTING HIGHLIGHTS OF ARCHITECTURE
One definition of the profession is "Architecture is one damn mistake after another."



THE SPECIFICATION DESK

A Department for the Specification Writer

LUMBER AND TIMBER—1

By David B. Emerson

A GOOD GENERAL KNOWLEDGE of lumber and timber is quite essential in the writing of specifications, and is not a bad asset to anyone engaged in any form of architectural work. Perhaps the first item to learn is the difference between soft and hard woods. The difference is not in the density or hardness of the wood, but in the commercial classification which places all conifers both of the needle leaf or pine-like type or cedar leafed types in the softwood class. This includes all pines, firs, spruces, hemlocks, larches, cedars, and cypresses; and all broad leafed deciduous trees are classified as hardwoods. Incongruous though it may be, two species of softwoods, the Southern cypress and the larch, sometimes called tamarack or hackmatack, shed their leaves and two varieties of hardwoods, the live oak and holly, though broad leafed, are evergreens.

Grain in wood is caused by the width of the annual rings, and the arrangement of the cells and fibres. Trees which grow rapidly and have wide annual rings produce coarse grained woods, whereas a slower growth and narrow rings produce fine, close grain. When the elements of the wood are straight and run parallel to the pith, the wood is said to be "straight grained." Quite often, however, the elements are twisted around the axis of the tree, thereby causing "spiral grain." Frequently in cypress and gum trees several rings of fibres run oblique to the axis of the tree in one direction, and the next layers are oblique in the opposite direction; such wood is "cross grained." "Wavy grain" is caused by large undulations in the wood elements, generally on radial surfaces, and "curly grain" is caused by small undulations. Oak, ash, birch, maple, and cherry very often exhibit curly or wavy grain and properly sawn it makes a beautiful wood for cabinet work and furniture. It is naturally quite essential that structural timber should be straight grained.

Softwoods supply the great bulk of the lumber and timber used for general construction in this country, as well as throughout the major portion of the world.

Of the softwoods in this country the several varieties of pine are probably more widely distributed and widely used than any other wood. The Southern pines, also called yellow pines and which include long leaf or Georgia pine, short leaf, loblolly or North Carolina pine, pond pine, and Cuban pine, are the most extensively used. Long leaf or Georgia pine is the leading structural timber of this country, is one of the leading flooring lumbers, is extensively used for mill work in the South, and it makes a very fine interior finish either for painting or a natural finish. Long leaf pine when slash sawn shows a very handsome grain. I well remember a tale I heard when I was a boy in an architect's office regarding the late H. H. Richardson, who had a great admiration for the wood. Some one asked him about it, and his answer was,

"the only trouble with it is God made too much of it."

For pulley stiles and parting beads in window frames it has no equal. In some sections of the country this wood is called "hard pine," but this name is not recognized by the lumber associations, and should not be used. Specify either "long leaf" or "Georgia" pine and you will get what you want. Short leaf pine has practically the same uses as long leaf pine, but as a general rule it is inferior to it as a structural timber; but by the "density rule" established by the Southern Pine Association short leaf pine having the necessary annual ring and Summer wood requirements is classed with long leaf pine. North Carolina pine is less strong and durable than the other varieties of Southern pines, but it furnishes good lumber for flooring, interior trim, and rough lumber.

Cuban pine and pond pine are not marketed under their own names, but are sold for structural timber as Southern pine. Arkansas soft pine is a very high quality of short leaf pine. The wood is free from excessive pitch, and resembles Northern white pine more than any of the Southern pines. It is used for framing, flooring, mill work, and interior trim. This wood takes paint and enamel particularly well and can be given a natural finish. Southern pines are exported under the name of "pitch pine" and are known only by that name in Europe.

White pine has been the leading wood for both exterior and interior finishing since the earliest settlements in New York and New England. All the lumber used in the early work was grown in the New England States, New York, and Pennsylvania, and the proof of its excellent quality can be found in the exterior wood work and interior finish in many of the old houses in New England which are still in good condition after one hundred and fifty to two hundred years of service. The original sources of supply for this wood are now practically exhausted, and at the present time the larger part of the true white pine on the market comes from northern Minnesota, Wisconsin, Michigan, and Idaho. White pine is noted for its extreme softness of texture, evenness of fibre, great ease in working, durability, and strength; its ability to stay in place after once being fitted, its freedom from pitch or objectionable acids.

In addition to the foregoing qualities, no wood carves better than white pine or stands up better after being carved, as can be seen by some of the Eighteenth Century work still remaining in New England. The heart wood of the choicest New England white pines was called "pumpkin pine" by the old-time ship builders; this wood carved remarkably well and lasted indefinitely. White pine, on account of its freedom from pitch or resin and from objectionable acids, takes paint or enamel finish perfectly. It absorbs and grips the paint, but does this most

economically, therefore holds its coat of paint longer and better than any other wood either soft or hard.

Idaho white pine, although it has a different botanical classification, is a true white pine, and differs only very slightly from the white pines of the New England States, New York, Pennsylvania, Minnesota, Wisconsin, and Michigan. In fact all botanists are by no means agreed that there is a botanical difference. This wood can be used for any of the purposes which the eastern and northern white pines are used. Idaho pine produces all grades of lumber, but it is most noted on account of the high percentage of tight knotted "Common" lumber produced, which is what is needed for the knotty pine interiors so popular at the present time.

Sugar pine is a large tree growing in California and is classed as a white pine, but is somewhat coarser textured, has more prominent resin ducts and a more pronounced odor than the true white pines. The general uses of sugar pine are for mill work and rough lumber.

"Pondosa" pine is a trade name which has recently been given to a western yellow pine, which was formerly sold as western white pine. It is a valuable timber of the Rocky Mountain section and the Pacific Coast, and some of the timber is light, soft, uniformly textured, and so light in color that it may be used in many ways as a satisfactory substitute for white pine. Its only faults are that it is less durable and more liable to sap stain than first growth white pine.

Norway pine or red pine which grows in the Lake States is an intermediate species between white pine and yellow pine. Much of this wood is sold mixed with white pine, and can be used for some of the same purposes.

Spruce grows in the Northeastern portion of the United States, in Eastern Canada, the Pacific Northwest, and in the Rocky Mountain region. The three principal kinds found in the Northeast and in Canada are the black, red, and white, or cat spruce. The woods are all very much alike, but the white spruce is usually coarser grained than the others. Eastern spruce is used almost exclusively for structural purposes and for lath. As a structural timber it ranks second only to southern pine and Douglas fir, and is extensively used in New England and New York. Spruce laths in my opinion are undoubtedly the best wood laths available. Spruce has been used to a very limited extent for interior trim, but of late years a new use has developed; that is the knotty spruce has been used for deal rooms, as the color and grain are more nearly like the English deal than any other native softwood.

Sitka, frequently called "western spruce," grows in the Pacific Northwest and is available in larger sizes than the Eastern varieties. It also differs from them in that the wood has a pinkish color instead of the straw color and white of the Eastern woods. Its principal uses are for framing and for exterior and interior trim, and as it contains no resin it takes all kinds of finishes very readily.

The firs include the true firs, the principal kinds being the balsam fir of the Northeast, the white fir of the Rocky Mountain and Pacific Coast regions, the noble fir of Oregon and the red fir of California, and the Douglas fir which, although not a true fir, is more nearly related to them than to any other of the conifers. The true firs have wood which is quite similar to that of the spruces, and it is used for practically the same purposes, though not so highly esteemed. Douglas fir is one of the most useful of all the softwoods; as a structural timber it is second only to southern pine to which it is similar in its properties,

though usually it is less resinous. It can be had in larger sizes than any structural timber. Timber thirty inches square and one hundred feet long can be obtained if necessary. It is an excellent finish both for exterior and interior work. It will take paint almost as well and hold it almost if not quite as tenaciously as white pine, and when slash sawn it shows a good figure and can be given a natural finish. Douglas fir is exported as Oregon pine, and is known in Europe by that name exclusively.

There are several varieties of cedar grown in this country, the principal kinds being the eastern and southern red cedars, white cedars, yellow cedars or cypresses—which include the Port Orford cedar, the Alaska cedar or Nootka cypress, and the western red cedar. The eastern and southern red cedars are common trees in the eastern and southern sections of this country. Practically the only use made of the wood is for lining cedar closets. The red heart of the wood contains a natural oil that gives off an aroma which stifles moths. The white sap wood is valueless. The principal source of supply at the present time is in Tennessee. White cedar grows both in the Northern and Southern States but the southern cedar attains a larger size, and is used for tanks, posts, and shingles. Port Orford cedar and Alaska cedar have a limited distribution in the Pacific Northwest. These woods are firm and strong, highly scented, and of a yellowish color. They are used for siding, closet lining, interior finish, and shingles.

Western red cedar is the largest of the four true cedars found in the world. The wood is light, soft, of close straight grain, and very easy to work; it shrinks very little in seasoning and does not warp. It contains a natural preservative, is entirely free from resin or pitch, and has a marked resistance to decay or the attacks of insects. This wood should not be confused with the eastern red cedar or with California redwood, as it is a different species from either. It is used for rough lumber, siding, exterior, and interior trim and is the principal shingle wood of this country. This wood has a decided affinity for paints and stains, but it can be left unpainted if desired as it does not deteriorate to any great extent even under the most severe climatic change.

Cypress is a large tree growing in the swamps and lowlands of the Southeastern States. It sheds its leaves annually and is frequently called "bald cypress." The wood varies in color from pale yellow to dark brown and in weight and texture from light and soft to rather hard and heavy. It has the general structure and durability of a cedar, but is unscented, and is nearest to redwood in its properties. The general uses of this wood are for greenhouse construction, exterior and interior trim and next to western red cedar, it is the leading shingle wood, as I wrote in my previous article (March, 1930). Cypress shingles have been claimed to have lasted over a century. Another use of cypress in which it stands almost alone is for tanks, cedar being practically the only other wood used for this purpose. One of the principal reasons for the desirability of cypress as a tank wood is that it imparts no flavor to the water. Cypress takes paint very well and on account of its color and attractive grain, it can be given a natural finish and makes a most attractive appearance. Pecky or "peggy" cypress has large galleries or passages which resemble the work of worms; these are due to the attacks of a fungus. These galleries contain powdered wood when the lumber is first sawn. The action of the fungus ceases when the tree is felled, and the lumber is highly resistant to further decay.

There are two well known species of hemlock growing in this country, the Eastern and the Western. The wood of the eastern hemlock is about the color of spruce, but it is harder, more brittle and more likely to be defective. This wood is only used for structural purposes, and is a very inferior structural timber, and should only be used where economy is the first and greatest consideration, and only on small and unimportant buildings. Western hemlock is a much superior wood to the eastern species. It is uniform in texture, nonresinous and tough, but works easily. It is free from shake, and is not brash and splintery like the eastern hemlock and has a beautiful grain. This wood is used for structural work, rough lumber, flooring, siding, and interior trim. It takes and holds paint and enamel very well and can be stained and given a natural finish. So far this wood has not been used to any great extent in the Eastern States, but has been exported to England where it has been quite extensively used for interior paneling. Sir Edwin L. Lutyens used it for the paneling in the board room of Baring Brothers' Bank in London with excellent results.

There are two principal species of larch in this country, the Eastern and Western. The eastern larch, commonly called tamarack or hackmatack, is a slender tree growing in swamps in the Lake States and the Northeast. It is used as a structural timber and for lath, and is marketed mixed with white pine and fir. Western larch is a large tree growing in Western Montana and Northern Idaho; in many respects it resembles cypress. The wood is a reddish brown color with a rather conspicuous grain, and is impregnated with preservative oils which cause it to offer a remarkable resistance to decay when placed in contact with the soil or other intermittently moist surroundings. It is used for structural timber, flooring, and interior trim.

Redwood, frequently called "California redwood," is a large tree, often attaining gigantic size and found at its best in the fog belt along the Pacific slope of the Coast Range in Northern California. Redwood should not be confused with the giant Sequoia or "bigtree" to which it is closely related, but the lumber and timber of which very rarely enter the market. The wood varies in quality from light, soft grained, and easily worked to decidedly hard, heavy and more or less flinty. The color is a pale cherry which deepens on exposure. It is exceedingly durable, and very well adapted for uses where resistance to decay and to the attacks of insects is essential, except in heavy construction. This wood is used for siding, sash and doors, exterior and interior trim and shingles. Redwood has acquired a reputation for resistance to fire which is not too well founded, although it is not as inflammable as most other softwoods. I very well remember some years ago a wealthy man living in one of the outlying districts of New York City built a fireproof library adjoining his house. Happening to be there on business, he very carefully explained it all to me, how everything was brick, stone, iron or concrete, excepting the book shelves which were of redwood, which, as he explained, was "fireproof." During the conversation we were enjoying the heat from a roaring fire in the big fireplace, which was being fed by the workmen with ends sawn off the redwood shelving.

Of all the native hardwoods, oak is undoubtedly the most widely used and the most valuable, both as a structural and a finishing wood. The many species of oak, so far as architectural uses are concerned, are divided into

two groups, the white and the red. In the white oak group are eight different species which are classed as white oak by the National Hardwood Lumber Association, and ten which are classed as red oak. These various species, with the exception of the true white oak and the true red oak, are almost entirely used as structural timber. All of the woods have many properties in common, being hard, heavy, strong, fairly easy to work, taking a very good finish and showing a characteristic figure on quarter sawn surfaces. There is naturally considerable variation of the wood not only in the different species, but also in the different trees of the same species, as the result of age, rate of growth, and the character of the soil. Wood from the old trees of slow growth is the mellowest. White oak is the best for practically all purposes, being more durable, less porous and of a lighter color. The principal sources of supply are Indiana, Ohio, Kentucky, Tennessee, Arkansas, and Mississippi. The best quality comes from Indiana, Ohio, and Kentucky. It is medium hard, of clear texture and when quarter sawn shows fine flakes. The Tennessee white oak is soft with a pinkish shade from the mountain districts and white from the valleys. Mississippi and Arkansas white oaks are generally very hard, white, and have a tendency to run to comb grain. Red oak is much more porous than white oak and has a decidedly pinkish color. Oak is used as a structural timber where compressive stresses occur and where a hardwood is desired, such as posts, foot blocks for trusses, bolsters and tree nails, and as a finishing wood for interior trim, furniture and flooring.

In addition to the native grown oak, several varieties of oak are imported for high class interior finish and flooring. Notable among these are English oak, Austrian oak, Bavarian oak and Australian lacy oak. English oak is of a yellowish color, turning to a rich brown, and very often nearly black, with age. Australian lacy oak has a brownish color and a beautiful lacy grain, and some of the flooring companies are advertising it quite extensively at the present time.

There are two species of ash which are recognized commercially: white ash and black ash. White ash is noted for its strength and stiffness and is used for interior trim, furniture, and is the best known wood for drain boards for sinks. Black ash or brown ash is darker in color and lighter in weight than white ash, being more or less like chestnut in many of its properties and uses.

Chestnut was in the past a very important timber in Southern New England and New York, but is now limited to the Southern Appalachian region, due to the attack of the blight which has destroyed a vast number of the trees. The wood is a pale brown in color, of medium density rather coarse textured and highly durable. In structure and general appearance it resembles black ash. Its principal uses are for interior trim and for furniture. Wormy chestnut makes a particularly good core for veneered work, as it does not warp, shrink nor swell, and is perfectly safe to use, because the chestnut borer only works on live timber in the tree.

This country produces several varieties of birch trees, but the greater portion of the lumber is from the yellow birch and the sweet, black, or cherry birch, as it is sometimes called. The hardest and smoothest grained wood grows in the hardwood forests of Michigan and Wisconsin. Sweet birch is somewhat harder and stronger than yellow birch, but there is usually no distinction made in the woods, as both produce lumber which is sold as unselected



FROM A RENDERING IN CRAYON BY THEODORE DE POSTELS
APARTMENT BUILDING FOR THE TISHMAN REALTY AND CONSTRUCTION COMPANY, NEW YORK
Benjamin Moscovitz, Architect

LUMBER AND TIMBER

or mixed color birch, and the sapwood of each is known as "white birch," and the heartwood as "red birch." Birch is one of the hardest and strongest of the native hardwoods; it is fine textured and has a very attractively figured grain. It looks equally well whether plain or quarter sawn, and is capable of taking a high polish. It may be given a natural finish or stained to imitate mahogany and it is a very fine base for enamels. If enameled or painted the unselected birch, which costs less than the red or white birch, should be used. This wood is used for furniture, fine cabinet work, interior trim, and for flooring. Birch flooring compares very favorably in service value with maple flooring and selected red birch makes a very beautiful floor. Maples are divided into two kinds, the hard and the soft. Hard maple is furnished by the sugar maple and the black maple, the principal source of supply being from Wisconsin and Michigan. The wood is heavy, hard, strong, fine textured, easy to work and takes a high polish. The principal kinds of figured maple are "curly grained," "fiddle back," and "bird's-eye," which are greatly esteemed by cabinet makers and furniture manufacturers. Maple is used for furniture, interior trim and flooring. As a flooring wood hard maple ranks very high as it is free from splintering and slivering and has most excellent wearing qualities; in fact tests have shown that it wears better than any of our native hardwoods. Soft maple is the product of the red maple and the silver maple. It is less dense and not as strong as hard maple, and is more limited in its uses, although occupying a portion of the same field.

Walnut, generally known as black walnut, is without question the leading native grown cabinet wood. It grows in the Eastern, Middle Western, and Southern States, the main source of supply being in the Middle West. The wood has a natural brown color with a beautifully figured grain; the sapwood is nearly white, but turns brown upon steaming. It combines moderate weight with maximum strength, is easily worked because of its close grain, takes carving very well and can be given a wonderfully fine finish; a dull waxed finish shows the grain of the wood to a good advantage. The wood does not warp nor shrink and has great resistance to moisture and to changes in temperature. Burl walnut is obtained by slicing the huge knots or burls which sometimes form like great warts on a walnut tree. The twisted and thickened wood fiber in these burls gives very beautiful bird's-eye and peacock tail patterns. Walnut is used for furniture, fine cabinet work, interior finish and flooring. Walnut flooring gives very good service and looks wonderfully well on account of its charming figured grain and is very popular for large display windows. Several varieties of walnut are imported from European countries, among which are Circassian walnut, Italian walnut, French walnut, and English walnut. All the European walnuts are the same species the only difference being due to the soil in which they grow and the climatic conditions. The walnut is supposed to have originated in Persia and was introduced into the various countries at various times. The Romans introduced it into Italy, and are said to have introduced it into England, but the earliest authentic record we have is that they were brought from Persia in 1565, and planted in Wilton Park in Wiltshire by the Earl of Pembroke and Montgomery. English walnut is usually light brown in color, with black markings or lines; some

varieties have a very rich tiger-striped figure. French and Italian walnuts resemble the English walnut, but they are generally lighter in color, of a milder texture, and either plain or with a curling or "fiddle back" figure. Circassian walnut is obtained from the region to the west of the Black Sea. This wood is noted for its very beautiful figure, the peculiar tracery of the dark pigments being like the veins in marble. The European walnuts are used for furniture, fine cabinet work, and interior finish.

Butternut, which is quite closely related to the black walnut, is often called "white walnut," but it lacks the strength, rich color, and prominent figure of the more valuable wood. It is soft, easily worked wood, light brown in color and is used for furniture and interior finish. In some sections of the country this wood is called satin wood, but it should not be confused with the Ceylon or West Indian satin woods which are an entirely different species.

There are a number of varieties of cherry in this country but only one, the wild black cherry, supplies commercial lumber. The wood is moderately hard, works easily and is decidedly free from defects. It has a rich reddish color, with very little contrast between heartwood and sapwood, it ages very well, does not fade with exposure to the sunlight and it is not subject to any bleaching of its color when finished in the natural wood. It does not warp, cup, twist, shrink, contract or expand with changes in the temperature, and has a very low moisture absorption. This wood is used for furniture, fine cabinet work and interior finish. It takes a very fine natural finish, and is, also, a splendid base for paint and enamels. Therefore it is frequently used for fine turned and moulded work in conjunction with white pine or whitewood, on account of its being less liable to fracture due to its hardness. About forty years ago cherry was very liberally used for furniture and interior finish, in fact it was one of the leading hardwoods, but for quite some years it was practically off the market. At the present time it appears to be coming back to something like its old place with apparently a good supply to draw upon.

There are two kinds of gum which furnish lumber, red gum and tupelo gum. Red gum, also called hazel, is a very common tree throughout the hardwood bottom lands of the South. The wood is fine and uniformly textured and takes a beautiful satin-like finish. It is of a brownish color, often variegated with black, suggesting Circassian walnut. This wood is used for furniture and for interior finish. It must be handled very carefully to prevent warping; also, it must be thoroughly seasoned and properly kiln dried before using or it will not stand up well. This was found to be the case in New York City some years ago, when a quantity of improperly seasoned red gum was used for interior finish with very bad results. Red gum is exported to England where the heartwood is known as "satin walnut" and the sapwood as "hazel pine." Tupelo gum, sometimes called "bay poplar," is another Southern timber and it often grows in a mixture with cypress. The wood, which is nearly white in color, is soft, fine textured, cross grained, tough, and strong. It finishes smoothly, but is rather inclined to warp. This wood is principally used for flooring.

(Continued in the next issue)



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.

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

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

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

THE MART

S. A. Cyr, 4404 St. André Street, Montreal, Canada, wishes to purchase copies of *PENCIL POINTS* from March, 1923, to January, 1924, inclusive.

Joseph H. Radoms, 334 Sayre Street, Montgomery, Alabama, has the following for sale at very low prices: a bound volume of *PENCIL POINTS* for the year, 1921; a good selection of architectural books, including bound volumes of back numbers of leading architectural magazines, such as *Arte y Decoracion en Espania*, 7 volumes, and Prentice's *Renaissance Architecture and Ornament*.

J. Stanley Bedford, 21 Blauvelt Avenue, Dumont, N. J., will accept any reasonable offer, F. O. B., for the following copies of *PENCIL POINTS*: 1920, June, July, August, September, November, and December; 1921, June, July, August, September, and November; 1922, April and September; 1925, complete; 1926, January, February, March, May, August, September, October, November, and December.

Richard J. Werner, 1315 Burnett Street, San Antonio, Texas, would like to secure a copy of the November, 1929, issue of *PENCIL POINTS*.

The following is offered for sale: oak table, 6 feet, \$10; oak arm chairs, \$3; blue print cabinet, \$25. Address Room 2003, 26 Court Street, Brooklyn, New York.

Peter Mrock, 63 Chicago Street, Fall River, Mass., would like to obtain a copy of the May, 1929, issue of *PENCIL POINTS*.

Everett C. Bradley, 11 Montague Terrace, Brooklyn, N. Y., has the following for sale: *White Pine Series*, Vol. VII, Nos. 3 and 4; Vol. VIII, No. 4; Vol. IX, No. 5; *Architectural Forum*, Part II, all for 1927; March, 1928; January, March, and April, 1929.

Ruel S. Hawke, Service Dept., Louisville Gas and Electric Co., 311 W. Chestnut Street, Louisville, Ky., would like to obtain the following copies of *PENCIL POINTS*: February, May, August, and November, 1928; February and April, 1929.

Fred J. Clarke, 424 Barrington Street, Halifax, N. S., would like to exchange pencil drawings, etchings, etc. Artists and student artists please communicate with him.

Julio C. Japon, 230 West 107th Street, New York, N. Y., has for sale, at \$10 each copy, twelve volumes of *Art and Decoration in Spain*, recently purchased in Cuba, originally costing \$14 each.

The Regional Plan Association, Inc., 400 Madison Avenue, New York, wants to buy the following articles: drafting table, 60" x 120"; drafting table, 54" x 72"; 3 plain stools; plan cabinet with drawers having inside measurements 54" x 40".

Norman Bel Geddes, 128 East 37th Street, New York, N. Y., would like to obtain a copy of the January, 1929, issue of *PENCIL POINTS*.

PERSONALS

G. W. SPAULDING, of Scottsbluff, Nebraska, and ALLAN TUFFORD, of Gering, Nebraska, have formed a partnership for the general practice of architecture under the firm name of SPAULDING & TUFFORD, with offices at 1706 Broadway, Scottsbluff, Nebraska.

AARON G. ALEXANDER, ARCHITECT, formerly with Hobart Upjohn, and Peabody, Wilson & Brown, has taken charge of the architectural department of the National City Realty Corporation, 52 Wall Street, New York, N. Y.

LINDEN & HERR have dissolved partnership. Gordon Herr, Jr., will continue a general practice of architectural and commercial design at the same address, 306 Plaza Bldg., Oakland, Calif. Mr. Linden will open his own office in the Atlas Bldg., Mission St., San Francisco, Calif. SIGVALD L. BERG, 917 Curtis Street, Berkeley, Calif., has been awarded a certificate to practice architecture in that state.

COGGINS & HEDLANDER have removed their offices from 49 West Putnam Avenue to 45 East Putnam Avenue, Greenwich, Conn.

JAMES RIELY GORDON, ARCHITECT, has moved his offices to Suite 509, Farmers Loan & Trust Co. Bldg., 475 Fifth Avenue, New York, N. Y.

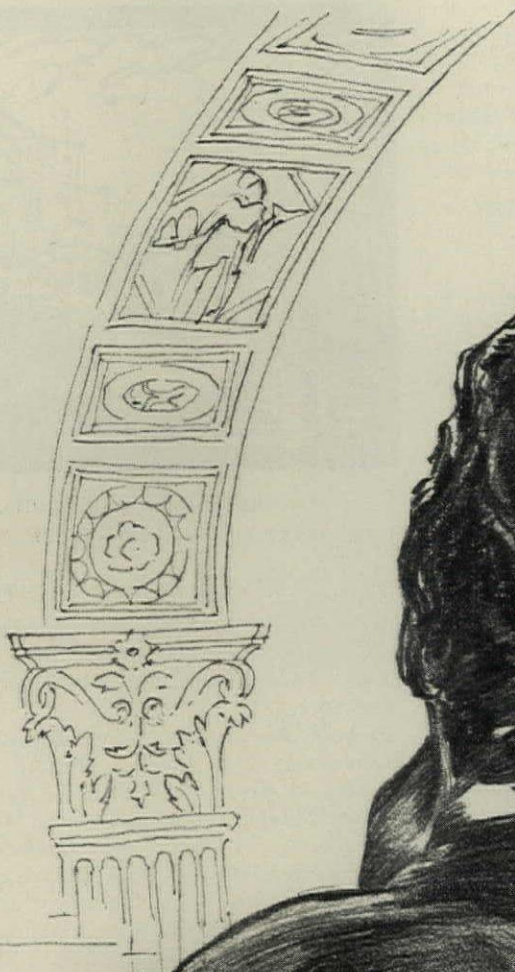
SAMUEL LEWIS MALKIND, ARCHITECT, has moved his offices from 88 West Park Street to 60 West Park Street, Long Beach, L. I., N. Y.

(Continued on page 90, Advertising Section)

FREE EMPLOYMENT SERVICE ITEMS WILL BE FOUND ON PAGES 94, 98, AND 99 IN THE ADVERTISING SECTION

BRONZE

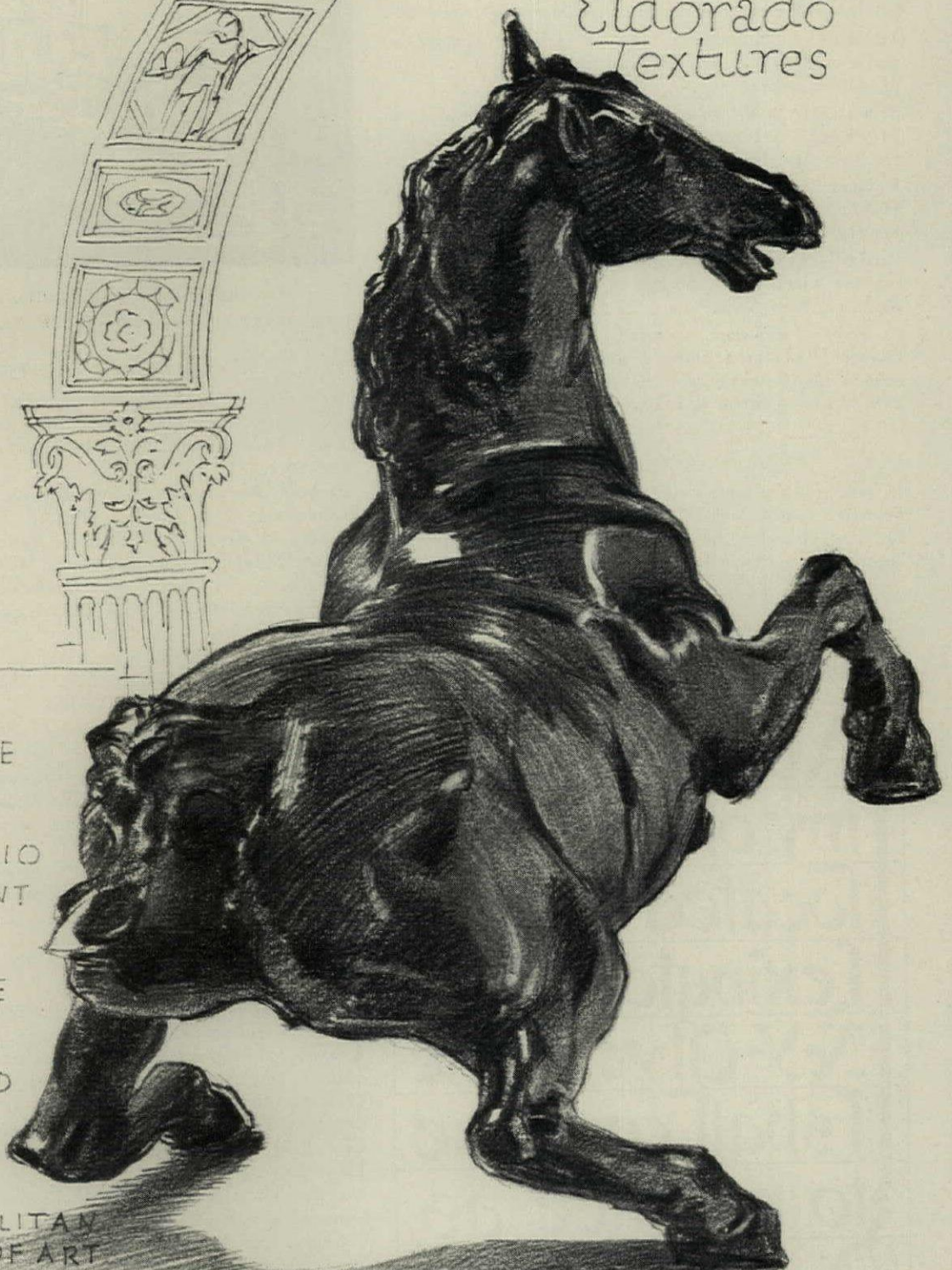
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PERSONALS

(Continued from page 404, Editorial Section)

LANCELOT SUKERT AND G. FRANK CORDNER have entered into partnership with offices at 301-303 Architects' Bldg., Detroit, Michigan. Mr. Sukert is President and Mr. Cordner is Secretary of the Michigan Society of Architects.

MICHAEL J. HOFFMANN, JR., has recently opened his studio at 192 Wakefield Avenue, Buffalo, N. Y., for the practice of architecture.

MIRIAM HILLIARD FLICK, ARCHITECT, has moved from 210 East 77th Street to the McCutcheon Building, 607 Fifth Avenue, New York.

RUSSELL SEYMOUR, ARCHITECT, has moved from the Hamby Building to the Mitchell Building, 227 W. Forsyth Street, Jacksonville, Florida.

EMIL FALKENHAINER, ARCHITECT, has opened an office for the practice of architecture at 371 Fulton Street, Brooklyn, New York.

FLOYD E. BREWSTER, formerly associated with the late George Washington Smith, Santa Barbara architect, has opened his own office for the practice of architecture at 889 Mission Canyon Road, Santa Barbara, Calif.

A CORRECTION

IN THE ADVERTISEMENT of the Johnson Service Co. in our February issue in which the Williamsburg Savings Bank Building, Brooklyn, N. Y., is illustrated, credit should have been given to Frank Sutton as engineer for this building.

On and after
April 1st 1930
my office will be
located at 370
Lexington Ave.
N.Y. City: where
I shall continue
to practice as
Architect
Room No. 2211 . . .
Phone - Caledonia 4091

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ADDRESSES WANTED

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

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NO. CAROLINA: *Durham*; Arnold Perreton.

OHIO: *Cincinnati*; Carroll W. Everett. *Cleveland*; Julian Crowgey. *St. Bernard*; P. L. Engel.

PENNSYLVANIA: *Philadelphia*; Wm. T. Ahern, Herbert Steiglitz, Tilden, Register & Pepper. *Pittsburgh*; Samuel Bond.

TEXAS: *Amarillo*; Claude J. Cosner. *Legion*; Hubert H. Crane.

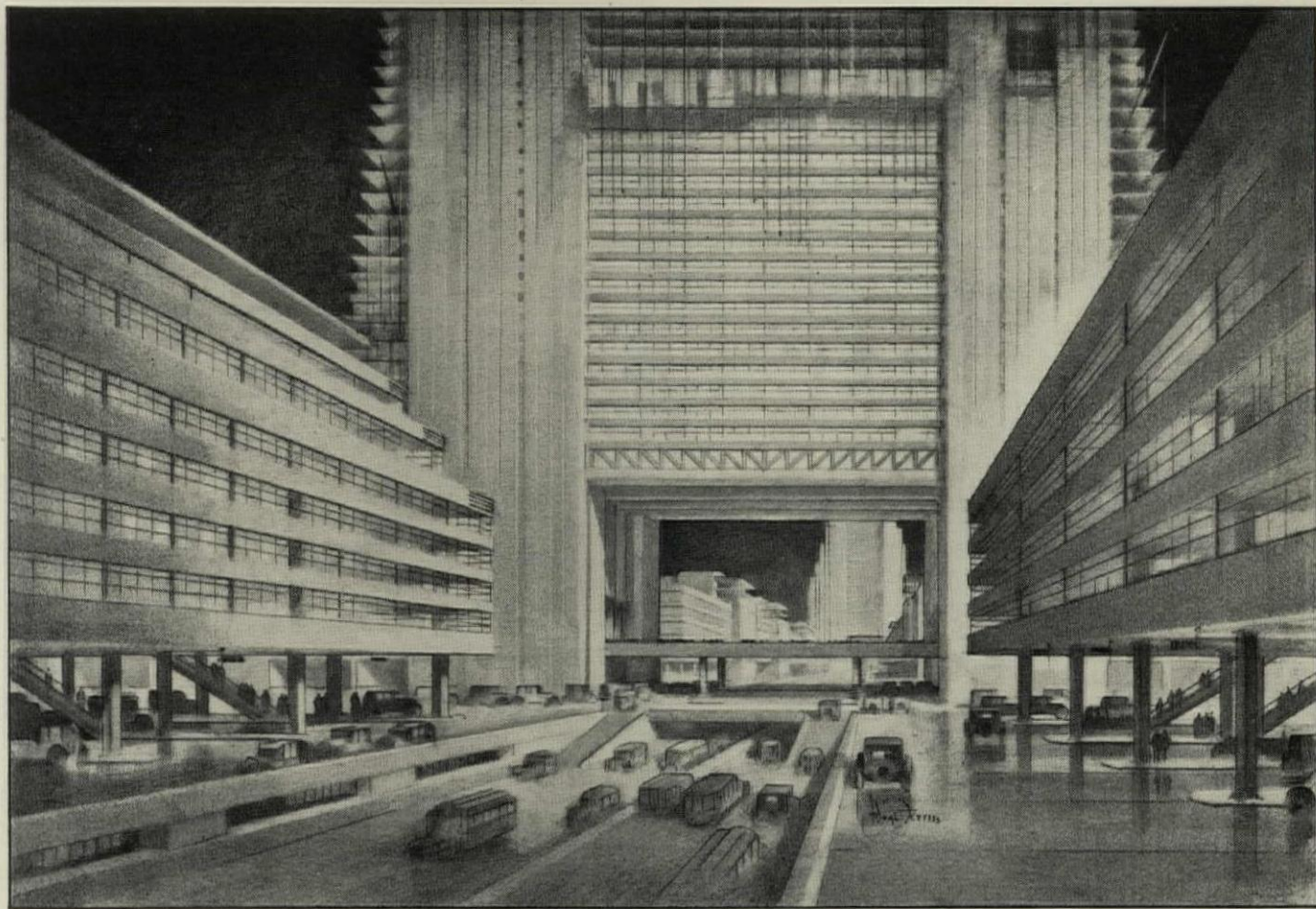
WASHINGTON: *Spokane*; C. R. Butcher.

WISCONSIN: *Green Bay*; Joe B. Wood.

CUBA: Mario Esquiros Ramos.

CANADA: *Westmount, Que.*; Edwin A. Sherrard.

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PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER

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

Andersen Master Window and Door Frames.—A.I.A. File No. 19-e-13. Catalog No. 500. New publication prepared especially for architects, draftsmen and specification writers presents detailed information on this recently perfected line of frames. Master specifications and many pages of detail drawings of frames for basement, double-hung and casement windows, and outside doors for buildings of frame, stucco, brick veneer, and masonry construction. 54 pp. $8\frac{1}{2} \times 11\frac{1}{2}$. Andersen Frame Corp., Bayport, Minn.

Veneer-Steel Partitions.—A.I.A. File No. 28-a-3. New illustrated document gives complete information on the construction and erection of this type of partition. Specifications, detail drawings, typical installations. 16 pp. $8\frac{1}{2} \times 11$. The Hart & Hutchinson Co., New Britain, Conn.

Lighting Equipment for Airports, Airport Hangars, Landing Fields and Airways.—New illustrated bulletin deals with the requirements and proper selection of lighting equipment for lighting the exterior and interior of the storage area and repair base, boundary and obstruction lighting, airway marking and airway roof designs. 30 pp. $8\frac{1}{2} \times 11$. Benjamin Electric Mfg. Co., Des Plaines, Ill.

Vincent's Vellum Tracing Papers.—Booklet with descriptive notes and samples of tracing papers. George Vincent, Inc., 251 West 19th St., New York, N. Y.

Wooster Safe-Groove Stair Treads.—A.I.A. File No. 14-d-1. Descriptive bulletin with detail drawings covering this type of stair tread, also Wooster Security nosings and edgings. Standard filing size. Wooster Products, Inc., Wooster, Ohio.

Corrugated Wire Glass Skylights—Construction Details.—A.I.A. File No. 12-j. Architects' filing folder with brief descriptive data and series of sheets showing construction details as applied to various types of roofs. David Lupton's Sons Co., Allegheny Ave. and Tulip St., Philadelphia, Pa.

Toncan Iron Pipe for Permanence.—A.I.A. File No. 29-b-8. Attractive new illustrated publication gives complete information covering the development, manufacture, physical properties and advantages of Toncan copper molybdenum iron pipe for water supply and plumbing systems. Reports of tests, tables of sizes and weights. 32 pp. $8\frac{1}{2} \times 11$. Republic Iron and Steel Co., Republic Bldg., Youngstown, Ohio.

Mat'O Horn Reinforced Paper Fabric Tarpaulin.—Standard filing size sample of this material suitable for insuring the curing and hardening of concrete floors and as a waterproof mat under shingles, clapboards, etc. A. C. Horn Co., Horn Bldg., Long Island City, N. Y.

Aulbras Hot Water Heaters.—A.I.A. File No. 29-d-2. New catalog with descriptive information and drawings, showing capacities and methods of installation of a new type of non-ferrous hot water heater, also adaptable for pre-heating fuel oil and for other purposes. 12 pp. Standard filing size. Rome Brass Radiator Corp., 1 East 42nd St., New York, N. Y.

Rixson No. 20 Automatic Closer and Floor Check.—Appliance bulletin No. 63 describes the use of this door closing device as applied to Otis elevators of the pushbutton type. Oscar C. Rixson Co., 4450 Carroll Ave., Chicago, Ill.

Schools Yesterday and Today.—A.I.A. File No. 30-c-2. Brochure on schools which is No. 6 of a series featuring the highlights in the architectural development of different types of structures. Separate data sheet showing various types of valves suitable for school installations. $8\frac{1}{2} \times 11$. Jenkins Bros., 80 White St., New York, N. Y.

Standardized Service in Steel for One-story Buildings.—A.I.A. File No. 13-g. Catalog No. 618, just issued, contains much useful information for architects and engineers on the structural design of one-story buildings together with detail drawings and data on this line of standardized steel building products. 12 pp. Standard filing size. The Macomber Steel Co., Canton, Ohio.

Duromit Floors.—Standard filing size folder with descriptive information covering this new flooring material suitable for use in all types of buildings. American Fluresit Co., 27 E. Water St., Cincinnati, O.

Modern Interiors.—Handsome brochure on the subject of immured and paneled types of invisible radiators contains numerous photographic reproductions of home, office, apartment and hotel interiors in which these heating units have been installed. 32 pp. The Herman Nelson Corp., Moline, Ill.

Hubbell Convenience Outlet.—Illustrated folder with complete data covering this new type of convenience outlet. 4 pp. $8\frac{1}{2} \times 11$. Harvey Hubbell, Inc., Bridgeport, Conn.

Colloidal Colors (Collopakes) and How they Differ from Paint.—A.I.A. File No. 25-b. Laboratory bulletin No. 1 contains useful information for architects and draftsmen on the subject indicated. Standard filing size. Samuel Cabot, Inc., 141 Milk St., Boston, Mass.

Published by the same firm, "The Fading of Paint." A.I.A. File No. 25-b. Laboratory bulletin No. 2 discusses the fading of paint, its causes and prevention. $8\frac{1}{2} \times 11$.

"The Relation of Surface Tension to Brush Marks on Painted Surfaces." A.I.A. File No. 25-b. Laboratory bulletin No. 3 covers the subject indicated.

Hamilton-Calumet Drafting Equipment.—Catalog No. 9 describes and illustrates this new line of filing and drafting room equipment. Dimension tables. 16 pp. $8\frac{1}{2} \times 11$. Hamilton Manufacturing Co., Two Rivers, Wis.

Excelsio Direct Water Heaters.—Illustrated folder describes several types of direct heaters for fire pot installation. $8\frac{1}{2} \times 11$. Excelsio Products Corporation, 65 Clyde Ave., Buffalo, N. Y.

Sanitary Disposal of Waste in Hospitals.—A.I.A. File No. 35-j-41. Illustrated bulletin shows how this necessary part of hospital service is taken care of with the Kernerator. $8\frac{1}{2} \times 11$. Kerner Incinerator Co., Milwaukee, Wis.

Published by the same firm, "Basement-fed Kernerators."

Bulletin with descriptive data covering type of incinerator which can be installed in homes already built or in homes without adequate flue for chimney-fed incinerator. $8\frac{1}{2} \times 11$.

Modernizing Obsolete Heating Systems.—Illustrated bulletin B-800 explains in detail how the modernization of obsolete heating systems can be effected with Webster syphon attachments. 16 pp. $8\frac{1}{2} \times 11$. Warren Webster & Co., Camden, N. J.

Vaulted Concrete Sidewalks.—New publication with detail drawings and specifications discusses the definite requirements for vaulted sidewalks and how these requirements may be attained. 12 pp. Standard filing size. Portland Cement Assn., 33 West Grand Ave., Chicago, Ill.

American Walnut for Interior Woodwork and Paneling.—A.I.A. File No. 19-e. Attractive brochure gives costs and specifications of a specimen room and shows the various treatments possible with this kind of wood. 24 pp. Standard filing size. American Walnut Manufacturers Assn., 616 South Michigan Blvd., Chicago, Ill.

Modernize Your Home.—A.I.A. File No. 23-a. Illustrated bulletin showing the adaptability of mosaic tiles for modernizing various rooms of the home. $8\frac{1}{2} \times 11$. The Mosaic Tile Co., Zanesville, Ohio.

Guide Book to Good Walls.—Attractive brochure on the subject of walls and ceilings describes a complete line of wall-making materials, including lath, plaster, lime and color texture. 20 pp. Standard filing size. National Gypsum Co., Jackson Bldg., Buffalo, N. Y.

Published by the same firm, "Rooms of Romance." New document presents numerous suggestions for modernizing present homes through the use of this line of wall and ceiling materials. 24 pp. $8\frac{1}{2} \times 11$.

The Donley Catalog.—Fourteenth edition illustrates and describes 52 metal building devices, including fireplace equipment, coal chutes, package receivers, letter boxes, basement windows, garbage receivers, etc. 32 pp. Standard filing size. The Donley Brothers Co., 13900 Miles Ave., Cleveland, O.

The Protection of Iron and Steel Sheets Against Rusting.—Booklet contains a brief non-technical discussion of the value of protective coatings. 12 pp. $8\frac{1}{2} \times 11$. American Sheet and Tin Plate Co., Frick Bldg., Pittsburgh, Pa.

Yaxley Radio Convenience Outlets.—Illustrated catalog describing numerous designs of radio convenience outlets for use in residences, hospitals, schools, hotels, apartments, etc. Wiring suggestions, diagrams. 16 pp. Standard filing size. Yaxley Manufacturing Co., 9 South Clinton St., Chicago, Ill.

Westinghouse Commercial Lighting Equipment.—A.I.A. File No. 31-f-2. Catalog 219-B describes and illustrates lighting equipment suitable for commercial interiors of any type. Included are the procedure for designing a lighting system, a list of representative installations and tables of sizes and prices. 28 pp. $8\frac{1}{2} \times 11$. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

Natco Vitritile.—Bulletin No. 164, just issued, is devoted to complete description of this glazed structural fire clay tile for use in both interior and exterior load bearing and non-load bearing walls and partitions. Color plates, typical shapes and sizes, detail drawings, tables, specifications, etc. 40 pp. Standard filing size. National Fireproofing Co., Fulton Bldg., Pittsburgh, Pa.

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Position Wanted: Drafting room and general office manager in architect's office. Salary \$6500.00 per year. Box No. 500, care of PENCIL POINTS.

Wanted: Architectural designer with technical training, some experience and good habits. A man with congenial disposition and above average talent will be offered a salary and interest in a good practice in the northwest. Box No. 501, care of PENCIL POINTS.

Position Wanted: Architect with New York and Philadelphia experience desires permanent position in southern or southwestern office doing general practice. Designs well, domestic, public or ecclesiastical work. Age 27, married. At present in New York. Box No. 502, care of PENCIL POINTS.

Position Wanted: Architectural draftsman-designer and supervising architect, 14 years' experience in leading architectural offices. Five years New York, two years Boston. Registered in New York, Georgia and Florida. Versatile experience. Graduate in full course in architecture. New York City or Boston location. Box No. 503, care of PENCIL POINTS.

Position Wanted: Experienced architectural designer, Gothic and all-round. Perspectives, quick sketches, details. Settled man. Out of town preferred. Box No. 504, care of PENCIL POINTS.

Position Wanted: Architectural draftsman, 37 years of age, married. Fourteen years' experience in all classes of buildings. Work from sketches to finished plans and details. Best references. Salary open. Box No. 505, care of PENCIL POINTS.

Position Wanted: As designer, preferably with theatre architect. Seven years' experience. Box No. 506, care of PENCIL POINTS.

Position Wanted: Architectural draftsman wishes position with reputable architect or builder doing high class residential work, Northern New Jersey or Westchester County preferred, as draftsman or architectural superintendent of construction. Seven years' office experience, two years' special course in architecture and two years' superintendent of construction. Box No. 507, care of PENCIL POINTS.

Specification Specialist, thirty years' practical experience, wants a few more clients. Specifications are brief, concise, coherent, comprehensive without verbosity and thoroughly co-ordinating with drawings. Reasonable charge. Box No. 508, care of PENCIL POINTS.

Position Wanted: Architectural engineer and draftsman, recent graduate, detailing, estimating and designing in steel, reinforced concrete or wood, rendering, some ability for design. Wants work where merit counts anywhere in United States. Box No. 509, care of PENCIL POINTS.

Position Wanted: Architectural draftsman, six years' experience detailer and designer, age 25. Salary \$50.00 per week. Knowledge of sculpturing. Willing to travel. Box No. 511, care of PENCIL POINTS.

Position Wanted: Registered architect, State of New Jersey, Pratt Institute graduate, eighteen years' experience including residential, school and industrial work, also specification writing and superintending. Box No. 512, care of PENCIL POINTS.

Position Wanted: Position or part time work wanted. Architectural draftsman, thirty years of age, six years' field and office experience. Capable on interior or exterior perspective, expert detailer. Box No. 510, care of PENCIL POINTS.

Position Wanted: Experienced designer wishes connection with busy office. Competent to handle architectural work from sketches to completion. Box No. 514, care of PENCIL POINTS.

Position Wanted: Draftsman and scale modeler. Box No. 515, care of PENCIL POINTS.

Position Wanted: Architectural, interior decorative draftsman-designer, having thirteen years' practical experience, residential work, etc. Familiar with all branches of furnishings, construction. Salary secondary. Box No. 518, care of PENCIL POINTS.

Position Wanted: Draftsman, good residential work. Can carry job through from sketches to completion. Good knowledge of construction. Box No. 516, care of PENCIL POINTS.

Position Wanted: Detail man, specializing Kalamein doors, windows, hollow metal doors and millwork. Five years' experience with manufacturers of same. Box No. 517, care of PENCIL POINTS.

Position Wanted: Architectural draftsman and superintendent of construction. Ten years' practical experience and best of training. Desires connection with architectural firm as general office assistant or outside superintendent. Box No. 520, care of PENCIL POINTS.

Position Wanted: Young man, nineteen years of age. Three years' drafting at Mechanics Institute. Good letterer and can make neat drawings, tracings, and blue prints. Edward Paul Jaeger, 200—40th Street, Union City, N. J.

Position Wanted: Young man, twenty-six years of age, architectural draftsman, single, willing to work in any part of the country. Completed seven-year architectural course and have had a year and a half actual experience. Box No. 521, care of PENCIL POINTS.

Position Wanted: Junior draftsman, three years at Mechanics Institute and one year estimating. Moderate salary. Box No. 522, care of PENCIL POINTS.

Position Wanted: Architectural designer and draftsman, detailing, perspectives and renderings. All types of architecture, new, old, and modern. Eight years' actual office experience. Five years in New York City and three years abroad. Box No. 523, care of PENCIL POINTS.

Position Wanted: Young man, twenty-eight years of age, desires position in architect's office as sketcher for modern factories, schools, churches and public buildings. Six years' experience in architectural and engineering office. Otto Stoffel, 445 Ellison Street, Paterson, N. J.

Position Wanted: Young lady would like position in architect's office to do lettering. Miss Ravlin, 134 Lexington Avenue, New York, N. Y.

Position Wanted: Young lady, thoroughly experienced in architect's office, desires position with architect or large contracting concern where knowledge of bookkeeping and specification writing can be employed. Call Lehigh 2276 or address Miss B. Santelli, 2182 Second Avenue, New York, N. Y.

Position Wanted: Student member of the Royal Institute of British Architects, who is qualified for associateship of the R.T.B.A., and has taken five-year course at the Welsh School of Architecture, wants to gain experience as assistant in an architect's office. Has spent some time in a London architect's office. Drawings, design, sketches, and working drawings to show. Reasonable salary. Miss O. Emmerson Price, Hotel Montclair, Montclair, N. J.

Position Wanted: Draftsman, young man, technical school graduate, two years' practical experience, wishes position in architectural or construction office in New York City or vicinity. Address P.A.M., P. O. Box 33, Newark, N. J.

Position Wanted: Architectural draftsman, single, age twenty-six, wide experience and good general ability in the profession. Prefers work in connection with design department. Seven years' experience on all types of buildings. Good detailer. No preference as to location. Salary open. Harry Y. Steele, P. O. Box 312, Galena, Ill.

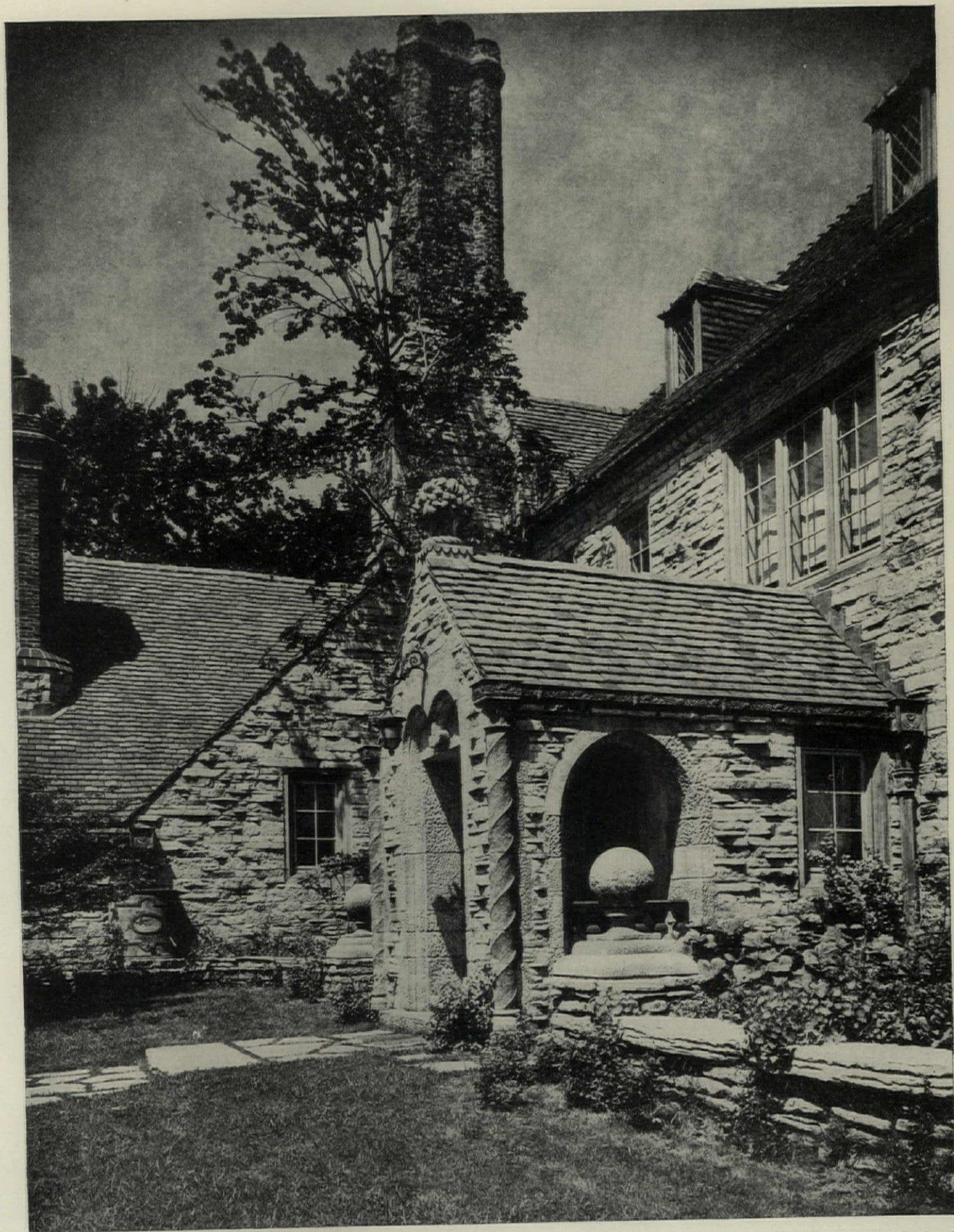
Position Wanted: By architect's-builder's construction superintendent, with years of experience in office as well as in the field; knowledge of all trades, first class references. Experience in detail furnished on request. Location immaterial. Reply Room 304 Temple Bldg., 71 Monroe Avenue, Detroit, Michigan.

Position Wanted: Young lady would like position as stenographer and general assistant in architect's office. Four years' experience in architect's office, also five years' commercial experience. New York City location. Salary at present \$40.00 per week. Box No. 524, care of PENCIL POINTS.

Position Wanted: Young lady with experience in architect's office would like position in architectural or engineering field as stenographer, telephone operator and general office assistant. Box No. 525, care of PENCIL POINTS.

Position Wanted: Architect, experienced in Investment, Industrial, Commercial, Theological and Theatrical Buildings, would like to communicate with a large office having in mind an assistant for a branch office, or with a small office located in one of the eastern coastal states. Address A. C. Y., Hotel Kraker, Holland, Michigan.

(Other items on pages 98 and 99, Advertising Section)



How appropriate to this Early English residence in Evanston, Illinois, is its roof of hand fashioned shingle tiles. The architect, Richard Powers of Chicago, chose IMPERIAL Roofing Tiles as best simulating the color and texture of ancient English tile roofs.

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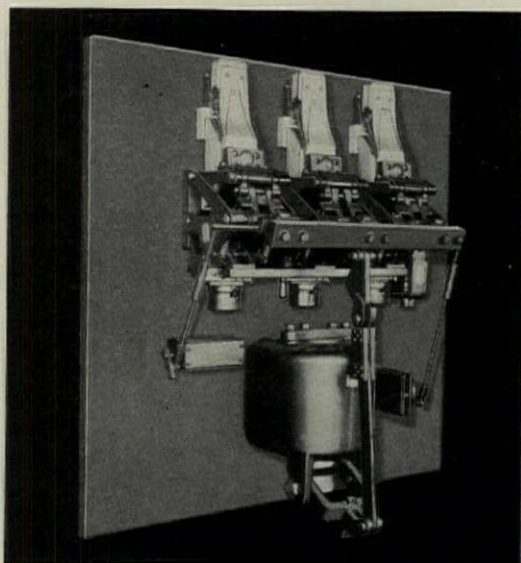
A BREAKER

to meet the need

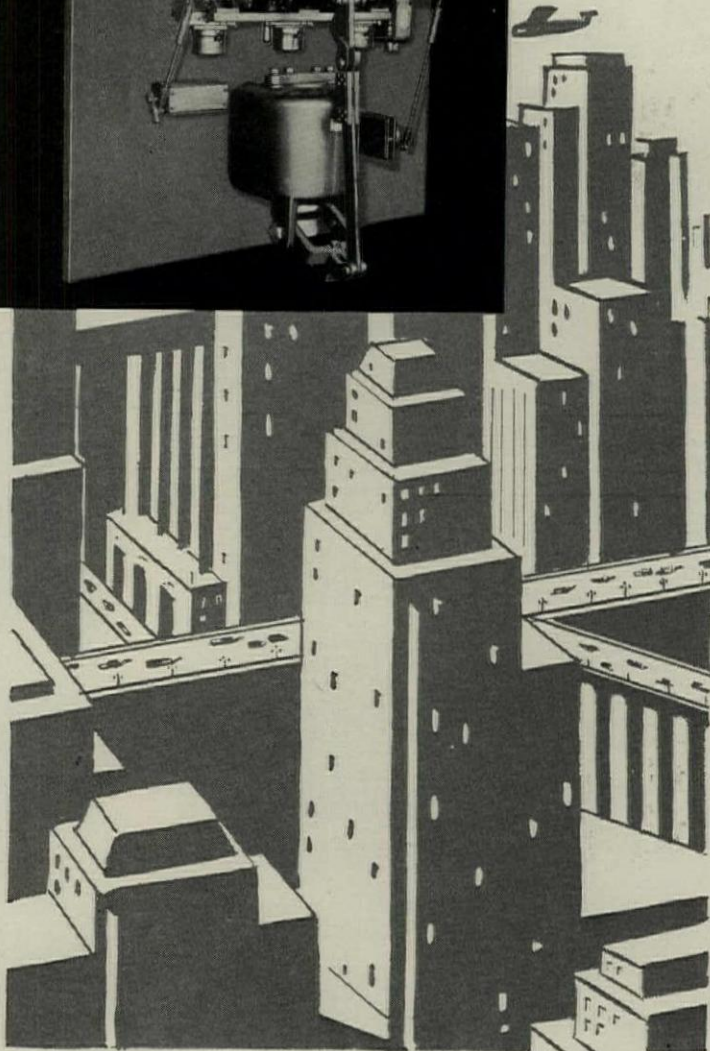
of

MODERN

SKYSCRAPERS



A three-pole, 4000-ampere, electrically-operated, trip-free, CL Carbon Circuit Breaker for modern skyscrapers



ADEQUATE control of distributed power was a problem of vital importance to architects in constructing modern skyscrapers.

In its solution, Westinghouse high-power laboratories played an important part. Power conditions similar to those met in modern buildings were set up for test purposes which made it possible to foresee breaker requirements to cope with new conditions.

From data thus obtained grew the modern CL carbon circuit breaker—the breaker that is being used so successfully in such structures as the Chicago Civic Opera Building, the Chrysler Building, the Atlantic City Convention Hall and many others.

If your file 31-D-44 does not contain our new circular 1705-B, please request it from our nearest office.

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

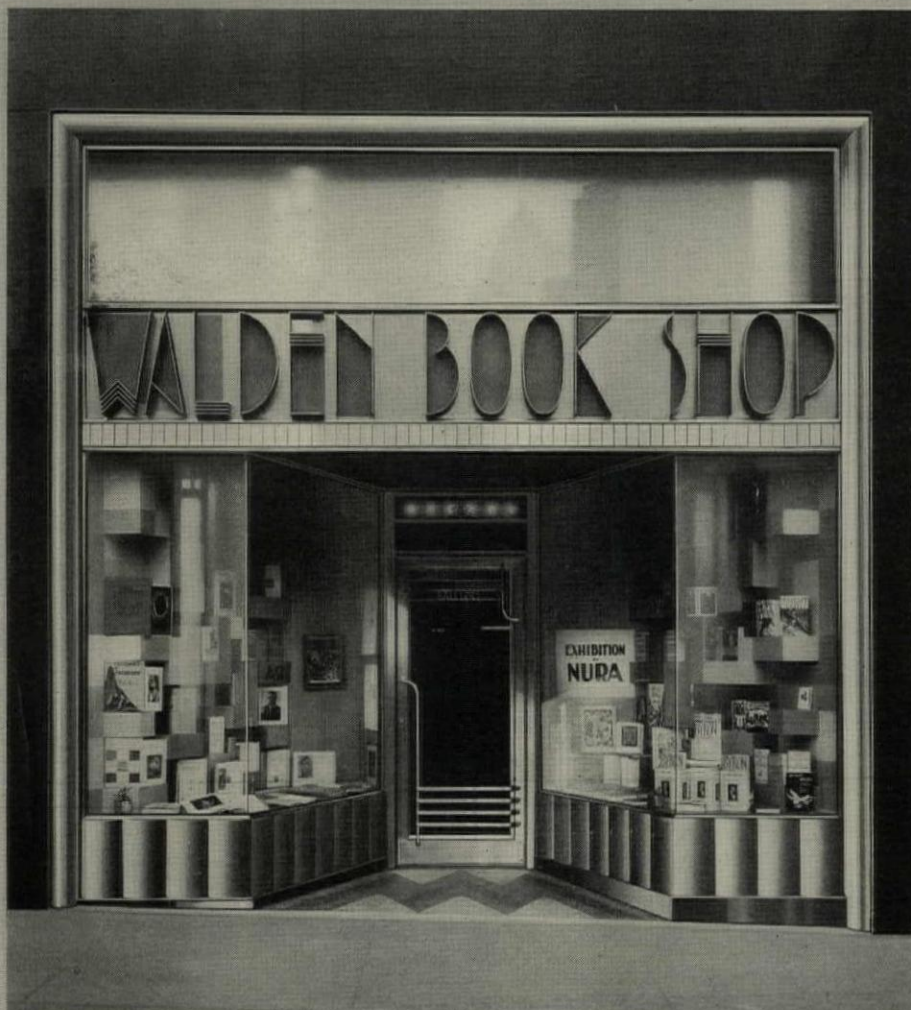
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TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY AT 10:00 P. M., E. S. T.

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The Walden Book Shop, Chicago. Architects—Holabird & Root. Custom-Built by Kawneer.

For excellence of workmanship, true reproduction of design and sound construction we advocate the fabrication of store fronts at our factory. A corps of skilled workmen trained by an institution with twenty-five years' experience in store front building is your assurance of satisfaction. Furnished in Bronze, Aluminum Alloy or Copper.

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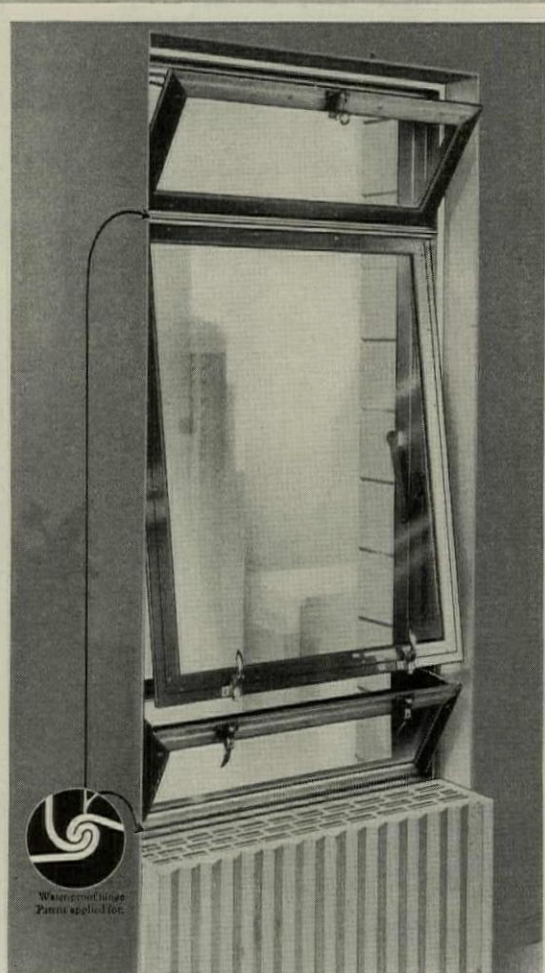
THE KAWNEER COMPANY, MANUFACTURERS OF
BRONZE STORE FRONTS, WINDOWS AND DOORS
NILES, MICHIGAN. Subsidiary, BERKELEY, CALIF.

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SEE OUR EXHIBIT
AT ARCHT'S
SAMPLE CORP.
NEW YORK CITY

WINDOWS



SEALAIR IN-SWINGING

This window is weather-proof when closed and draft-proof when opened. Both sides of all sashes can be washed from the interior. It will not rattle, and can be operated with ease. The stationary bar between lower and middle sash makes it a safety window. Made in Bronze, Aluminum Alloy or Steel.

Send for complete description, specifications and F.S. details.

THE
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Niles, Michigan

Subsidiary: Berkeley, Calif.

A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other items on pages 94 and 99, Advertising Section)

Position Wanted: Specification writer desires to make change. Thoroughly experienced on large commercial and industrial work. Available immediately. Chas S. King, 228 Higgins Bldg., Los Angeles, Calif.

Position Wanted: Draftsman and stenographer. Young woman with ten hard years' experience in designing houses, small churches, and stores and additional experience in office layout, used to all details connected with architect's office, specifications, quantitative analysis, estimating and A.I.A. files. Will begin for \$30.00 a week, environs of New York. W. Wigginton, 324 W. 107th St., N. Y.

Position Wanted: Designer of wide experience and education desires special employment for a period of six to eight weeks this summer. Box No. 526, care of PENCIL POINTS.

Part Time Work Wanted: Architectural perspectives, any medium, designing and research, ten years' experience. Eight club houses averaging a hundred thousand each have been obtained by one office from my personally designed perspectives and sketches. L. B. Harding, 630 Gary Place, Chicago, Ill.

Space suitable for architect in architect's office, with use of reception room and service, for rent from May 1st or earlier. Inquire Room 1018, 247 Park Avenue, N. Y. C. Telephone Wickersham 0569.

Wanted: Man to take charge of Private School in Massachusetts who has had training in the following subjects: Painting in oil and water color, cast drawing, and commercial design. Box No. 539, care of PENCIL POINTS.

Position Wanted: Registered architect, fifteen years' private practice and office manager New York City and Middle West wishes to connect with architectural office as office manager or executive. University graduate. Member A.I.A. Widely traveled abroad and in America. Broad experience. Young man of culture. Highest references. Box No. 535, care of PENCIL POINTS.

Position Wanted: Draftsman, two and one-half years' experience on apartment house work, fireproof and non-fireproof, also alterations, wishes permanent position in New York or Brooklyn with an architect who is always busy. Now I.C.S. course student in architecture having completed architectural drawing. Salary \$35.00. Age 29. Box No. 536, care of PENCIL POINTS.

Position Wanted: Temporary position wanted by young man, 23 years of age, six years' experience in architect's office. Capable of developing working drawings from sketches, detail drawings and designing steel. Box No. 537, care of PENCIL POINTS.

Position Wanted: Landscape engineer with many years of experience desires position. New work or administrator of Estate. Box No. 538, care of PENCIL POINTS.

Position Wanted: Registered architect with wide acquaintance wishes to cooperate or associate with architect in Manhattan who has planned large type fireproof apartments and office buildings credited to his name. Architect will obtain business. Interesting and confidential proposition. Box No. 527, care of PENCIL POINTS.

Position Wanted: Architectural draftsman, 14 years' varied European experience, 8 years' American, especially New York experience, desires permanent position. Experience in New York City on office and loft buildings, apartment houses, hotels, school houses and bank buildings (plans, interior and exterior work). Especially well versed in working drawings, scale and F.S. details (architectural and structural details), some designing. Can handle work from start to completion. Box No. 528, care of PENCIL POINTS.

Position Wanted: Young man, 17, recent Stuyvesant High School graduate, desires position in architect's office as beginner. Can trace. Charles Beyns, 431 East 16th Street, New York, N. Y.

Position Wanted: Architectural draftsman wishes position in any locality. Three years' College and special courses. Have had experience in residential, apartments. Can work at any detail. Salary may be worked accordingly. Box No. 529, care of PENCIL POINTS.

Position Wanted: Architectural man, registered, more than eleven years on all classes of buildings. Has handled large work, specifications, production of drawings, superintendence, management, contracts. Desires connection with owner-builder. Box No. 530, care of PENCIL POINTS.

"RACKET" OF THE REGISTRATION OF ARCHITECTS

(Continued from page 371, Editorial Section)

(But why the future tense, Mr. Jones, since it has all happened?); and "Every applicant must be accorded his constitutional right to be judged by his peers (equals), and not by a bureaucratic clerk who knows nothing about qualifications and whose actions are purely routine." On the point of being judged by one's equals, I should like to raise the question of the fitness of the examining board memberships, not only in this state but everywhere, to examine the average young architect with training by applicatory method, upon any proper modern basis. While there are honorable exceptions to my general criticism, it is generally the fact that membership on such boards is made up of men trained in obsolete academic theories or not trained at all, and professors who are professors because unfit to be architects. They are mere bureaucrats no better than the curt clerks at Albany who, finding themselves the discards of business and profession, are endeavoring "to keep out" the ablest and, to them, the "most dangerous" competition.

Of what service is it to the public that a man of the intuitive, imaginative, and inventive capacity of a Brunelleschi or Bramante should be examined in the light of the piffling knowledge of men whose alleged qualification is merely the academic parsley of a college degree, or be required to spend "three years in the office of a reputable architect"? And as a final question—by *whose* *altesse* of judgment and by what standard is that word "reputable" to be defined?—FRANCIS S. SWALES.

A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other items on pages 94 and 98, Advertising Section)

Wanted: Free lance work in architectural construction, details, elevations, preliminary layouts, office layouts and interiors; architectural modeling and compositions, specializing in suburban and town residences. S. E. Pearman, 1722 West 4th Street, Brooklyn, N. Y.

Position Wanted: Young woman, 22, graduate of four-year art school course. Two years' experience in monumental design. Good at perspective renderings in water color and pencil, blue prints and full sizes. Ambitious and hard working. Knowledge of typing and general office practice. Box No. 531, care of PENCIL POINTS.

Position Wanted: Young student would like position as tracer. Al. Rice, 238 Columbus Place, Cliffside, N. J.

Position Wanted: Young High School graduate, 20 years old, wishes position as beginner in architect's office, in Indianapolis or vicinity. Studied architectural drafting in High School. Can make perspective drawings. Wayne Smith, 507 E. Sycamore, Kokomo, Indiana.

Position Wanted: Architectural draftsman, ten years' experience, design, working drawings, superintending. All types of work. Any place in the U. S. Box No. 532, care of PENCIL POINTS.

Position Wanted: Stenographer-secretary (Christian), neat, accurate. Prefers technical work. Seven years' unusual experience. One year with architect, eight months with builder. Knowledge of general office work, filing and operation of any type switchboard. Salary \$30-\$35. Address L. J., 3737 Warren Street, Jackson Heights, L. I., N. Y.

Position Wanted: Architect with thorough grounding in domestic architecture and details; knowledge of landscape design, planting and details. Keen knowledge of all interior designs and details, a fine sense of color and sure knowledge of decoration, interior furnishings, fabrics and floor coverings. Box No. 533, care of PENCIL POINTS.

Position Wanted: Stenographer-secretary, who has had extensive experience in architects' offices, desires position in New York City. Box No. 534, care of PENCIL POINTS.

Position Wanted: University graduate, designer and all-round draftsman. Seven years' experience in New York and Eastern states doing churches, schools and residences. Would like permanent connection with small firm. Free to go anywhere after June 15th. Box No. 539, care of PENCIL POINTS.

DOORS



OF RUSTLESS METAL

The rails and stiles of this door consist of heavy tubular members, the joints of which are strongly welded. The inner edge of the frame is trimmed with shapely mouldings used for securing the center panel. With necessary hardware furnished and applied the complete ensemble presents a unit appropriate for the finest commercial buildings. Furnished in Bronze or Aluminum Alloy.

Send for complete description and F. S. details.

THE
Kawneer
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Niles, Michigan

Subsidiary: Berkeley, Calif.



SOLVED ...

an unusual Ventilation Problem

This installation at the Standard Stock and Mining Exchange of Toronto is an interesting example of the adaptability of Sturtevant Unit Heater-Ventilators to a wide variety of ventilating services.

Laying out a ventilating system for the exchange floor of this building presented an unusual problem. Building a fan room at some point in the main room would have seriously interfered with the architectural features. Furthermore, the unfavorable location of the fresh air supply introduced other difficulties.

Sturtevant Unit Heater-Ventilators provided the solution. Seven were installed above the quotation board as illustrated, eliminating the necessity of a fan room. Units discharge air downward at an angle of 45 degrees. Fresh air is conducted from the roof in ducts enclosed in the wall.

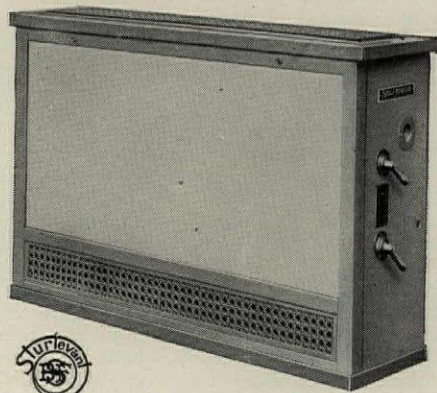
Our Catalog No. 361 shows a wide variety of Unit Heater-Ventilator installations and we are sure you will find it to be interesting and helpful. Any Sturtevant office will gladly send you a copy.

B. F. STURTEVANT CO., *Hyde Park*, BOSTON, MASS.

Branch Offices in Principal Cities: *Canadian Offices at:* Toronto, Montreal and Galt.

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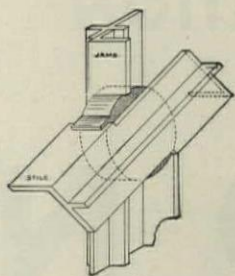
Standard Stock & Mining Exchange, Toronto, Canada. Architects in charge of remodeling: George, Moorehouse & King, Toronto. Consulting Engineers: McMaster-Jacob Engineering Co., Ltd., Toronto. General Contractors: Witchall & Son, Toronto. Heating Contractors: W. H. Clifton & Co., Toronto.



Sturtevant *the Silent* Unit Heater-Ventilator

Reg. U. S. Pat. Off.

SUPPLIES OUTDOOR AIR FILTERED CLEAN AND TEMPERED



*A
triumph
in
pivot
design*

Here is window sash unlike all others†
 Defies time and corroding elements† Fabri-
 cated exclusively by MESKER from genu-
 ine wrought iron of special rolled cruciform
 bar type, it brings new low maintenance
 costs† Marks the end of "or equal" sash
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 derful for packing house, foundry, seaboard
 or railroad buildings, and for chemical plant
 use† Learn about it† Request Folder PP†

WROUGHT

IRON

Mesker

MESKER BROS. IRON CO., ST. LOUIS, MO.
 Wrought Iron Window Sash Originators

CHECK CONCRETE DISINTEGRATION WITH OMICRON

OUT OF MODERN chemical and physical research has come proof of two important facts:

1. The effective life of concrete is materially shortened through the dissolution of soluble contents and consequent disintegration of the concrete.
2. The process of disintegration is constantly active everywhere. While in many industries or buildings it is hastened by direct exposure to oils, fats, acids and alkalis, it is just as surely at work wherever concrete is subjected to acidic precipitation from smoke, fumes, etc.

Out of the Master Builders Research Laboratories has come Omicron—a new, exclusive product—a proven means of checking disintegration; of increasing the strength and lengthening the life of concrete floors and other concrete structures.

Omicron—the “fifth ingredient”—when combined with Portland Cement materially reduces the soluble content of concrete, thereby largely preventing disintegration.

Fourteen comparative tests, made by recognized laboratories, definitely establish the effectiveness of Omicron in increasing tensile and compression strength, and in multiplying the resistance to disintegration. Those tests are recorded in detail in a booklet which will be mailed at your request.

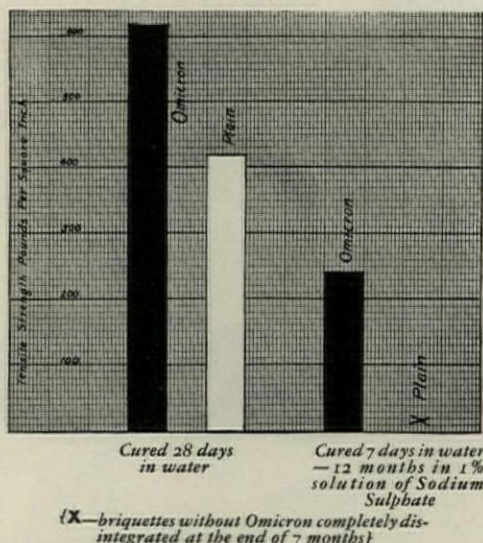


THE MASTER BUILDERS COMPANY

FACTORIES: CLEVELAND
BUFFALO, IRVINGTON

Cleveland, Ohio

SALES OFFICES AND STOCKS
IN ALL PRINCIPAL CITIES



ACTION OF SODIUM SULPHATE

Floors in many diversified industries are constantly subjected to the disintegrating action of Sodium Sulphate in solution. Laboratory tests clearly demonstrate the value of Omicron in checking that disintegration.

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

FOR INDUSTRIAL FLOORS

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

FOR COMMERCIAL FLOORS

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

FOR COLORED FLOORS

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

Complete literature on any or all Master Builders products will be sent to you on your request.

Save-

HOME BEAUTY Is More than Skin Deep

Many a recently built residence is proving a disappointment. The exterior is fresh and modern, but inside—the structure looks down at the heel—twice its age. The plaster has cracked or fallen—lath streaks have developed.

Marred plastering is almost an infallible sign that Steel Lath has not been used. For home beauty is more than skin deep. The lath—not the plaster—usually determines whether the interior of a home will age quickly or remain attractive for years.

















Plastering on steel lath costs very little more than plastering on ordinary lath. But the results are far different. Cove ceilings, decorative niches, artistic stairways and fire places—all those little touches which convert a house into a home—are obtained with economy and ease only with steel lath.

Steel lath does not warp and swell from moisture—nor dry out and shrink. As long as the structure of the building itself remains solid, the plaster stays in place—cracks do not develop. Lath streaks are unknown. The home interior remains fresh and beautiful—redecorating expense is halved.

Furthermore, plaster on steel lath in official tests resists fire one hour. That is important for approximately seven thousand lives are lost annually in residential fires. For this reason, the building codes of progressive communities specify the use of steel lath for fire-safe construction.

More and More—Good Construction Means Steel Construction

Modern construction requires a far greater use of steel. Steel doors, trim and cabinets cannot swell or warp—eliminating refitting—speeding up construction. Enamelled wall tile and laundry trays combine extreme cleanliness with reasonable cost. Wherever steel is used it makes certain definite savings. In one case it saves fire loss, in another money, labor, life, time, dirt, wear, weight, space or a combination of many of these. That these savings are important, is demonstrated by the rapidly growing use of steel products in all types of construction. For full information on any steel product write Trade Research Division, National Association of Flat Rolled Steel Manufacturers, 511 Terminal Tower, Cleveland, O.

Save with Steel								
	Life	Fire Loss	Weight	Labor	Time	Wear	Space	Money
								
	All Steel Buildings	Steel Lath	Plaster Steel	Steel Office Furniture	Steel Furniture Household Equipment	Steel Building Products	Steel Shelving, Bins and Lockers	Steel Buildings

with Steel LATH



“This Conductor Pipe is bound to last longer”

LEADCLAD roofing products consist of a base of special analysis copper-bearing steel to which is fused a thick, heavy coating of *Pure Lead*. This coating insures long life and durability in every Leadclad product. Leadclad has all the advantages of pure lead without its excessive weight. It is light in weight, lasting, non-staining and weathers to a soft stonelike color. Made in all standard roofing and drainage forms.

Leadclad Copper

Leadclad Copper is furnished, as illustrated, in either Old English Cast or plain finish. This material has a base of **PURE COPPER** to which is fused a thick heavy coating of **PURE LEAD**. It weathers to a stately stone colored patina. Unequalled at any price for flashings, gutters or conductor pipe.



Wheeling Metal & Mfg. Co.
WHEELING, W. VA.



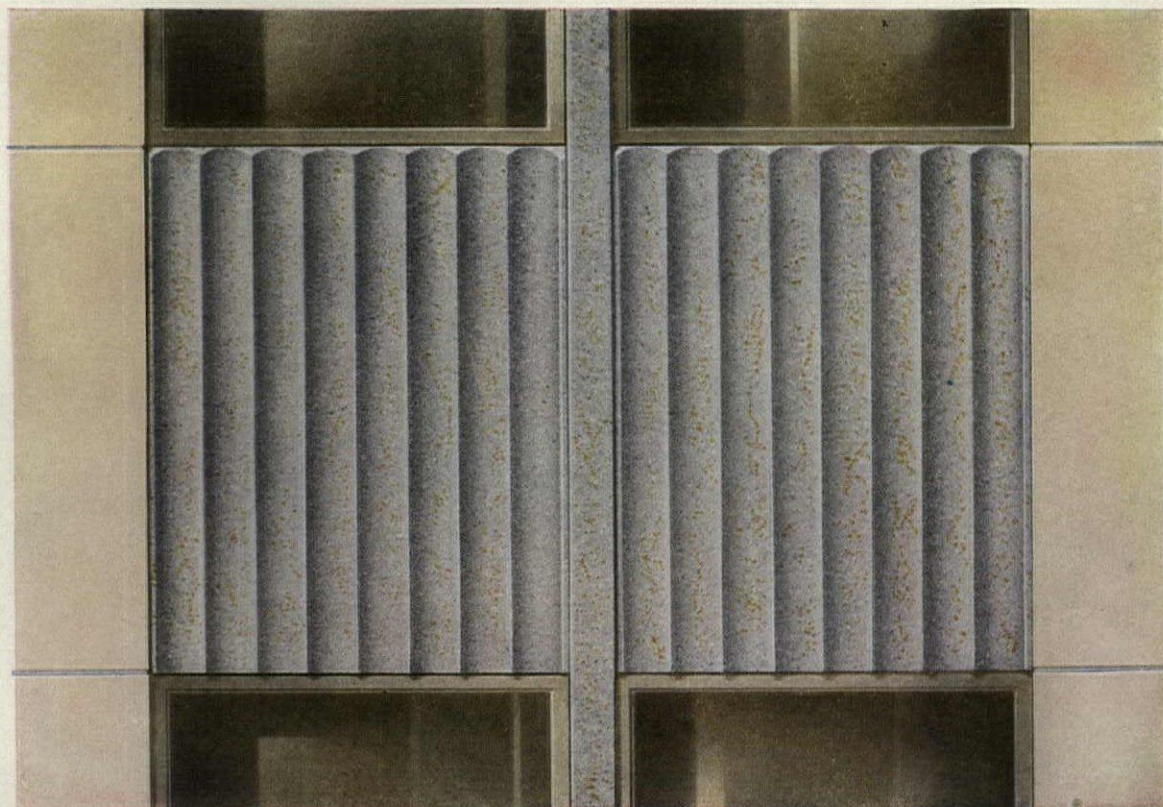
Leadclad Stocks in the Following Cities

Boston, Mass.
Bridgeport, Conn.
New York City
Erie, Pa.
Cleveland, Ohio
Cincinnati, Ohio
Mansfield, Ohio
Youngstown, Ohio
Toledo, Ohio
Detroit, Mich.
Richmond, Va.
Los Angeles, Calif.
San Francisco, Calif.
Portland, Oregon
Baltimore, Md.
Norristown, Pa.
Tacoma, Wash.
Medford, Ore.



SEE
OUR CATALOG
IN SWEETS
~ pages ~
B 1717-1728

Alberene Stone Spandrels Enrich the Simple Lines of Modern Design with Color and Texture

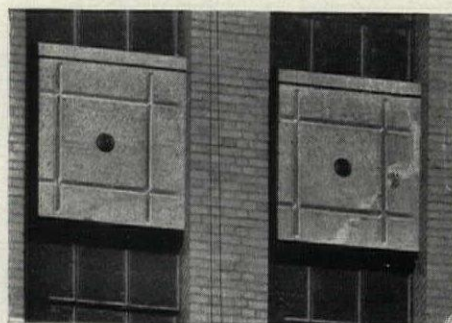


Structurally and Mechanically Sound

Beauty combined with economy in both space and cost

SPANDRELS take up a definite area in the exterior walls of every large commercial building. This beautiful blue-grey stone offers the architect a new color and charming textures. As years pass soapstone weathers to pleasing tones of darker blue and green with glints of yellow.

ALBERENE STONE SPANDRELS are free for all time of maintenance costs. No painting—weather proof (that is if we may consider a material weather proof that will withstand the elements for 200 years as soapstone has on Independence Hall, Philadelphia).



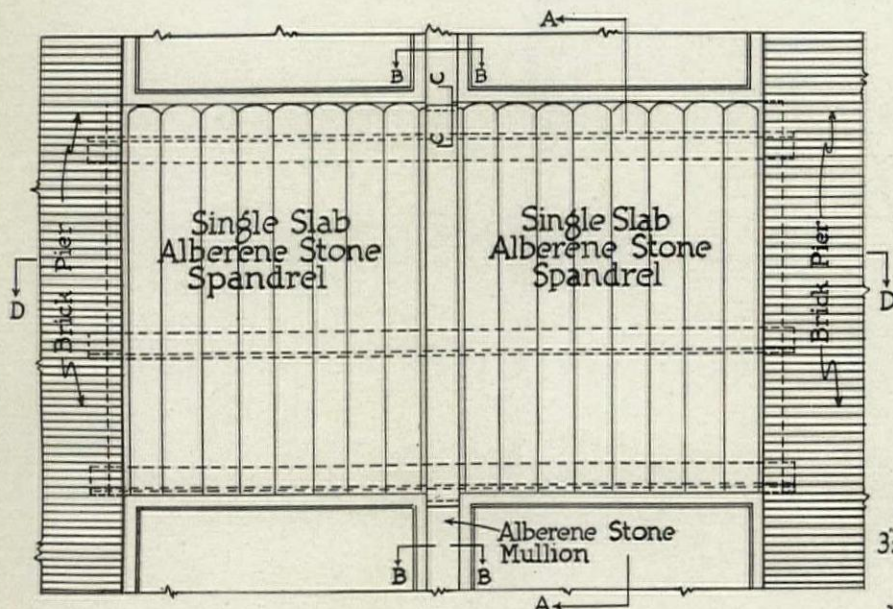
View of ALBERENE STONE SPANDRELS on the School of Education Building, New York University, N. Y. C., James Gamble Rogers, Architect

ALBERENE STONE SPANDRELS

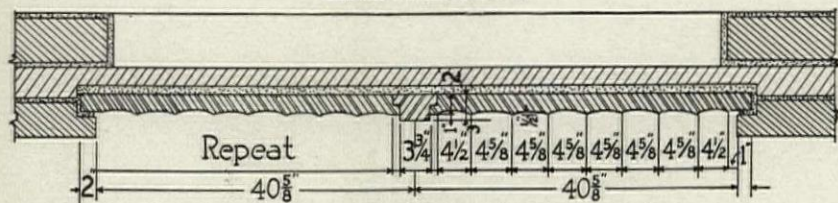
"Soapstone—an *age-old* material for the *new-day* designer"

Details of Alberene Stone (Soapstone) Spandrels

Adapted for Double Window Construction



ELEVATION



HORIZONTAL SECTION "DD"

Information for the Specification Writer on ALBERENE STONE SPANDRELS

Considered first from the standpoint of beauty, it later developed that the use of ALBERENE STONE SPANDRELS has important economical advantages as well. These details show how the exterior wall is reduced to a minimum thickness through the use of this type of wall-veil, providing adequate space for radiators to be installed without using up valuable floor space. Reduction of weight results in savings all along the line.

MATERIAL. (*Double Spandrels*) All spandrels to be structurally sound soapstone, grade equal to ALBERENE STONE. Stone not to be less than 1½" thick at thinnest point. Each pair of spandrels to be securely bolted to three horizontal angles extending 2" beyond spandrel at each end.

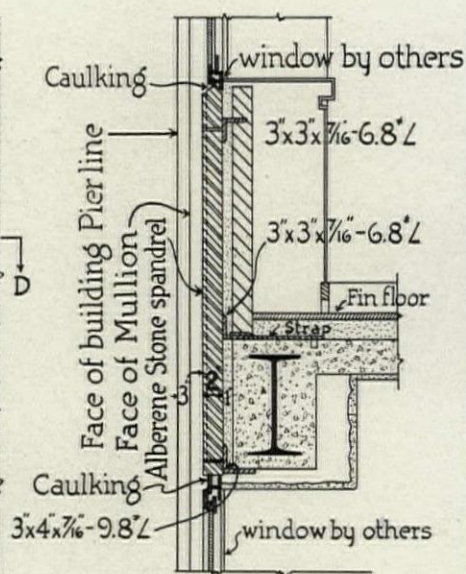
Bottom angle to be 3" x 4" x 1 1/4", center and top angles to be 3" x 3" x 1 1/4". Mullion to be 3 3/4" x 3 3/4" soapstone, rebated and bolted to steel flat 3 1/2" x 1/2".

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

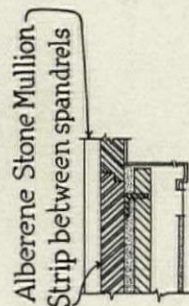
SPECIAL CASES. Where window is set with deeper reveal than face of spandrel, provide counter sill. Counter sill to be rebated for metal window frame and securely bolted to spandrel. Also provide soffit return for lintel at window head. Soffit to be bolted to under side of the 3" x 4" x $\frac{1}{8}$ " angle.

(Single Spandrels) Spandrels to be embedded in masonry 2" on each side.

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

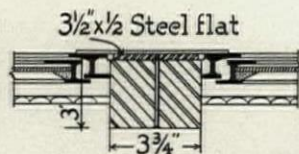


VERTICAL SECTION "AA"



SECTION "CC"

Method of connecting Mullion to strip between sections of spandrel.



HORIZONTAL SECTION "B B"
Showing Alberene Stone Mullion bolted to steel flat—this Mullion continues same in section between spandrels and is bolted to same angles that secure spandrels.

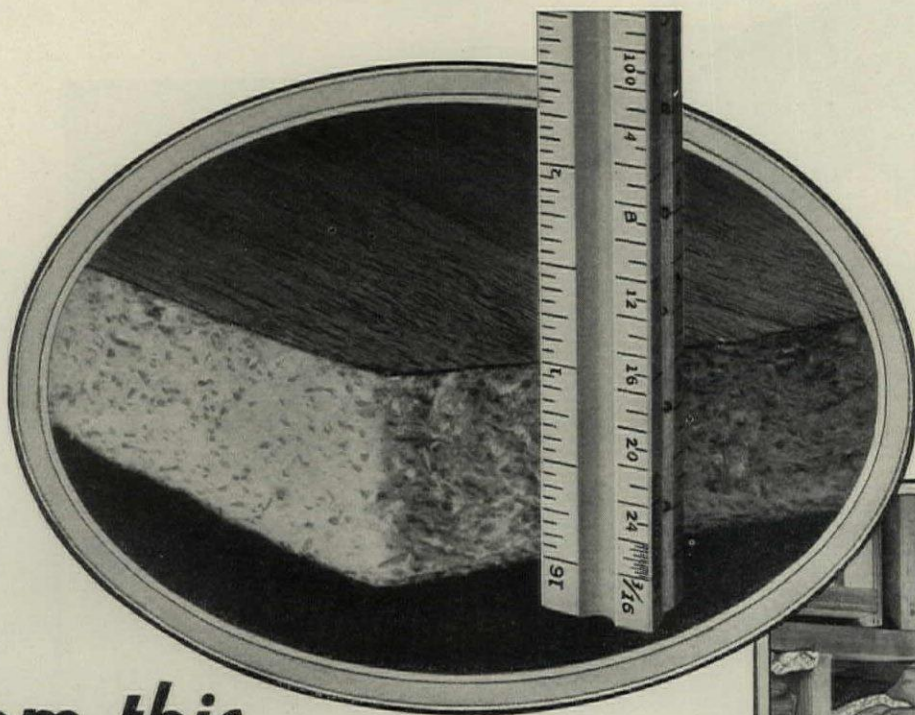
Only a stone with the "structural timber" of ALBERENE can be used for such a slender mullion

ALBERENE STONE COMPANY, 153 West 23rd Street, New York

BRANCHES

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

QUARRIES AND MILLS AT SCHUYLER, VA.



IT TUCKS IN! *Balsam-Wool combines the highest insulating efficiency ever attained in practical house insulation with the important advantage of flexibility. In these two respects it meets squarely the requirements of true house insulation*

From this Balsam-Wool A FULL INCH THICK

*... comes the superior benefit
of True Insulation
in adequate thickness*



ARCHITECTS have long known the difference true insulation of adequate thickness could make in house comfort and in fuel economy. Now Balsam-Wool a full inch thick makes this benefit practical.

One-inch Balsam-Wool does a more thoroughly adequate job than ever before possible in a single application. Per dollar of cost it provides a considerable increase in insulation value. Application time and costs are not increased.

In attaining the effectiveness of greater thickness, one-inch Balsam-Wool keeps unimpaired its important advantage of *flexibility*.

Workmen find it fits even more snugly and with equal ease, between the studding, joists or rafters.

Around windows and doors it *tucks in*—caulks every crack and crevice tightly. It is easy to install behind pipes, and in all the hard-to-get-at places.

Many specifications call for one-inch Balsam-Wool throughout. On other jobs one-inch material is specified in the places of greatest heat loss, and half-inch Balsam-Wool for the rest of the house. Architects will recognize the advantage of the two thicknesses, both available for use in every specification.

If you have not yet examined one-inch Balsam-Wool, upon request a sample will be sent you, together with complete data file including specification material. Full descriptive matter and specifications are also printed in Sweet's Architectural Catalogue.

WOOD CONVERSION COMPANY
Cloquet, Minnesota

Also makers of Nu-Wood—The All Wood Insulating Wall Board and Lath. Sold only through retail lumber dealers

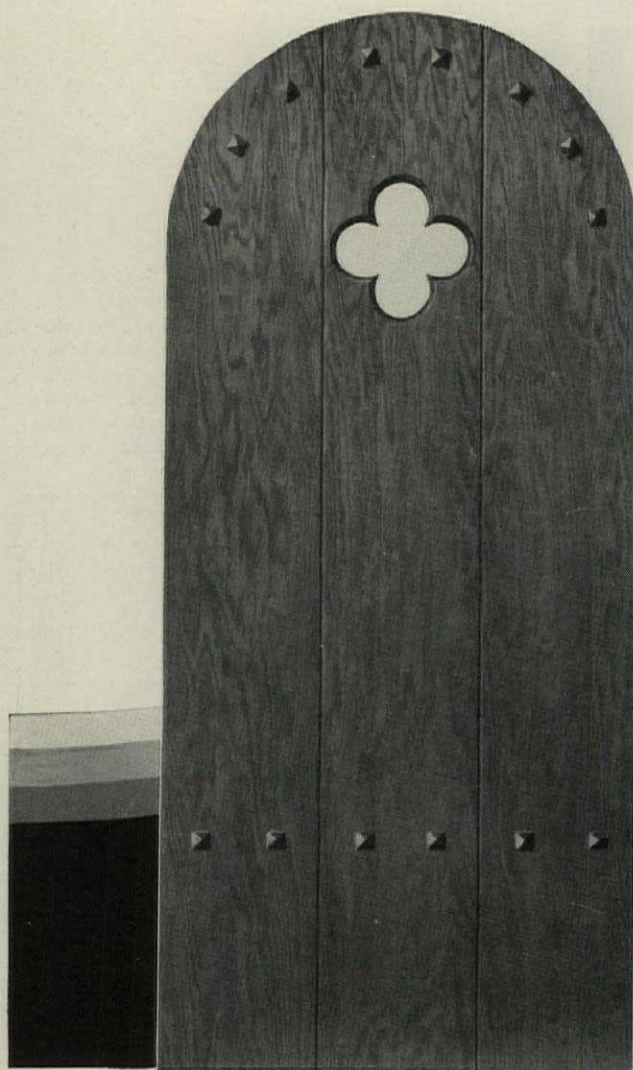
Branch Offices: New York, 3107 Chanin Bldg.—Detroit, 515 Stephenson Bldg.—Chicago, 360 N. Michigan—Kansas City, 231 W. 47th St.—Minneapolis, 414 Baker Bldg.—Seattle, 621 Liggett Bldg.



A guaranteed
Weyerhaeuser
product

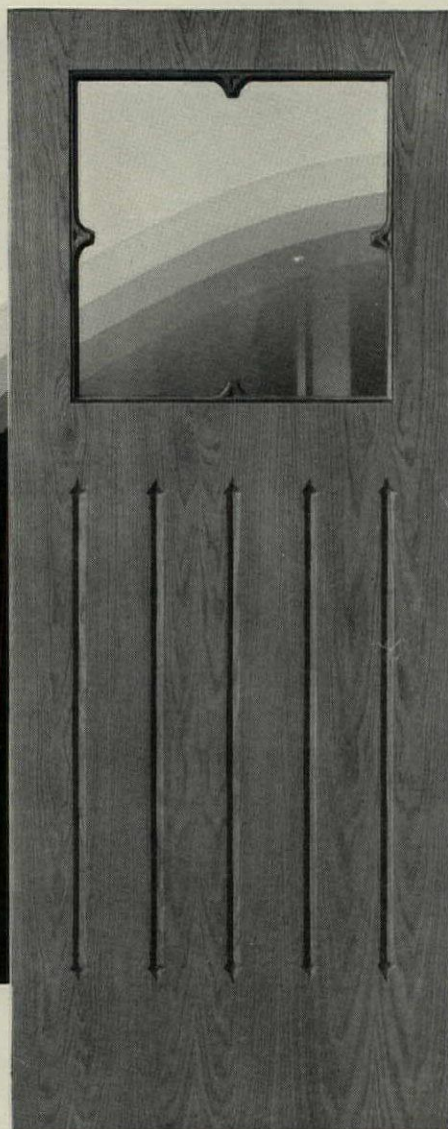
Balsam-Wool Blanket

THICK... FLEXIBLE INSULATION... EFFICIENT



Roddis
Trade
Mark

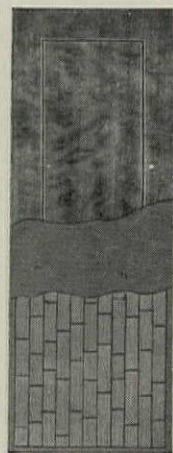
This Red-White
Blue Dowel
Trade Mark is
on the edge of
the Roddis Flush
Door. It is the
Roddis mark of
identity and
quality.



RODDIS

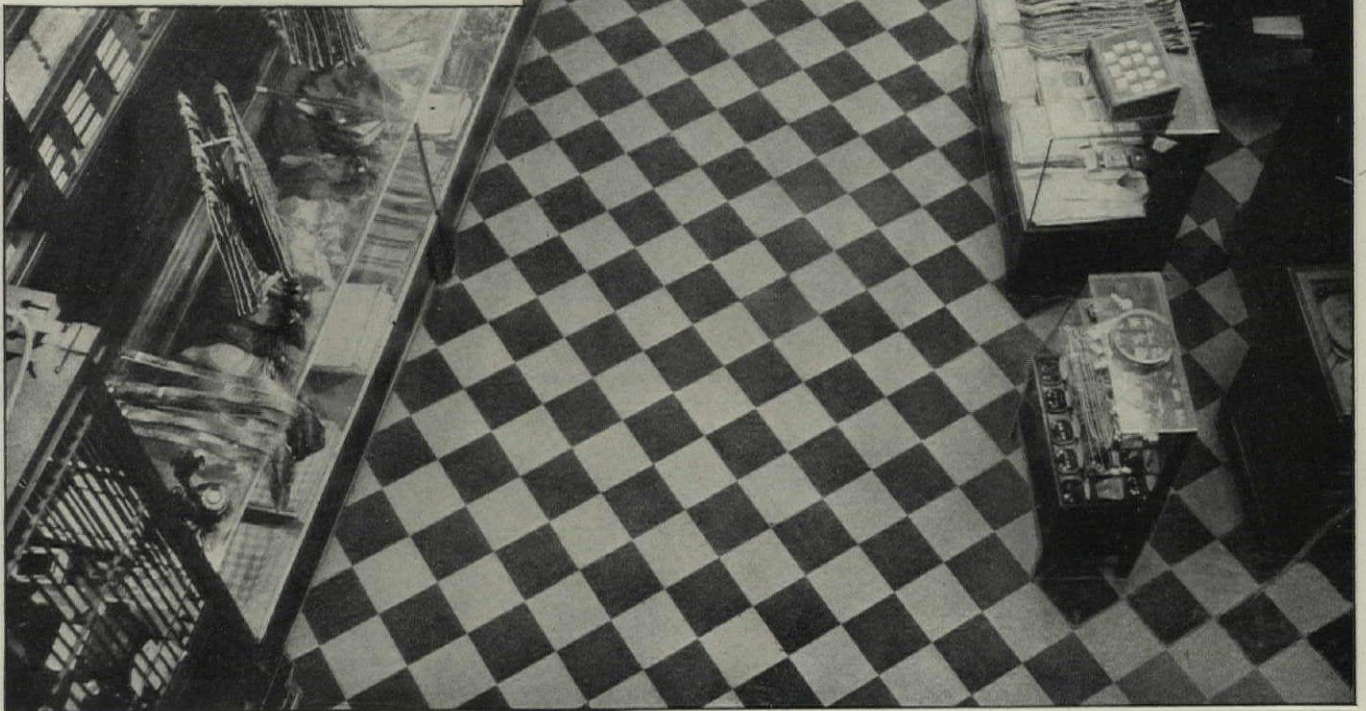
FLUSH DOORS CUSTOM MADE

Surprising ornamental possibilities are available with Roddis Flush Door completely solid, five-ply construction. Special styles are furnished to order, of Roddis conception or according to the architect's design and detail. At the left is a more conventional Roddis special door: of Sawn Oak with V-grooves, ornamental studs and clover leaf opening; can be made in any wood. At the right is an ornamental one-light door, of Sawn Oak Veneer, with special grooves. Whatever the requirement, Roddis Flush Door construction can be used: standard styles as catalogued by Roddis, or custom made to order.



RODDIS LUMBER & VENEER CO., 128 Fourth Street, MARSHFIELD, WISCONSIN
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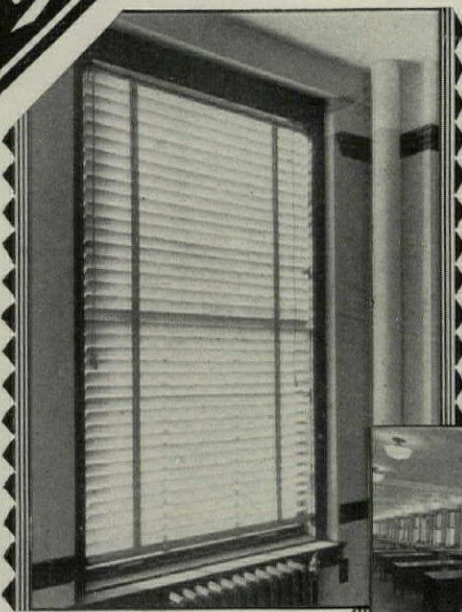


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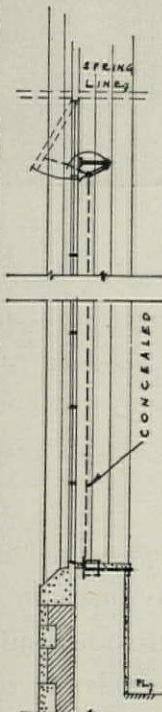
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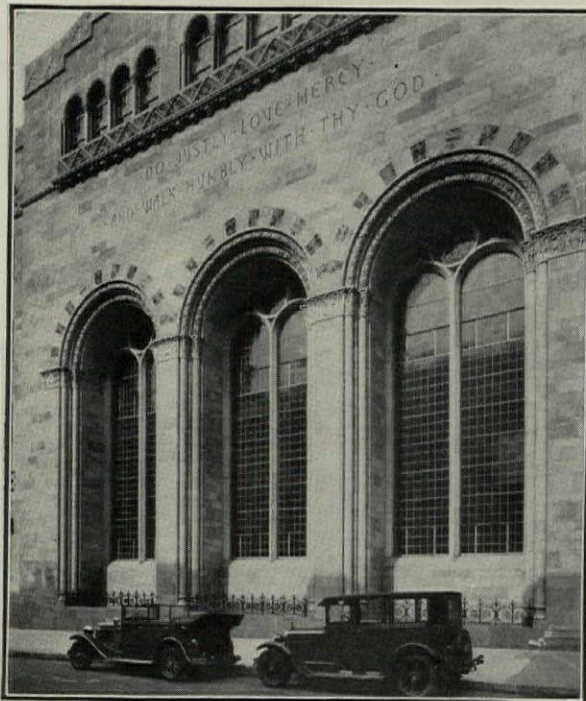
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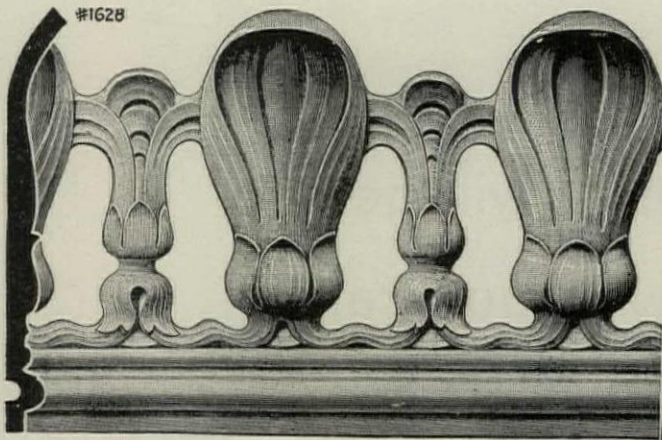
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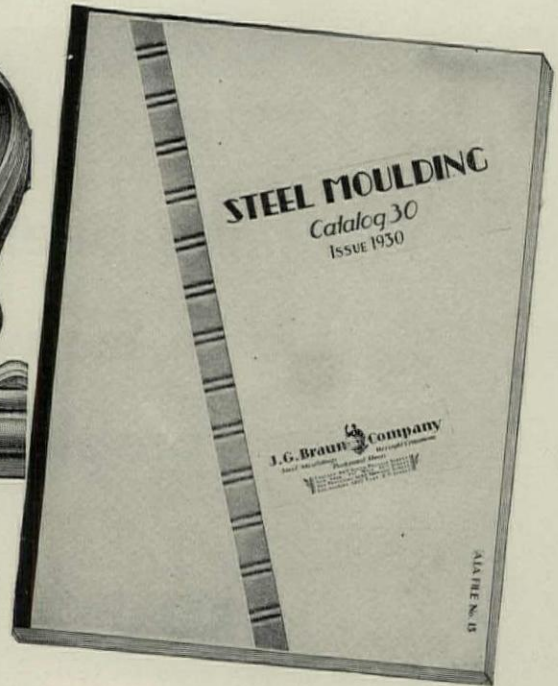
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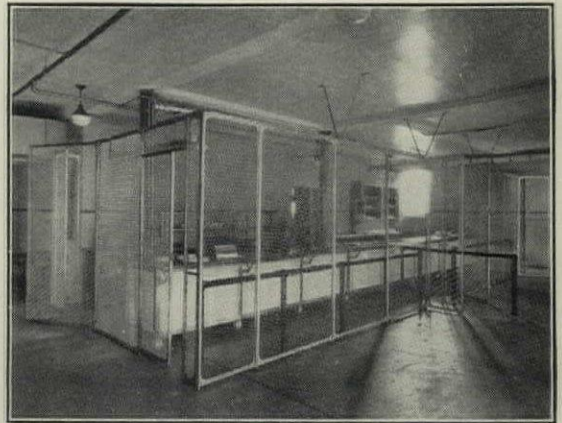
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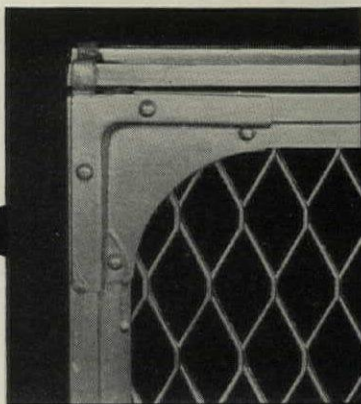
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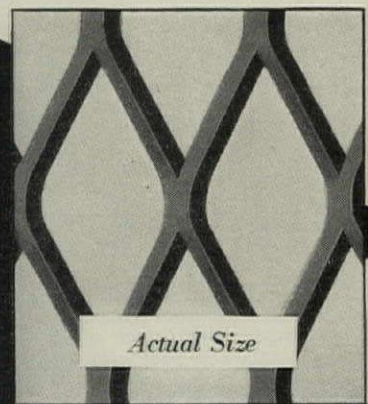
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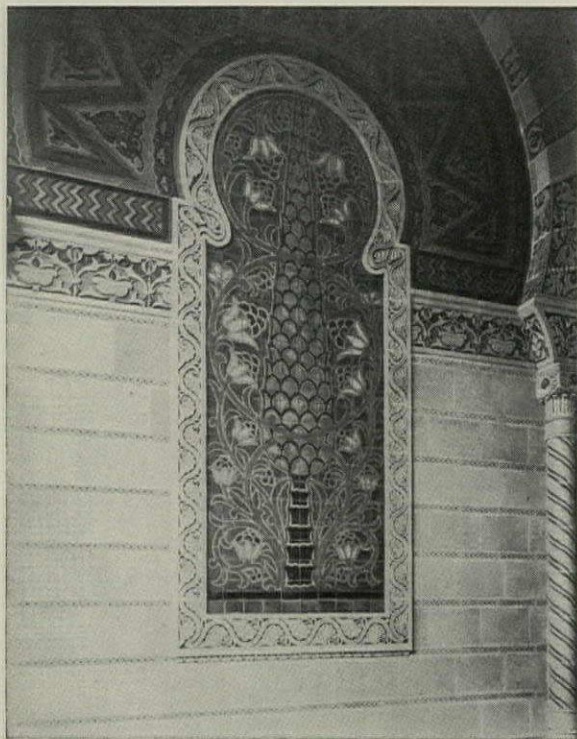
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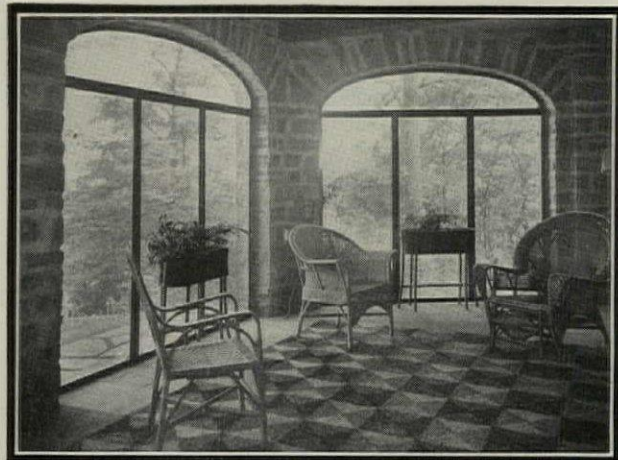
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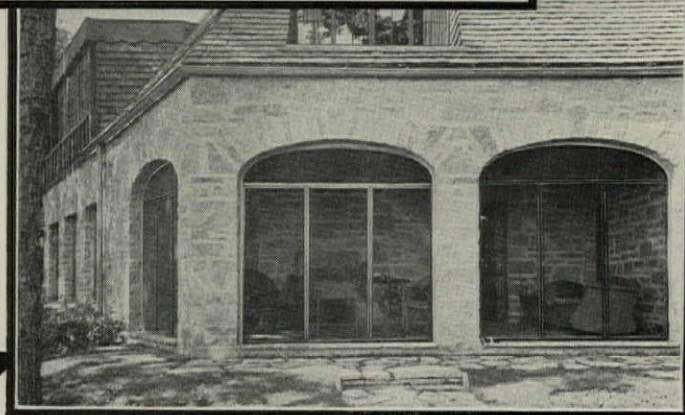
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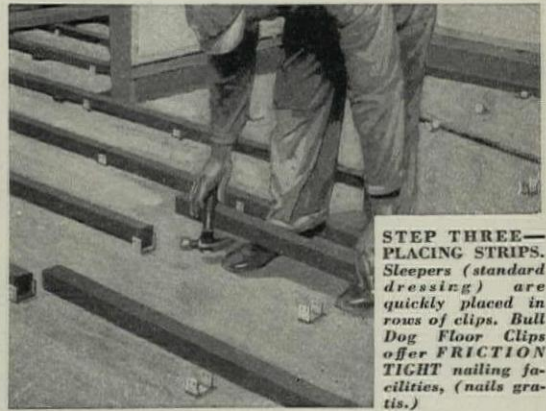
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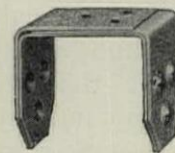
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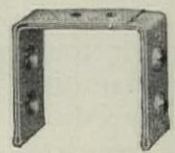
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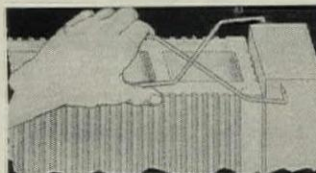
Original Patent
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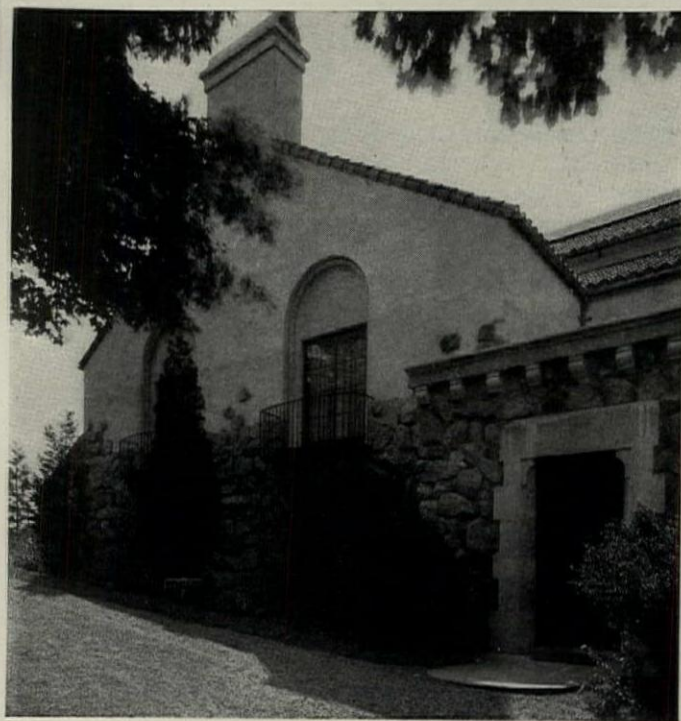
Interior Tennis Court of E. B. Schley, Far Hills, N. J.

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Exterior View of Tennis Court. Hyde & Shepherd, Archts.

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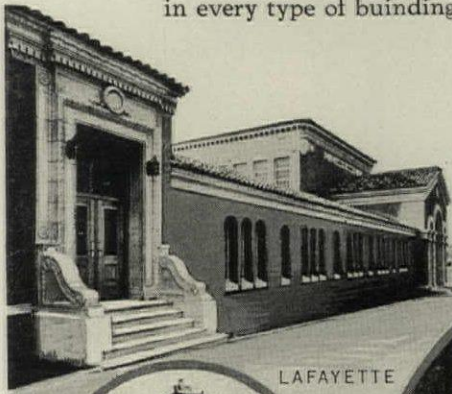
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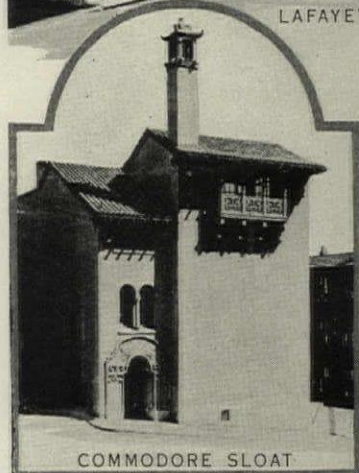
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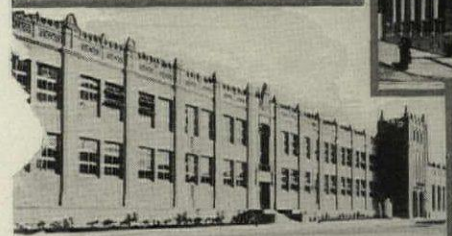
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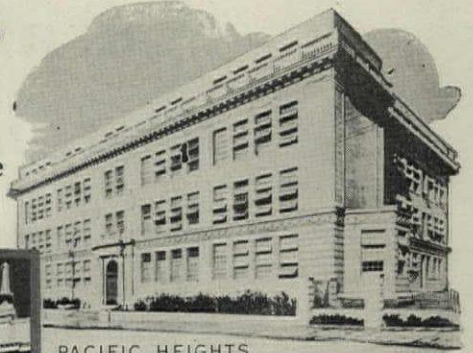
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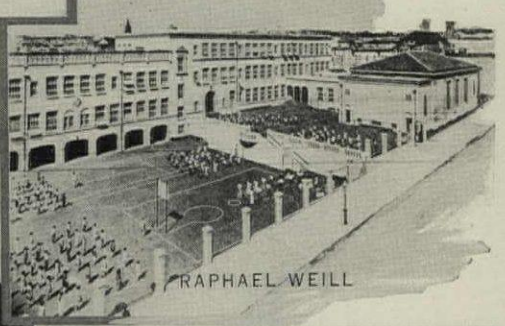
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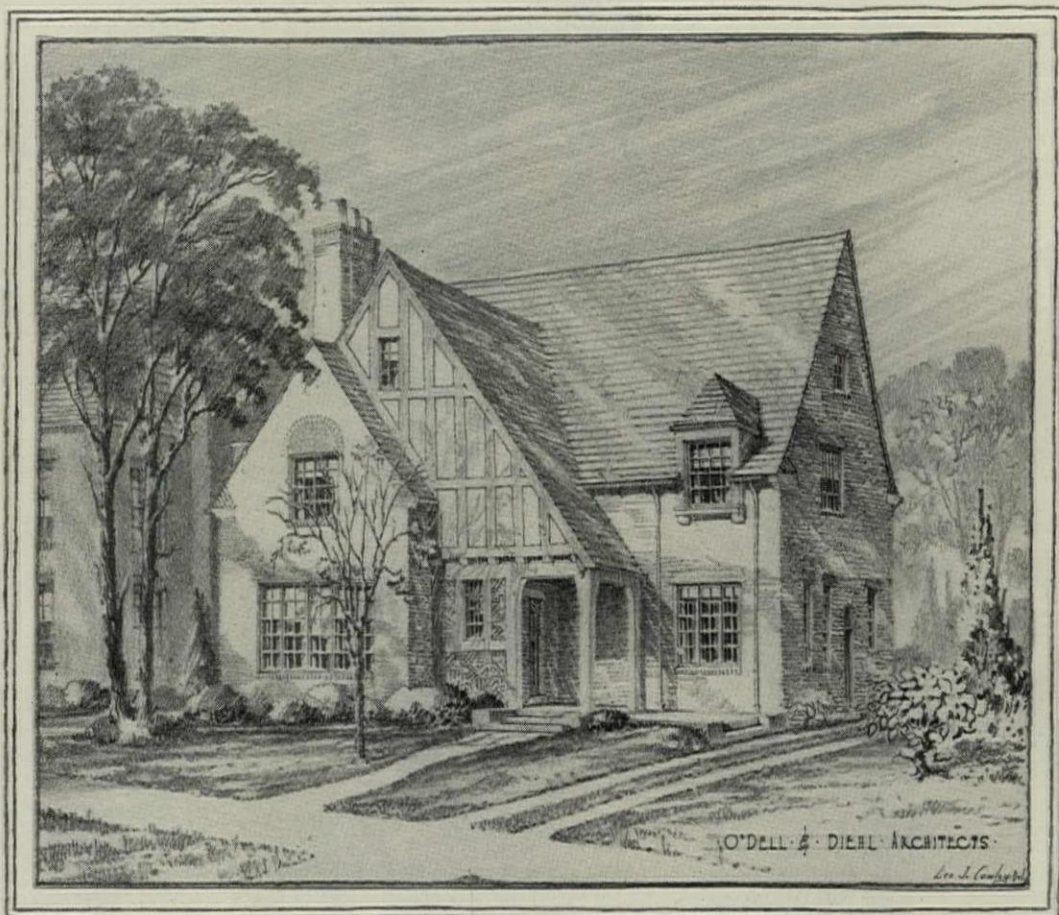
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designs his own home . . . and
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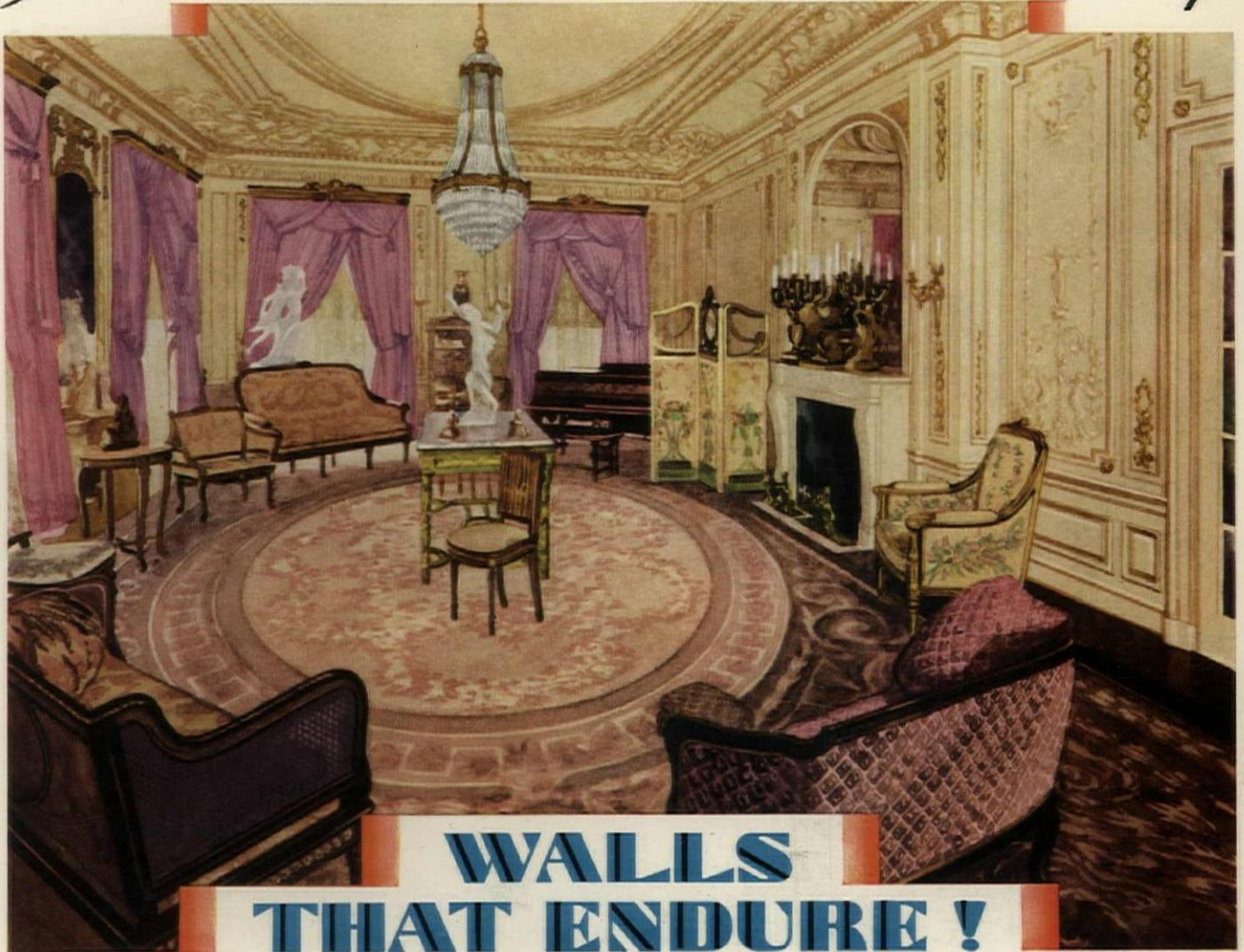
Res. of George F. Diehl, of O'Dell & Diehl, Detroit architects. Glazed with Libbey-Owens Glass

WHEN an architect builds his own home, and puts into it all of the experience he has gained in years of designing and building fine residences, his choice of materials will of course be limited to those of *proved* high quality. It was perfectly natural, therefore, that Mr. Diehl, in building his own home, should select Libbey-Owens "A" quality labelled glass. Libbey-Owens Glass Company, Toledo, Ohio.

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AN ARCHITECT IS AN INVESTMENT . . . NOT AN EXPENSE

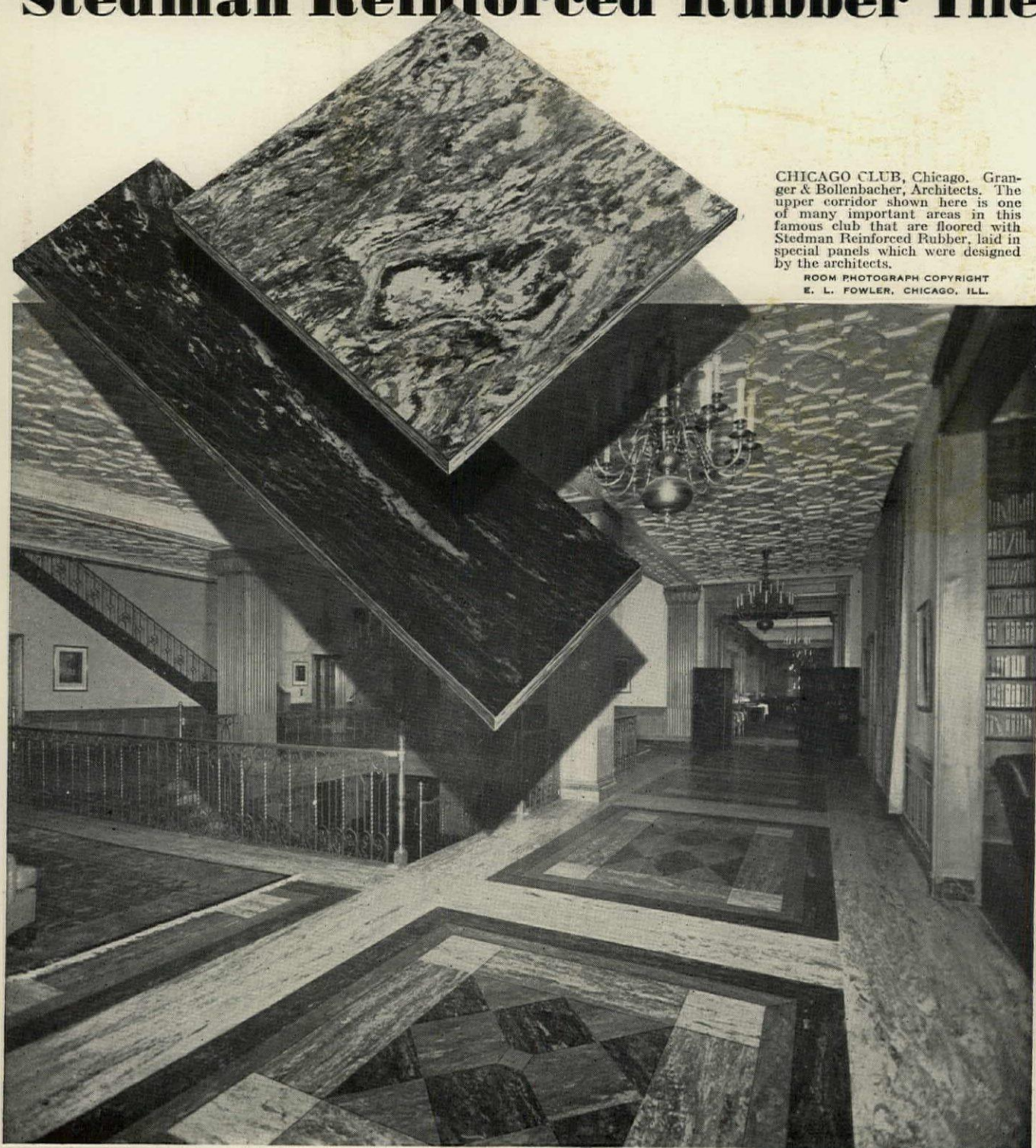
THE luxury of individual design, each panel conceived for its place in the architectural ensemble. The practical economy afforded by a material that is durable, quiet, and comfortable under foot; by a record of more than eight million square feet already in service, and by the assurance of expert craftsmanship from creation to installation. A booklet in full color will be sent upon request. **STEDMAN RUBBER FLOORING COMPANY, SOUTH BRAINTREE, MASSACHUSETTS**

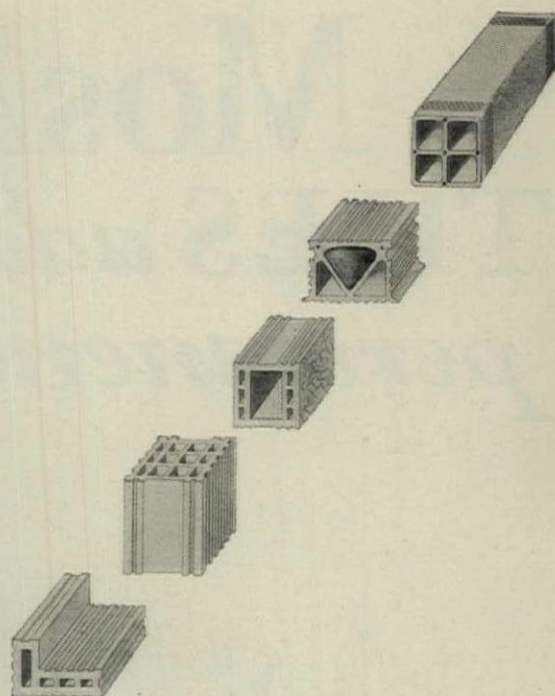
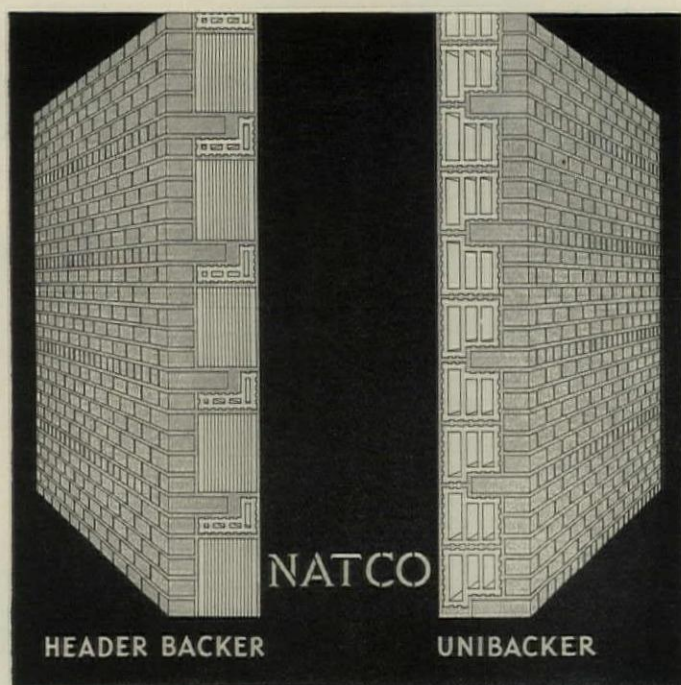
***REINFORCED:** In the Stedman Process minute cotton filaments, uniting with the rubber under high pressure and heat, are responsible for its unusual resistance to wear and distention, its lasting resilience and smooth impervious surface—characterized by color veinings of remarkable fineness and beauty.

Stedman Reinforced* Rubber Tile

CHICAGO CLUB, Chicago. Granger & Bollenbacher, Architects. The upper corridor shown here is one of many important areas in this famous club that are floored with Stedman Reinforced Rubber, laid in special panels which were designed by the architects.

ROOM PHOTOGRAPH COPYRIGHT
E. L. FOWLER, CHICAGO, ILL.





Make the Facing bear its share with ... THE TILE THAT BINDS

BRICK facing does not shirk its share, when backed with Natco Header Backer or Unibacker. Every sixth course a mechanical bond is established, so intimate that full bearing value is allowed on the full thickness of wall.

NATCO HEADER BACKER is furnished in various sizes for 10, 12, 14 and 16 inch walls. Backer units can be provided in varying heights, to meet various mortar joint conditions. Each Header and Backer is the equivalent of from 18 to 28 brick.

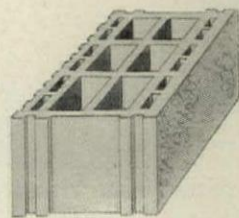
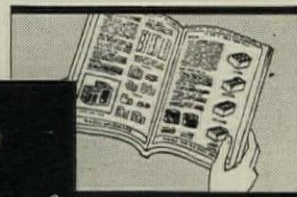
NATCO UNIBACKER is furnished for 12, 14 and 16 inch walls. Only the one style of unit is needed for all backing work. Each unit is the equivalent of from 8 to 12 brick. Smooth interior surfaces can be furnished on order.

These Natco Units are particularly adapted to curtain or closure walls where the highest type of construction is to be combined with minimum weight and foundation costs, economy in labor, mortar and time, fire safety, permanence and insulating value.

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MOSAIC CERAMIC TILES *add character and permanence to floors*



Floor of Mosaic Granitex Ceramics

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INTERNATIONAL CASEMENTS



Residence, Great Neck, L. I.

Julius Gregory, Architect



THIS charming house is an excellent example of the modern trend in architecture; the International Metal Casements are a pleasing, practical detail.

SCREENED CASEMENTS

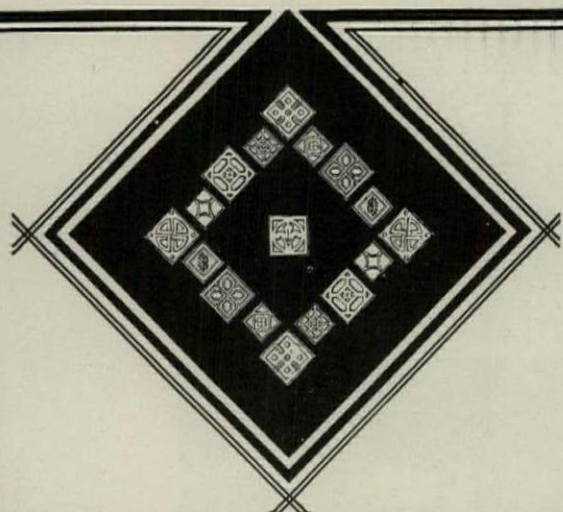
International Metal Casements—both Custom-built and Cotswold—now are available equipped with screens. Furnished with special hardware, the casement may be opened and closed without disturbing the screen which, however, may be detached instantly to operate awnings or clean windows.

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FLINT FAIENCE, a genuine hand-made tile, available in some 150 colors, in plain, decorated and special designs.

FLINTCRAFT, a new product, of high quality, machine-made, to meet today's demand for a glazed tile where uniform joints are preferred. Can be laid with considerable economy of time over Faience. Obtainable in 10 special colors and in any Flint Faience color on special order.

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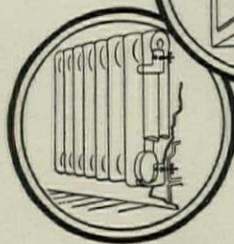
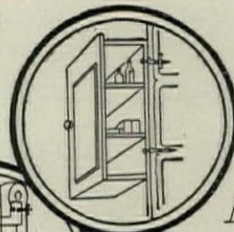
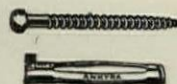
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MAIN OFFICE AND FACTORY: FLINT, MICHIGAN



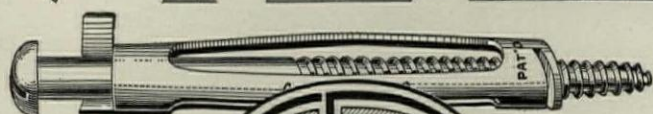
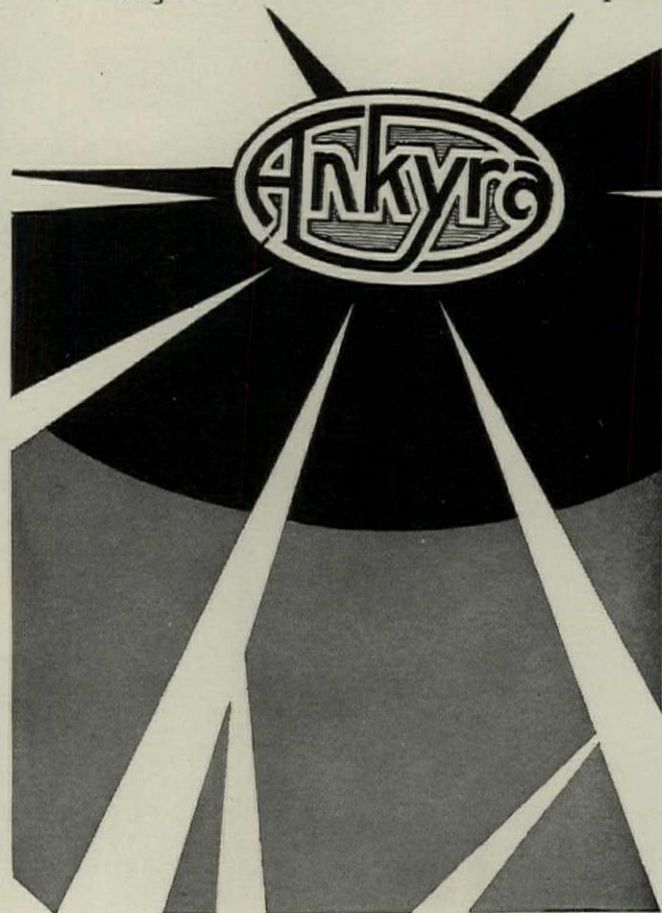
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The New Home of LISTERINE



Uses



The new plant of the Lambert Pharmacal Co., Newark, N. J.

DOUBLE-WAXED LINOLEUM

THE floors of the Lambert Pharmacal Co.'s new plant at Newark, N. J., are covered with W. & J. Sloane Linoleum.

W. & J. Sloane Linoleum is an ideal floor-covering for industrial plants where cleanliness is essential. Made with a natural, fine-textured finish, the result of *extra* processing in the grinding and mixing of raw materials and *extra*-pressure in the calenders, W. & J. Sloane Linoleum is then *double-waxed at the plant* by an exclusive Sloane process.

As a consequence it is ready for use the instant it is laid, is easily cleaned and easily kept clean. In

addition, its resiliency adds to workmen's efficiency and its pleasing appearance creates a favorable impression upon visitors.

W. & J. Sloane Battleship Linoleum is most often used for factory installations but where a distinctive effect is desired, it may be obtained with exclusive W. & J. Sloane Inlaid Linoleum patterns.

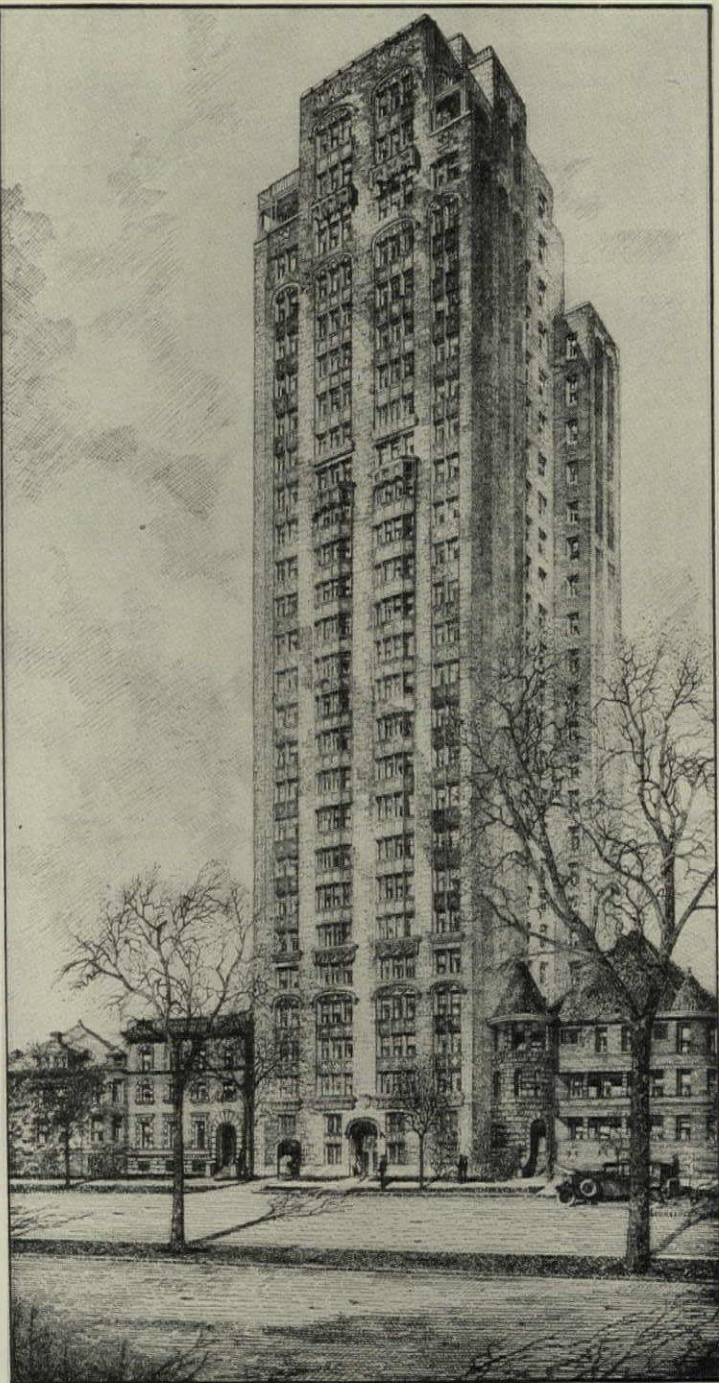
When you specify W. & J. Sloane Linoleum you assure your client of the finest money can buy. We will gladly send you quality samples. W. & J. Sloane Mfg. Co., Trenton, N. J. Sole Selling Agents: W. & J. Sloane, 577 Fifth Avenue, New York.



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

W. & J. SLOANE Double-Waxed LINOLEUM



1242 Lake Shore Drive apartment, Chicago. Architect, Robert S. DeGolyer & Company, Chicago. General Contractor, Turner Construction Company.

Alcoa Aluminum used for spandrels, ornamental balconies, jambs, mullions, heads and sills. The following two pages give details.

ALCOA ALUMINUM

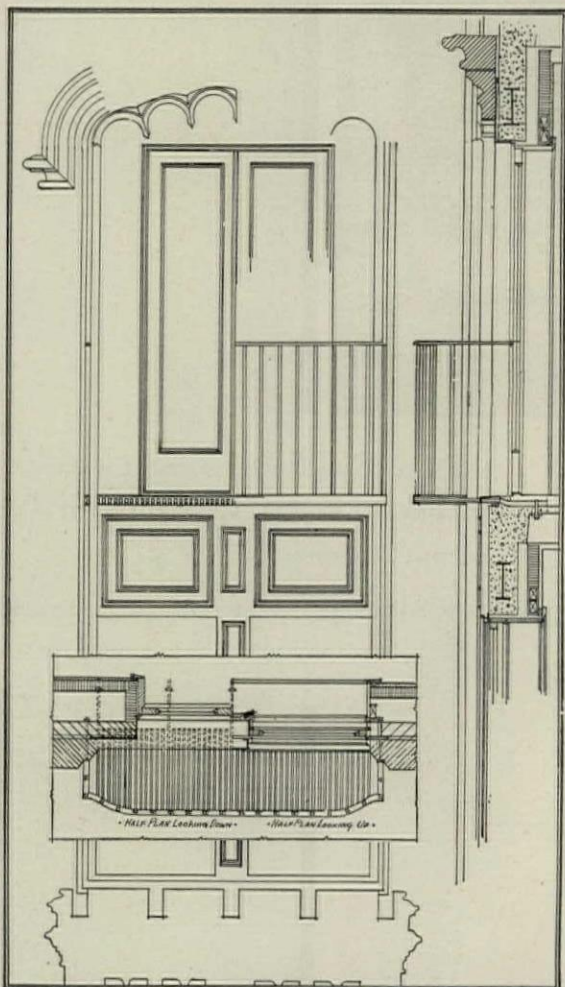
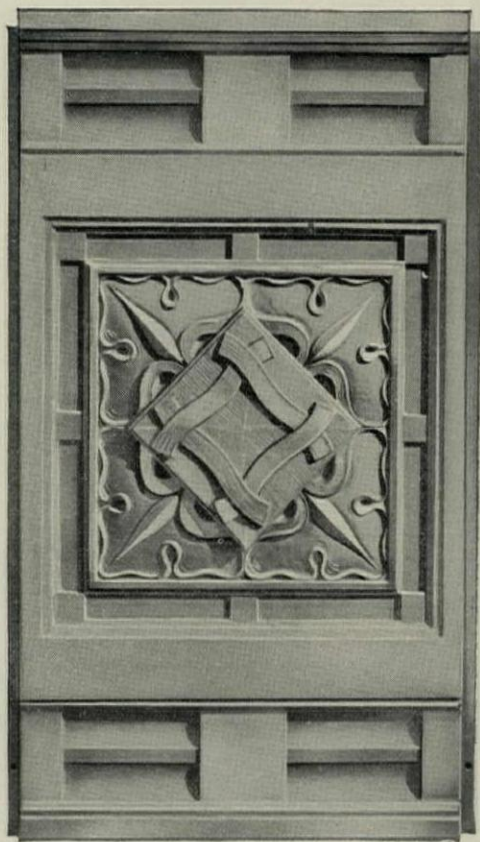
lift 30,000 pounds dead weight

WEIGHT REDUCTION

212 spandrels cast of Alcoa No. 43 Aluminum Alloy were used in this Chicago apartment house. The total weight was just over 15,000 pounds. If bronze or iron spandrels of the same size had been used instead, they would have weighed over 45,000 pounds. Thus there is now 15 tons less weight on the face of the building. 15 tons less on which to pay fabrication, hauling and erection costs.

Two men can easily lift a cast Alcoa Aluminum Alloy Spandrel 5' x 6'. An identical casting of old-fashioned, heavy metal cannot be moved without additional men and usually a tackle.

In addition to spandrels, Alcoa Aluminum Alloy castings were used on bays for jambs,



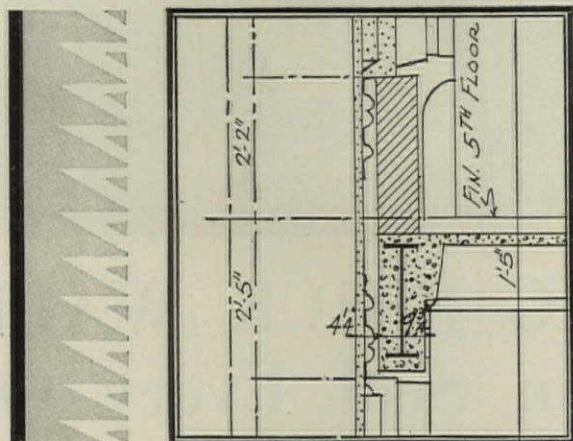
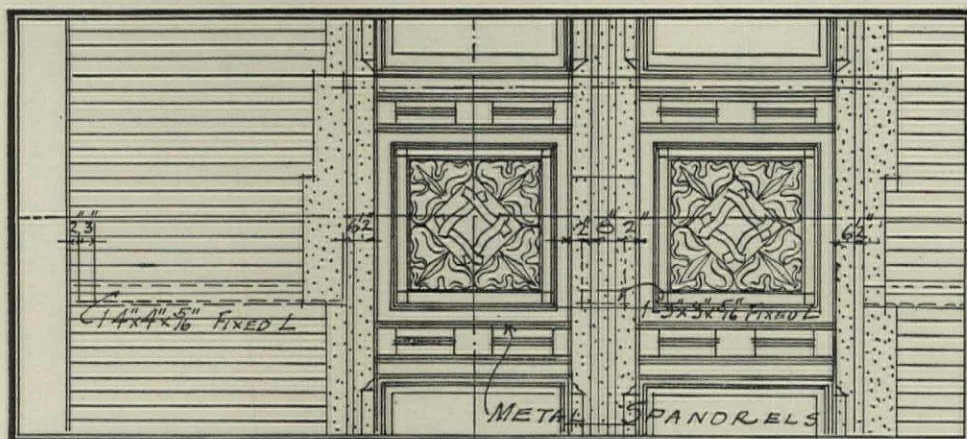
mullions, head and sills. Ornamental balconies were fabricated entirely of Alcoa Aluminum.

This modern material is unaffected by the weather; requires no painting or coating; will not streak onto adjoining surfaces, and is tough and durable. When you consider the many advantages that Alcoa Aluminum Alloys bring, it is little wonder that they are specified so generally by architects.

May we send you a complimentary copy of "Architectural Aluminum"? It brings you up-to-date on the use of this modern building material. ALUMINUM COMPANY of AMERICA, 2406 Oliver Building, PITTSBURGH, PA.

SPANDRELS

from faces of this apartment house



SPECIFICATIONS

"These aluminum spandrels, sills, and other cast items shall be made of Alcoa No. 43 Alloy, having a silicon content of 5%. The average tensile strength shall be 17,000 lbs. per sq. inch and the average elongation in two inches 5%. The weight shall not exceed .097 lbs. per cubic inch. The surface shall be free from imperfections and in all respects equal to sample submitted."

ALCOA ALUMINUM



MINWAX PRODUCTS • PROTECT • SEAL • BEAUTIFY

Photo by Curtis Flying Service, Inc.

ACRES OF LEAKING BRICK WALLS MINWAX Service Can Seal Every One

Great sponges of brick and cement—built in haste under trying conditions—no wonder so many leak, effloresce, disintegrate.

Twenty-five years ago, Minwax Clear Waterproofing answered the demand for an economical preventative against moisture, dampness, efflorescence and eventual disintegration. Since that time it has been used on untold thousands of buildings, and when intelligently applied, always with the desired results.

Out of Minwax Clear Waterproofing has grown a long and varied line of products, each to answer some specific problem. Today Minwax offers the architects of the country a service, experienced and effective in every problem of waterproofing, dampproofing and preserving masonry and wood. Consult Sweet's for details.

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Caulking Compounds . . . In black or colors. For use around steel or wood windows. Will not harden or become brittle.

Plasterbond Dampproofing . . . Spray, brush or trowel application. Developed for use on exposed masonry walls underneath plaster to prevent staining, leaking, etc.

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Concrete and Terrazzo Floor Finish . . . Protects and toughens floors, and develops their maximum efficiency and appearance.

Concrete Floor Paint . . . A full bodied floor enamel of unusual toughness. Produces sanitary and easy to clean floors.

LIONOIL

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PIERCES NEW YORK SKY LINE



BERRY BROTHERS' Lionoil Metal Trim Enamel is specified for one New York building after another. Weekly the list becomes more impressive. This finish is demanded for the new Chrysler, Lincoln, Western Union, Y. M. C. A., Salvation Army, and many other fine big buildings.

Lionoil Metal Trim Enamel is a semi-gloss finish that rust-proofs and beautifies doors, window sash, stairs, elevator wells, etc. It flows out perfectly, leaves no brush marks, adheres to bare metal or priming coat and air-dries with a baked-on effect and resists water, heat or cold.

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*The beautiful
Wilshire Tower,
Los Angeles,
built entirely
of concrete*

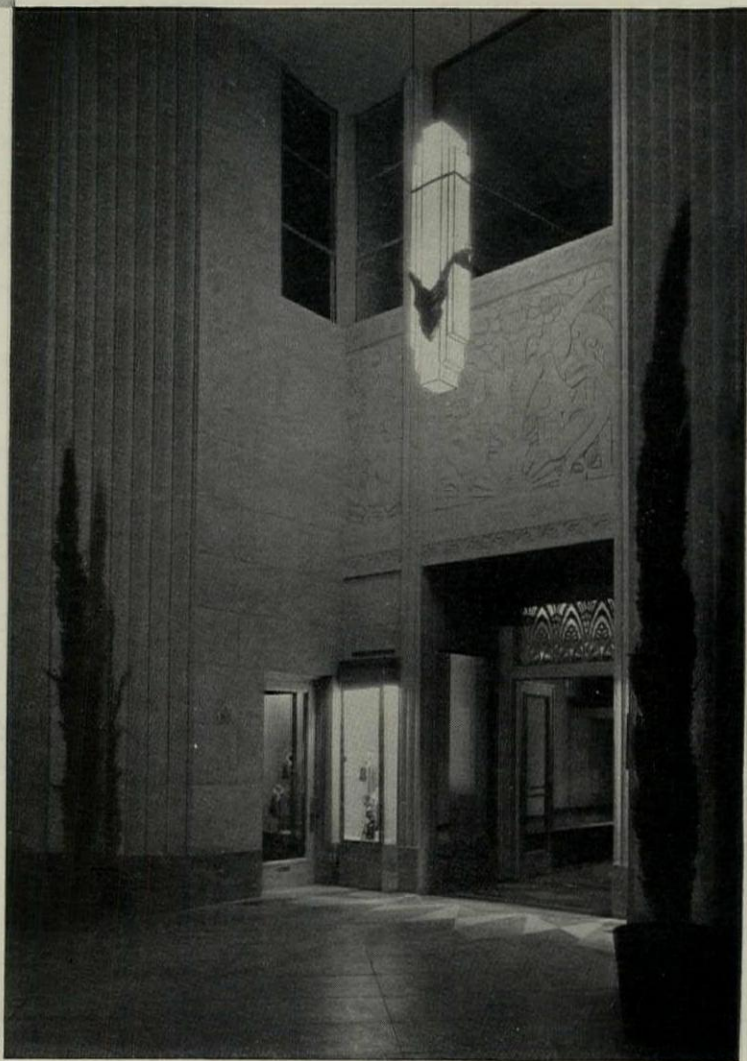


CONCRETE *sets a magnificent stage for sales*

As modernly conceived, architecture has become an important ally of business. Farsighted merchants know that sales are stimulated by an attractive setting. This is especially true with merchandise of high cost—yet even the great ten-cent store chains find good architecture an asset.

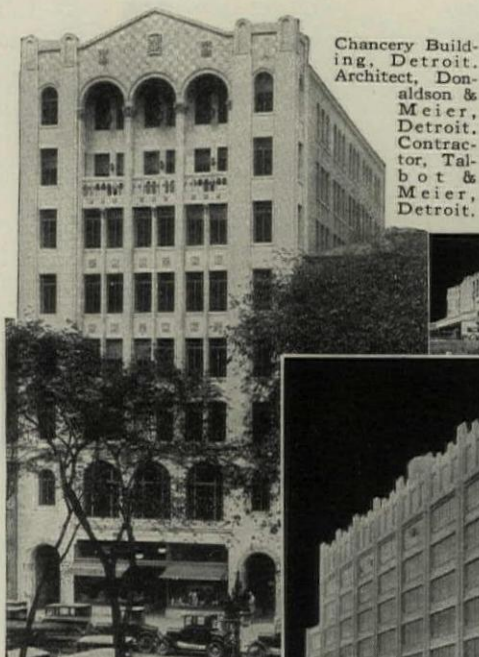
To provide the stage for modern merchandising, many architects have used concrete construction not only for purely structural purposes, but for exterior surfaces and ornamental detail. In their skilled hands, concrete provides an environment in which dignity is tempered with grace, and massiveness becomes a thing of rare beauty.

Because it is firesafe, concrete affords utmost protection. Because it endures through generations, its economy cannot be questioned. Throughout the structure it assures uniformity, rigidity, strength. From bedrock to skyline, concrete renders an unmatched service.



An example of fine craftsmanship in concrete. Decorative details, including panel over entrance, cast in place at the same time and of the same concrete as the walls. Exterior flat surfaces finished with tinted portland cement stucco. Gilbert Stanley Underwood, Architect; H. W. Baum Company, Contractors, both of Los Angeles

PORTLAND CEMENT Association
Concrete for Permanence and Firesafety CHICAGO



Chancery Building, Detroit. Architect, Donaldson & Meier, Detroit. Contractor, Talbot & Meier, Detroit.



Montgomery Ward & Co., Albany, N. Y. Designed by W. H. McCauley, Eng., Chicago. Contractor, Wells Brothers Construction Co., Chicago.

Green Industrial Building, New York. Architect, Renwick, Aspinwall & Guard, New York City. Contractor, Turner Constr. Company, New York City.



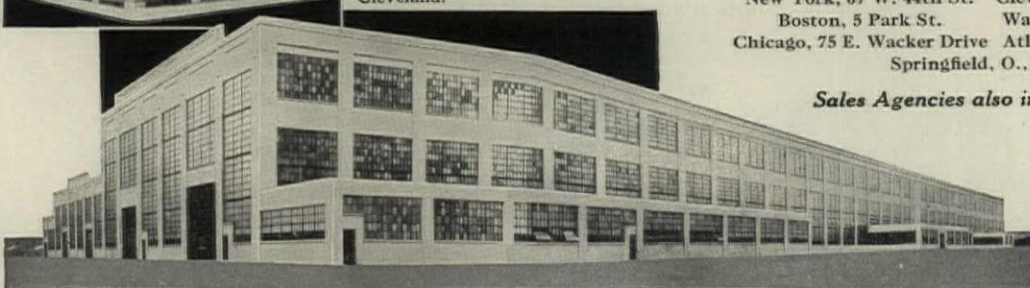
Medical Arts Building, Nashville, Tenn. Architect, Alsop & Callanan, Memphis, Tenn. Contractor, Foster & Creighton, Nashville, Tenn.



Bayley Steel Products include the following

- Pivoted Windows
- Pivoted Windows Screened
- Projected Windows Commercial
- Projected Windows Architectural
- Casement Windows
- Continuous Windows
- Detention Windows
- Prison Windows
- Airport Doors
- Tubular Doors

Shibaura Engineering Works, Tsurumi, Japan. Designed and built by H. K. Ferguson Co., Cleveland.



The Loyalty of Bayley Users

PRODUCTS designed right . . . built right . . . installed right — this sums up a Bayley ideal that is creating an ever-growing volume of sales. And the significant fact is that much of this increase in business each year comes from loyal users who are so completely sold on the Bayley organization and Bayley products that they never take second thought when a new or enlarged building is under consideration. This roster of loyal users includes not only influential owners but also leading architects and successful contractors throughout the country.

Obviously, they have found from long experience that for thorough engineering cooperation and for skilfully designed and masterly constructed steel windows and doors, Bayley is incomparable, giving the utmost value and lasting satisfaction. They have also found that Bayley follows through — that even after an installation is completed, interest in the customer's satisfaction continues.

Only a closely-knit organization, backed by adequate resources and forty-nine years of experience, makes it possible for Bayley to build steel windows and doors that merit such loyalty from customers; and to offer engineering cooperation that eliminates uncertainty for architects and contractors . . . as well as regrets for owners.

An opportunity to demonstrate Bayley service is always welcomed. A Bayley man will gladly call and furnish any information desired, without placing you under obligation. Illustrated folder sent on request. The William Bayley Company, 134 North St., Springfield, Ohio.

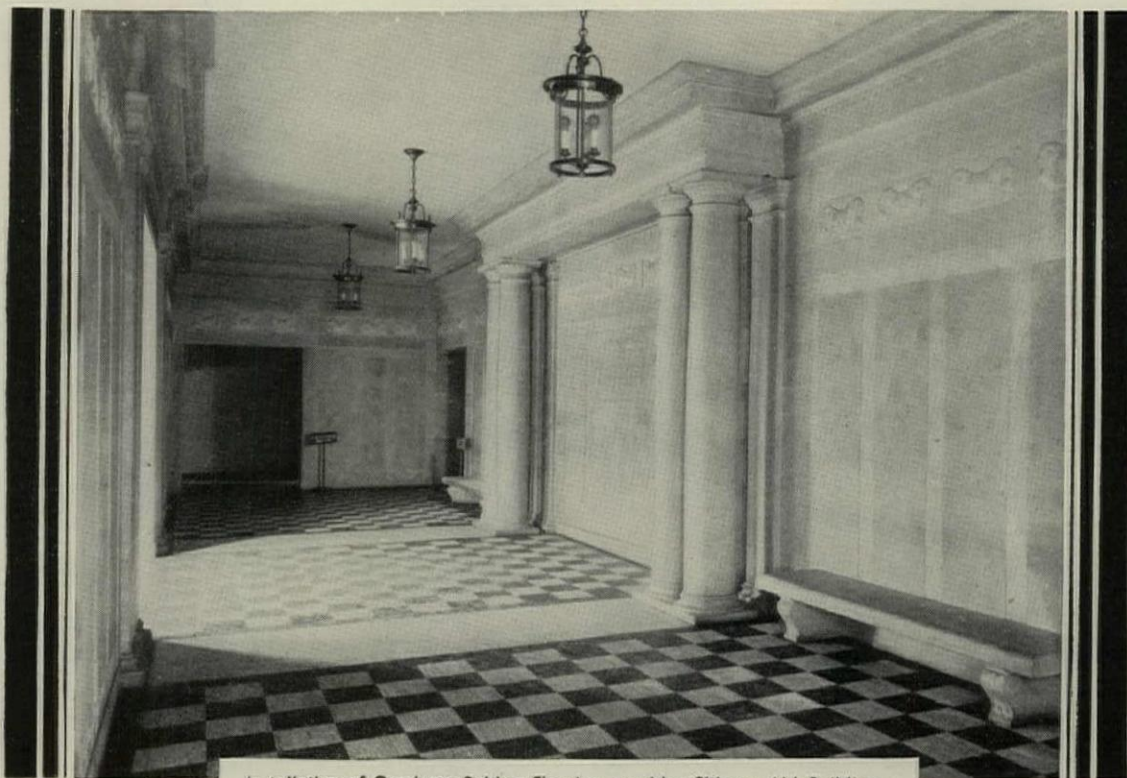
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 Chicago, 75 E. Wacker Drive Atlanta, 407 Bona Allen Bldg.
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Installation of Goodyear Rubber Flooring, corridor Citizens Aid Building, Minneapolis, Minnesota, Hewitt & Brown, Minneapolis, architects.

SILENTLY THE CUSHIONED FLOOR WITHSTANDS THE POUND OF PASSING FEET

In foyers, entryways, public corridors, wherever foot traffic is continuous, muddy, and heavy, Goodyear Rubber Flooring rapidly proves its worth. Made of rubber, it resists wear, absorbs sound, and is instantly cleaned.

It is a permanent cushion for all floors in business buildings. In offices it swiftly takes up the squeak of chair and table legs, preserves an orderly, restful quiet.

It possesses remarkable qualities for wear. Rubber yields from shock and scuff. And because the pattern extends the whole depth of the flooring, this flooring is permanently attractive, even where wear is especially severe as on stair treads.

Cold water is usually enough for cleaning. The smooth surface is impervious to dirt. It has a laboratory cleanliness.

Thirty colors and fifty-nine sizes

meet all decorative requirements. The range and adaptability to modern architecture of Goodyear Rubber Flooring is almost without limit. Any pattern is possible—in virtually any color.

For public buildings, offices, schools, residences, specify Goodyear Rubber Flooring. For complete specifications and architect's handbook A. I. A., 23C, write to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR
RUBBER FLOORING

THROWING > > DOLLARS

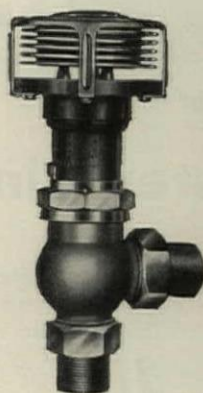
OUT OF YOUR WINDOW



Hortense Mancini—once considered the most beautiful woman in Europe—favorite pastime was throwing dollars out of her window and watching the mob scramble for them . . . great sport, but she squandered \$15,000,000 and died in poverty.

And yet in this day of industrial progress, of careful standardization, of conservation and good business—we are throwing more than this amount out of our windows yearly through the loss of heat radiation.

Your room gets hot, up goes the window, which calls for more heat in the radiators. This means more fuel in the boilers, and more money spent uselessly for steam. Yet this common practice can now be stopped. Sylphon's new Automatic Radiator Valve No. 875 maintains a comfortable temperature in any room, all the time, at the office, plant, or home. Turn the valve end to any point between hot, medium or cold and the matter of temperature is definitely settled. Specify Sylphon Automatic Radiator Valve and assure comfortable and economical heat in your client's building. Write for descriptive Bulletin JP-R-103.



Sylphon
TRADE MARK

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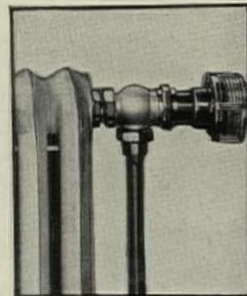
This remarkable new valve is easily installed on old or new heating systems by any steam fitter, and is built by the Fulton Sylphon Company, containing the original and genuine Sylphon Bellows. Built in the world's largest factory devoted exclusively to the manufacture of thermostatic instruments. Write for name of our representative nearest you. No obligation. Always glad to serve you.

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"What's AFTER those first few years?" —asks That Tough Old Tester, Time

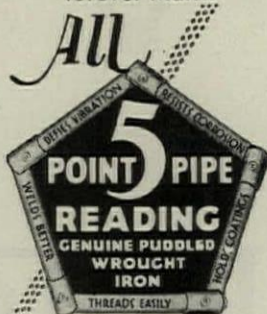
Time, That Tough Old Tester, smiles a grim smile as he lets ordinary pipe run neck-and-neck with Reading 5-Point Pipe when first installed. Then Time, who always tells the truth, gets down to his age-lasting business of proving how long pipe REALLY lasts. Under his merciless tests, ordinary pipe soon falls by the wayside. But Reading 5-Point Pipe, Time's records show, goes on serving faithfully, year after year—resisting gnawing corrosion, leaky joints, breakage through metal "fatigue". Genuine Puddled Wrought Iron—the material of which this pipe is made—cuts down repairs and replacement throughout the entire life of a building, and endures from two to five times longer than ordinary pipe where conditions are most severe!

That's pipe service. That's genuine pipe saving. That's the big advantage of specifying Reading Genuine Puddled Wrought Iron Pipe—tested in the laboratory of the years.

READING IRON COMPANY, Reading, Pennsylvania

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

For Your Protection.
This Indented Spiral
Forever Marks



Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron



For his picturesque cabin overlooking the broad valley of the Minnesota River, Wilbur Tusler, the architect, has used Shevlin Log Siding. For the shutters and doors he has used Shevlin Knotty Pine. Like the pioneer settler's cabin this interesting retreat blends beautifully with its surroundings and will withstand storm and stress for generations.

SHEVLIN LOG SIDING FOR COUNTRY CABINS

Interesting possibilities in the construction of log cabins at moderate cost are opened up by the use of Log Siding. This siding provides the appearance of a log cabin with decided advantages in workability, economy and tight structure. In the cabin shown here Log Siding is used to finish both the outside and inside walls. It creates a snug, wind-proof and rain-proof shelter with the picturesque qualities of log construction and none of the costly, uncomfortable disadvantages.

In this cabin the siding has been finished with a mixture of 40% raw linseed oil, 40% boiled linseed oil and 20% turpentine. The doors and shutters are a charming blue green. The interior of the cabin contains a cozy kitchen and a long living room with built-in bunks.

Log Siding is just one of many forms of Shevlin Pine. For more than forty years this organization has specialized in pine. Your dealer can easily get Log Siding or any of the other kinds of Shevlin Pine through the nearest office: Chicago: 1866—208 South La Salle Street Building; New York: N. H. Morgan, Sales Agent, 1205 Graybar Building; San Francisco: 1030 Monadnock Building; Toronto, Ontario: 606 Royal Bank Building.

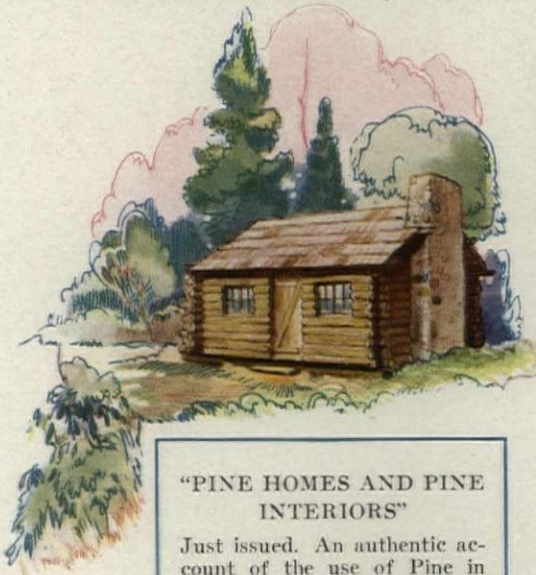
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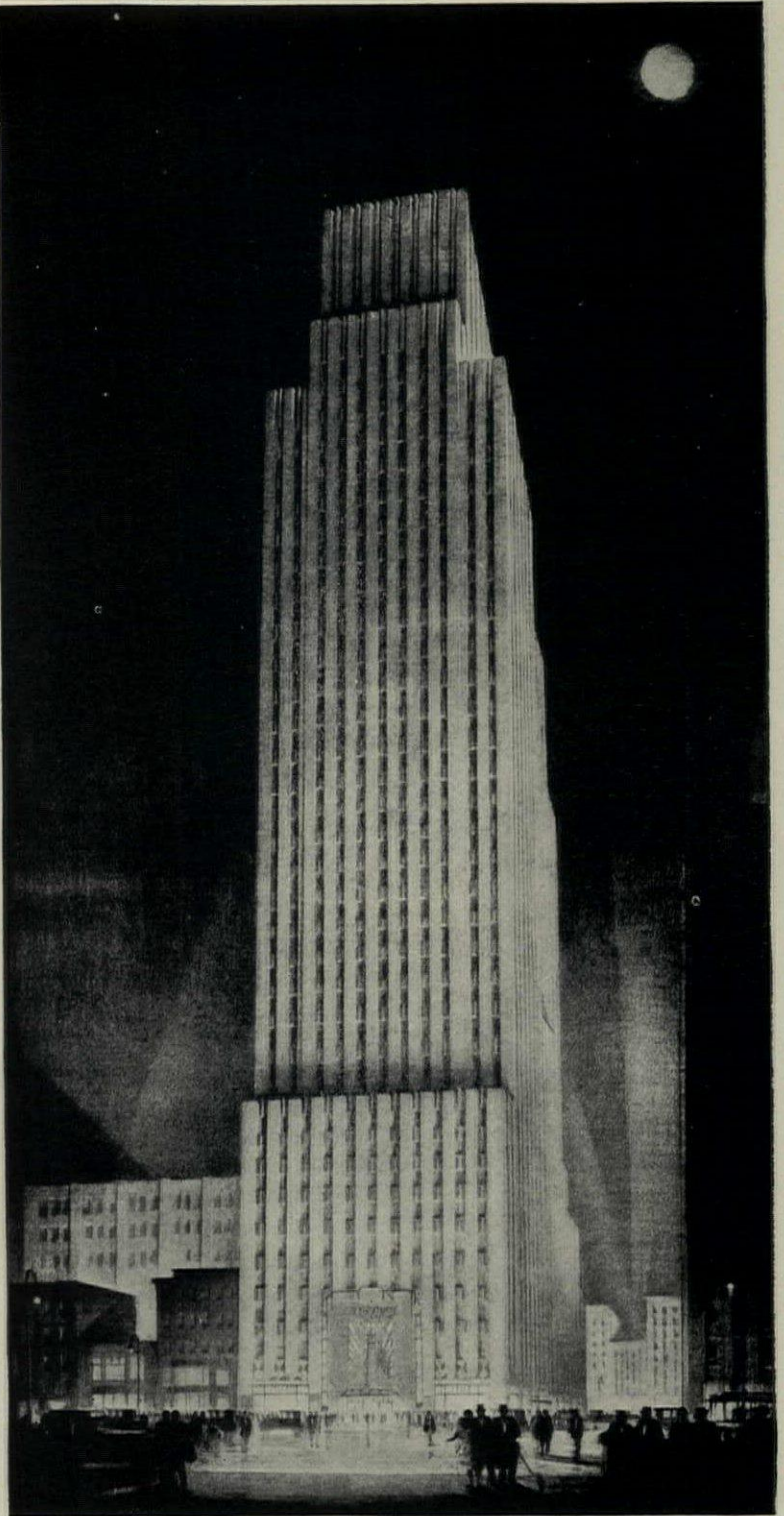
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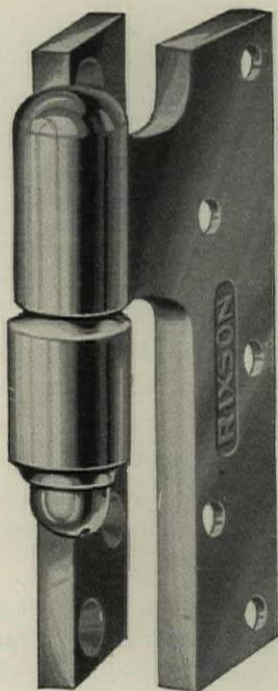
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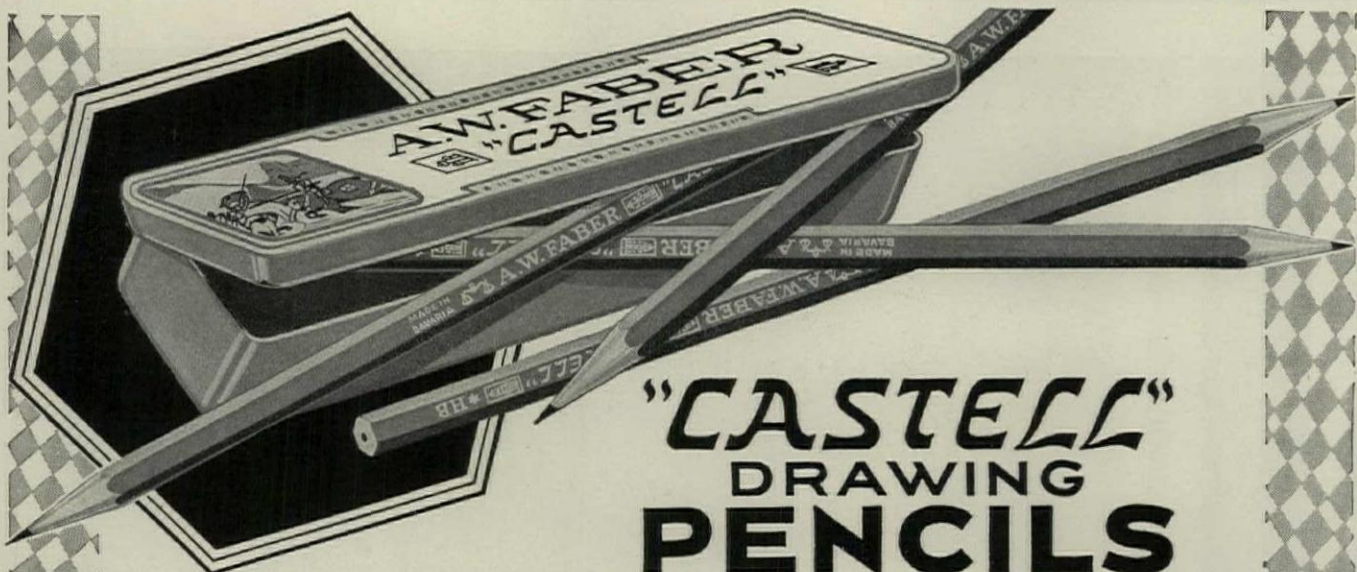
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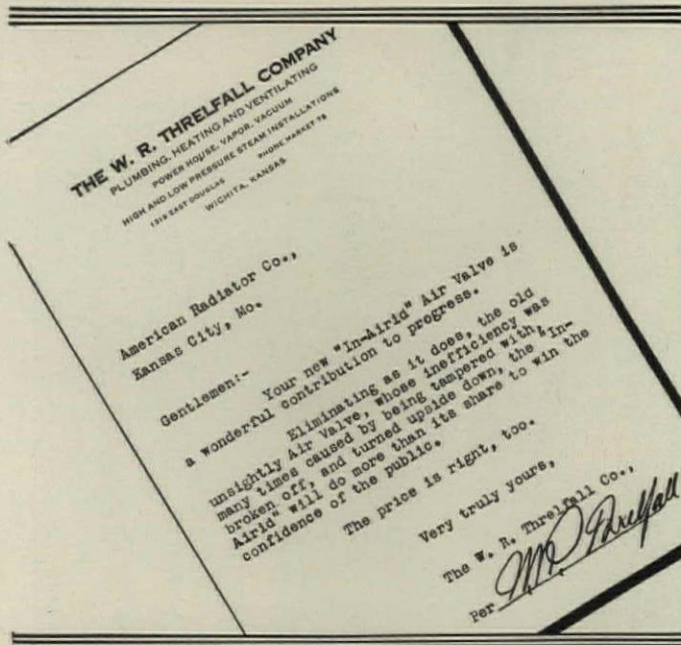
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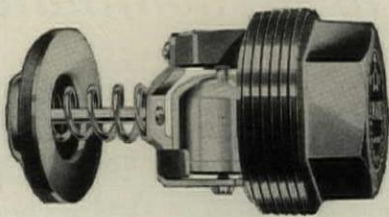
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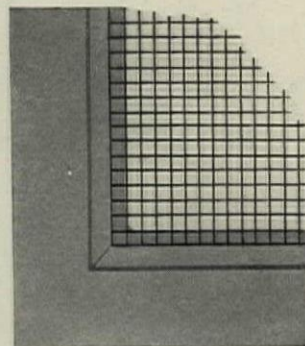
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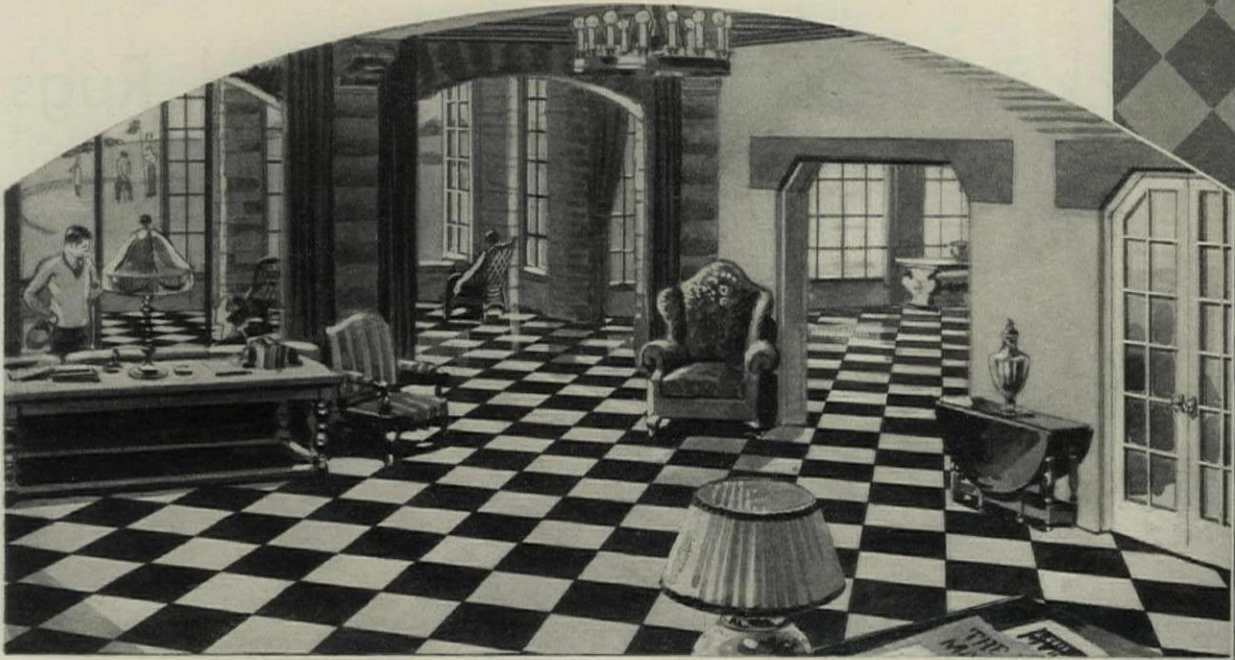
Before and after pictures of the residence of Mr. W. C. Harvey, Plainfield, N. J. Mr. Lewis Bowman, architect.





Aquatint study of the Beaux Arts Apartments New York City ~ The Firm of Kenneth M. Murchison and Raymond M. Hood, Architect ~ Godley and Foulhoux, Associate Architects ~ George A. Fuller Co., General Contractor ~ Jarcho Bros., Plumbing Contractor ~ S. H. Sweeney, Inc., Heating Contractor . . . in these buildings, recognized as an outstanding architectural achievement, Jenkins Valves were installed throughout. ~ Jenkins Bros. ~ 80 White St., New York ~ 524 Atlantic Ave., Boston ~ 133 No. 7th St., Philadelphia ~ 646 Washington Blvd., Chicago . . . Jenkins Bros., Ltd. ~ Montreal ~ London.

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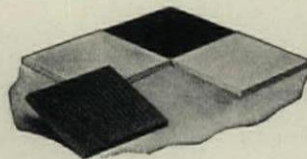
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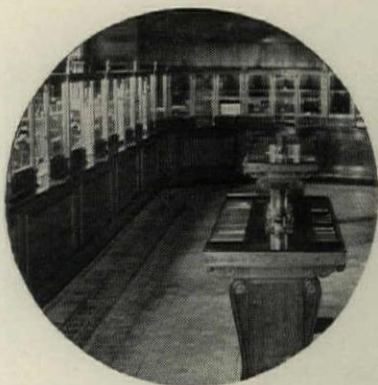


ABOVE, RIGHT. Heavy wood beams and wood furniture make this hotel lobby comfortable...friendly...attractive.

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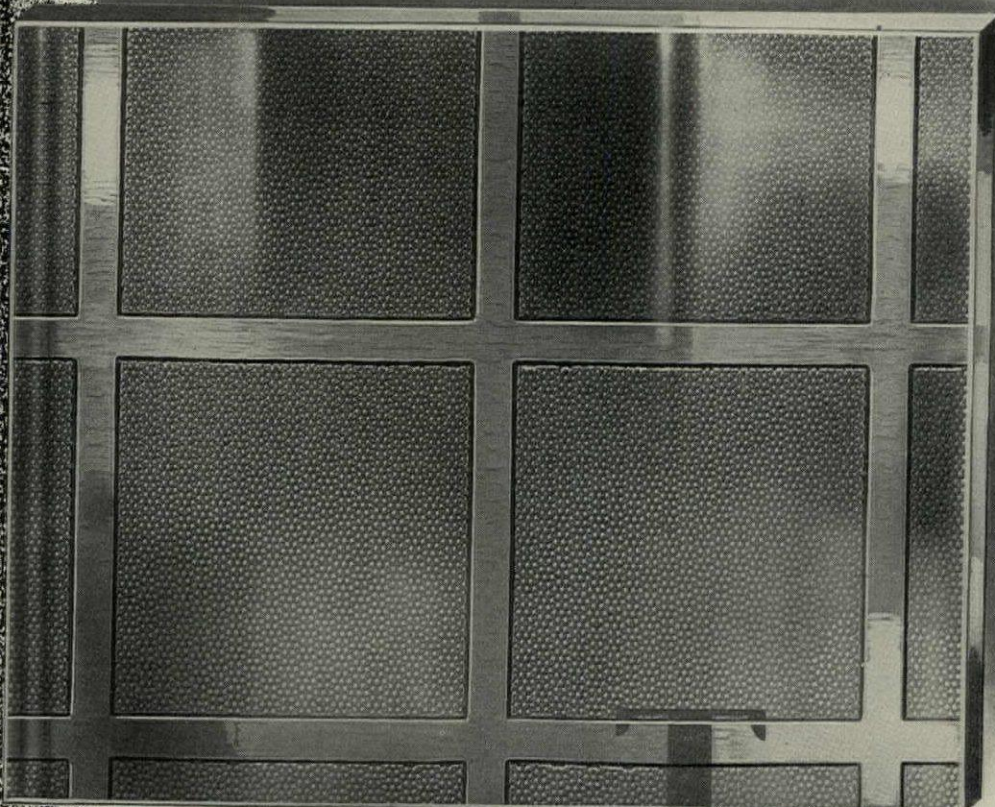
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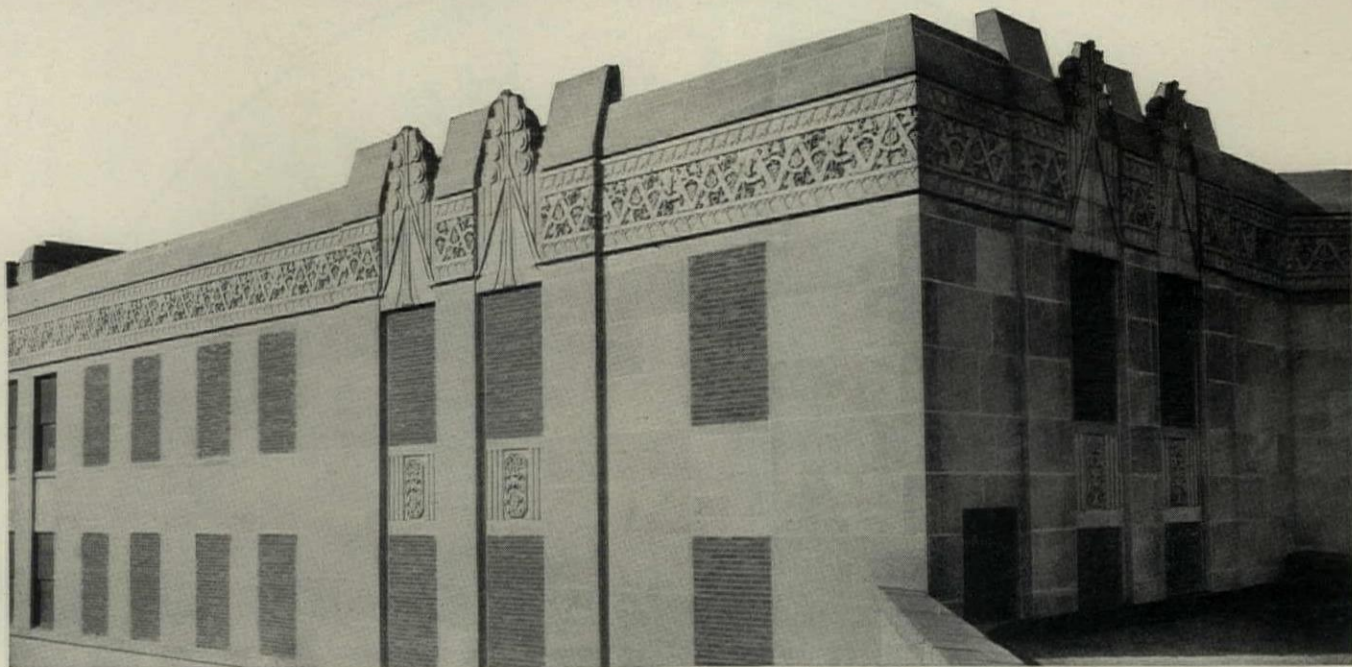
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Details Medical Arts Building, Cleveland, Ohio

*Graham, Anderson, Probst & White, Architects
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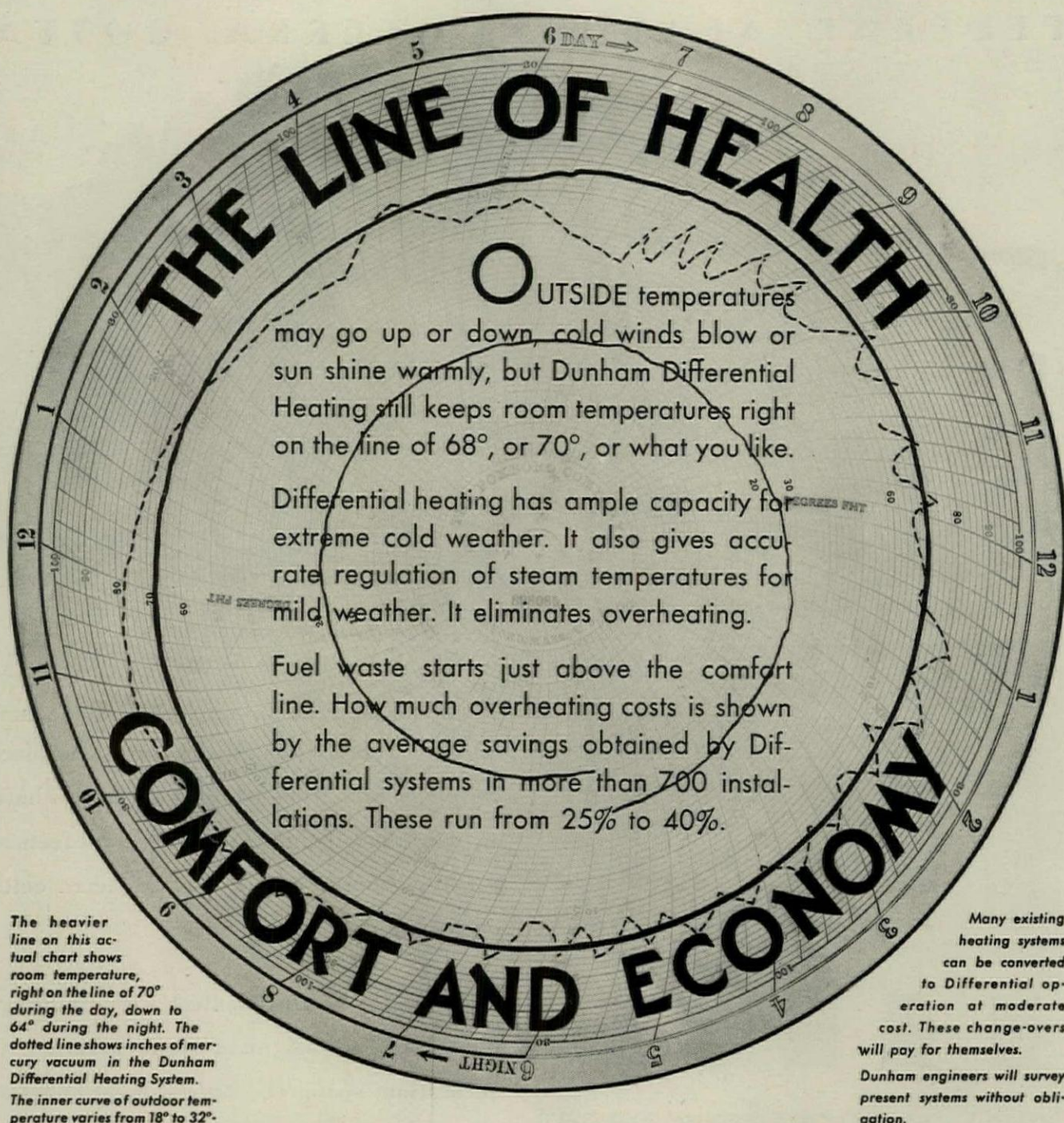
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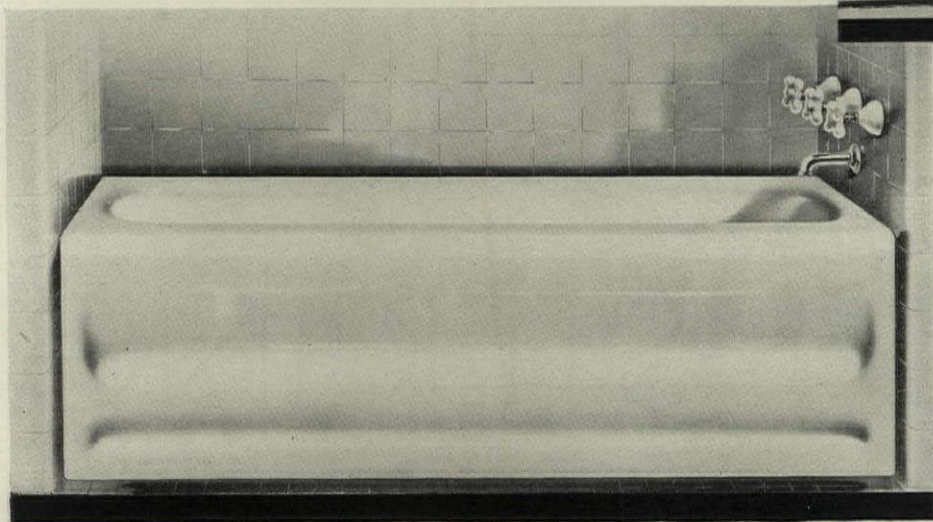
HOME HUNTERS IN SEATTLE FIND

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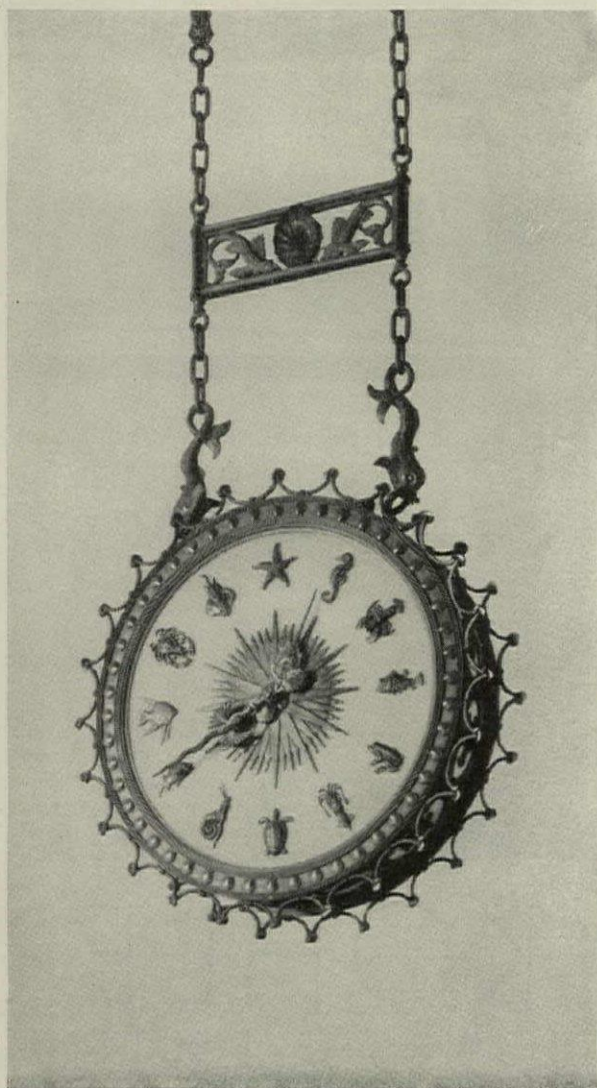
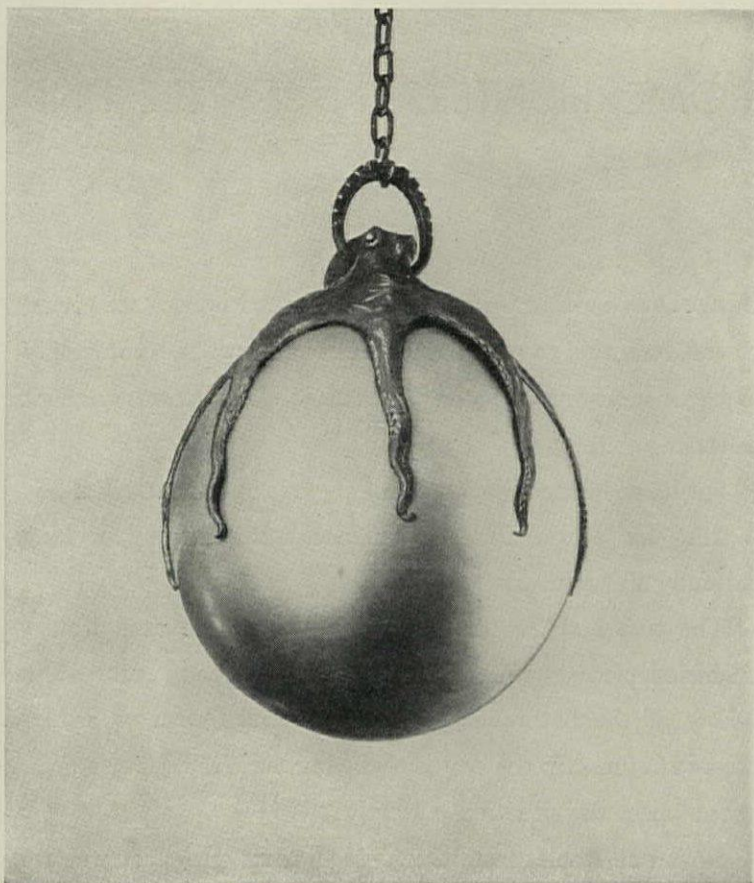
● PARK VISTA Apartments, Seattle, Wash. . . . General contractor, A. S. Hainsworth. Plumbing contractor, Chisholm Plumbing & Heating Co. Wholesalers, Palmer Supply Co.

● VICEROY Built-in Bath, K-30-BG, used in both buildings shown. One piece, slope end, recess pattern, all-over enameled. Built-in over rim supply and secret drain fittings with 1/2 inch compression valves. A popular all-Kohler installation.

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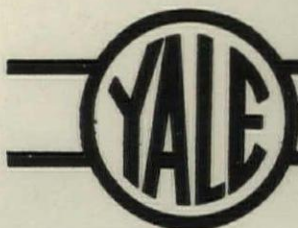
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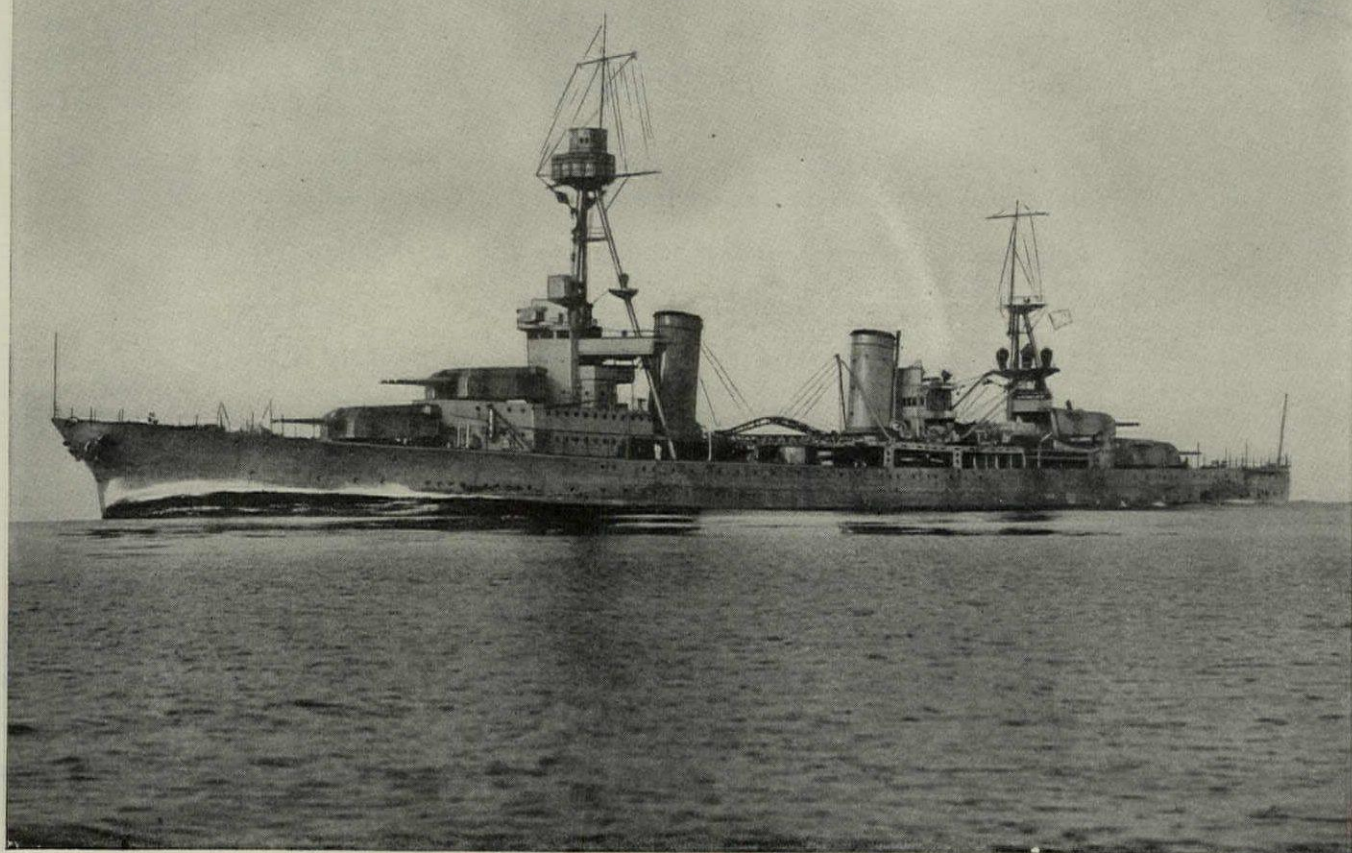
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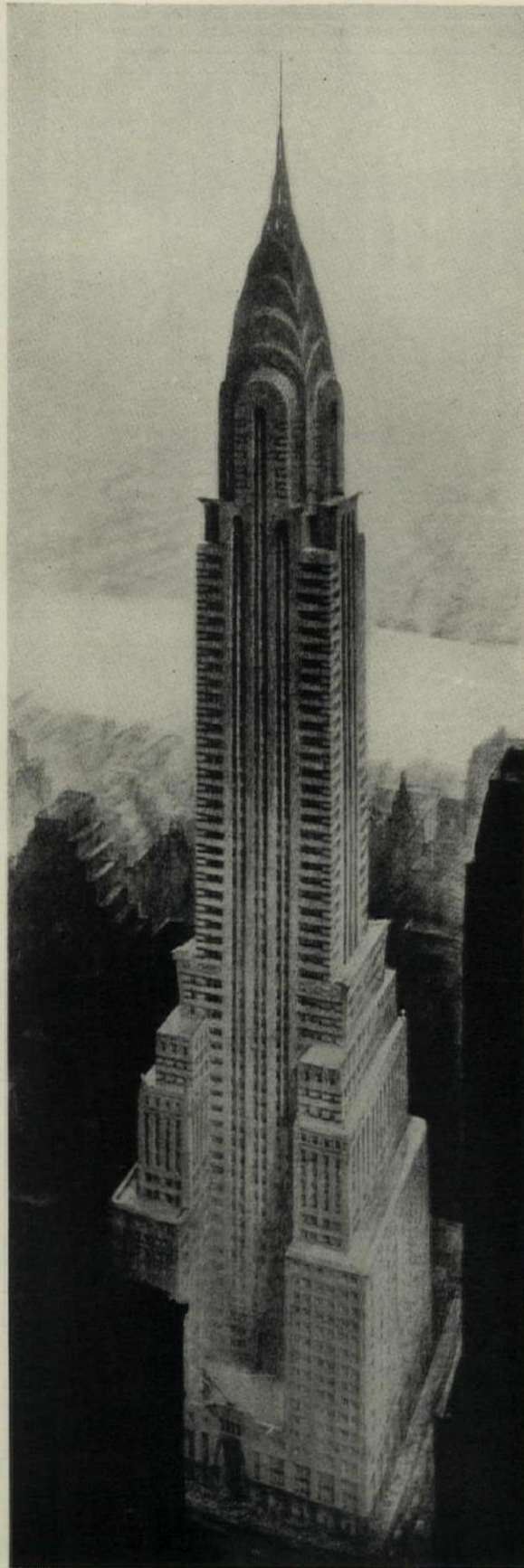
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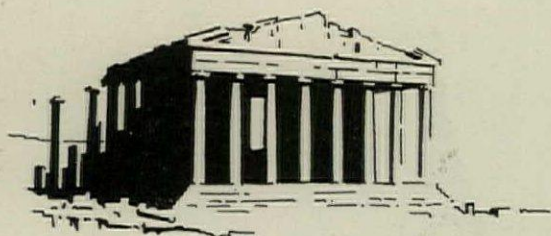


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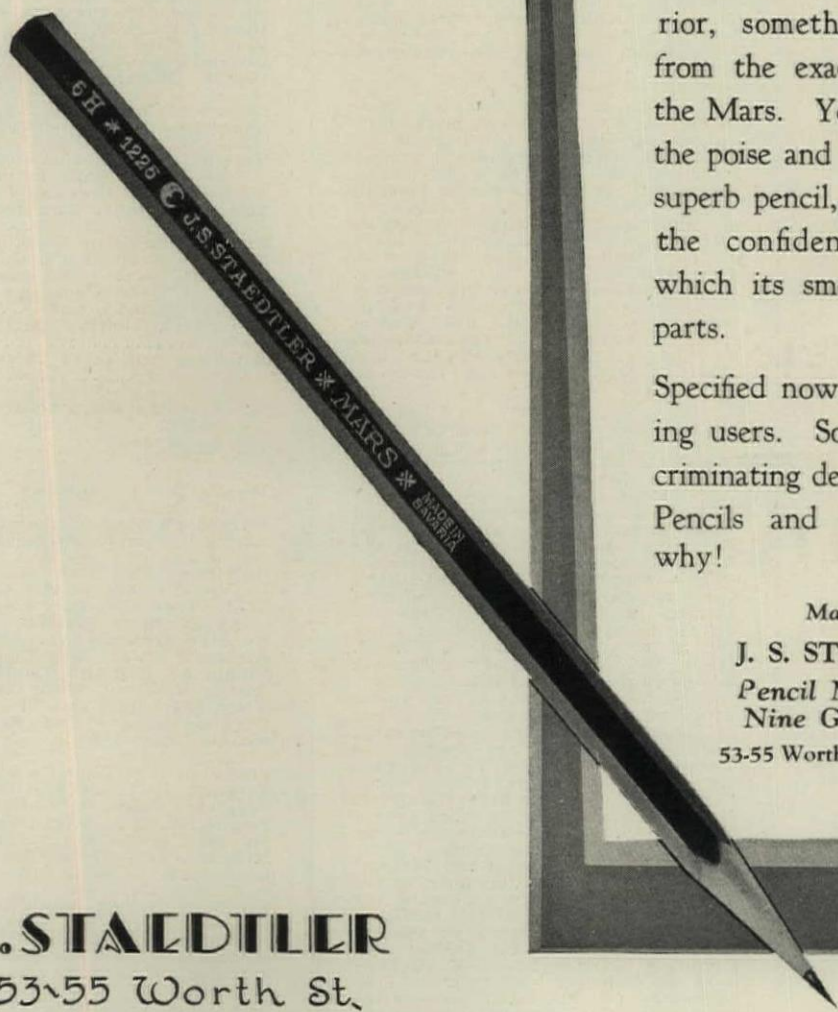
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Julius Kahn, President of the Truscon Steel Company, announces the appointment of Oscar W. Loew as a Vice-President of the Truscon Steel Company. Mr. Loew has been Director of Advertising and Sales Promotion of the Truscon Steel Company for the past six years. Prior to his joining the Truscon Steel Company, Mr. Loew had been engaged in advertising and sales work both in this country and Canada.

According to a joint announcement issued by William L. Geddes, president of the MacAndrews & Forbes Company, Camden, N. J., and M. H. Baker, president of the National Gypsum Company, Buffalo, N. Y., the entire sales and distribution of Maflex insulation board has been taken over by the National Gypsum organization. This arrangement will result in Maflex being added to the Gold Bond line of wall materials, which now includes wall-board, plaster, lath, lime and texture finish as well as insulation board.

The Atlantic Terra Cotta Co., New York, N. Y., announces with profound sorrow the passing of its treasurer, George Palmer Putnam, on April 5th. He was eighty-seven years old. Mr. Putnam was born in Buffalo, the son of the late James O. Putnam, one-time American Minister to Belgium. Since 1879 Mr. Putnam had been connected with the Atlantic Terra Cotta Company. He was the sole surviving original member of the Buffalo Society of Natural Sciences. He also was a member of the Sons of the American Revolution, the Buffalo Club and the City and Manhattan Clubs in New York.

The Concrete Reinforcing Steel Institute held its sixth annual meeting at the Bon Air-Vanderbilt Hotel, Augusta, Georgia, March 31st-April 2nd. Representatives from distant points as San Francisco, Tulsa and Houston were among those present. C. Louis Meyer, President of the Concrete Engineering Company of Omaha was elected President of the Institute for another year in conformity with the policy of the Institute to have each President serve for a term of two years. O. W. Irwin, Vice President of the Truscon Steel Company, Youngstown, was re-elected Vice President of the Institute and Hugh J. Baker, President of Hugh J. Baker & Company, Indianapolis, was re-elected as Treasurer—a position he has held for three years. W. H. Pouch, President of the Concrete Steel Company, New York, was re-elected as a Director of the Institute to serve for a term of three years. E. B. Wilkinson, President of the Wilson-Weesner-Wilkinson Company, Nashville, was elected to represent the South as a Director of the Institute for a three-year period succeeding D. B. Knowlton of the Dudley Bar Company, Birmingham. M. A. Beeman of Chicago was re-elected as Secretary for his sixth consecutive year. R. W. Johnson was re-appointed as Engineer while J. P. Thompson will continue as District Engineer for the eastern territory and Arthur Burnie will continue as District Engineer for the Kansas City territory.

A new storage type electric water heater known as the "Adaptomatic" has been placed on the market by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa. It is suitable for either full or semi-off-peak heating and for providing either continuous or intermittent service.

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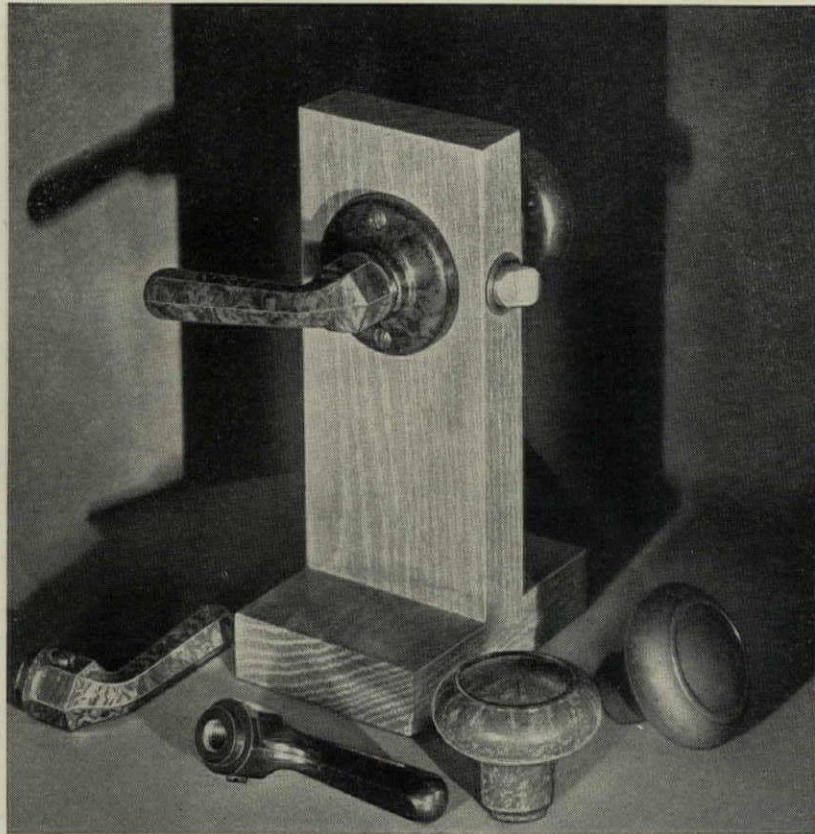
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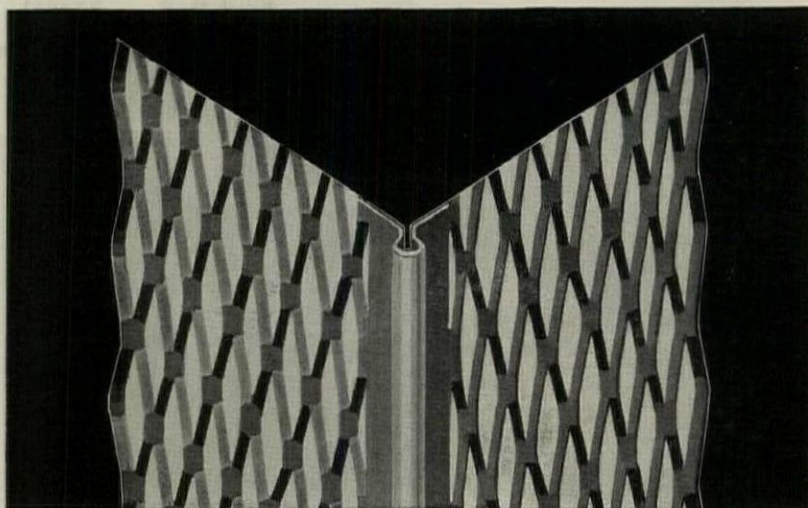
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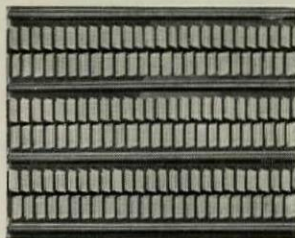
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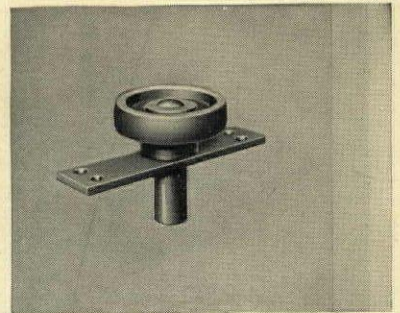
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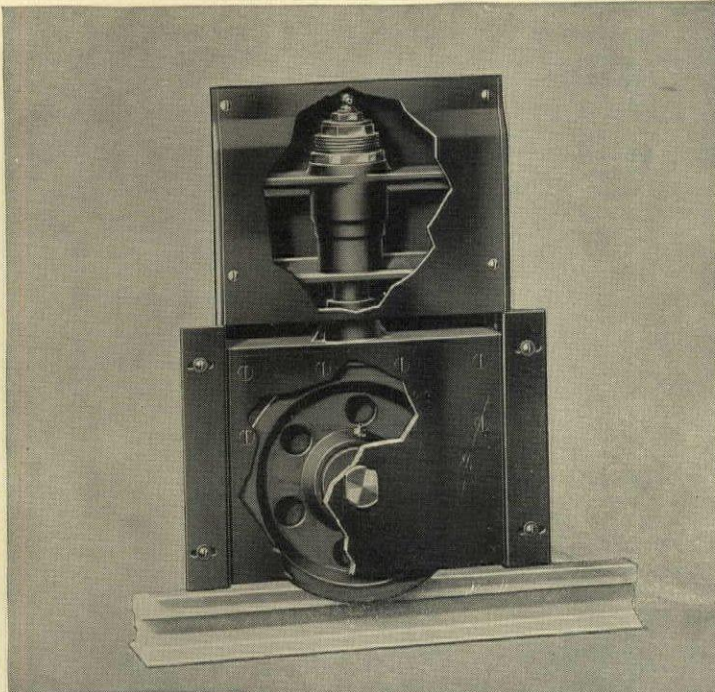


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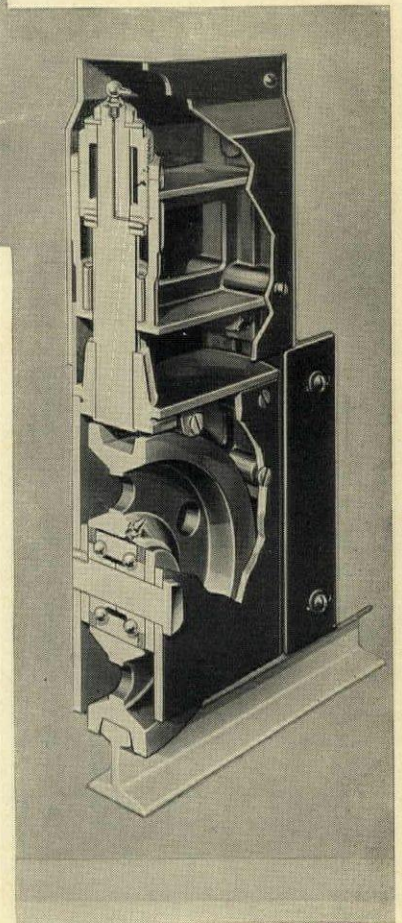


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