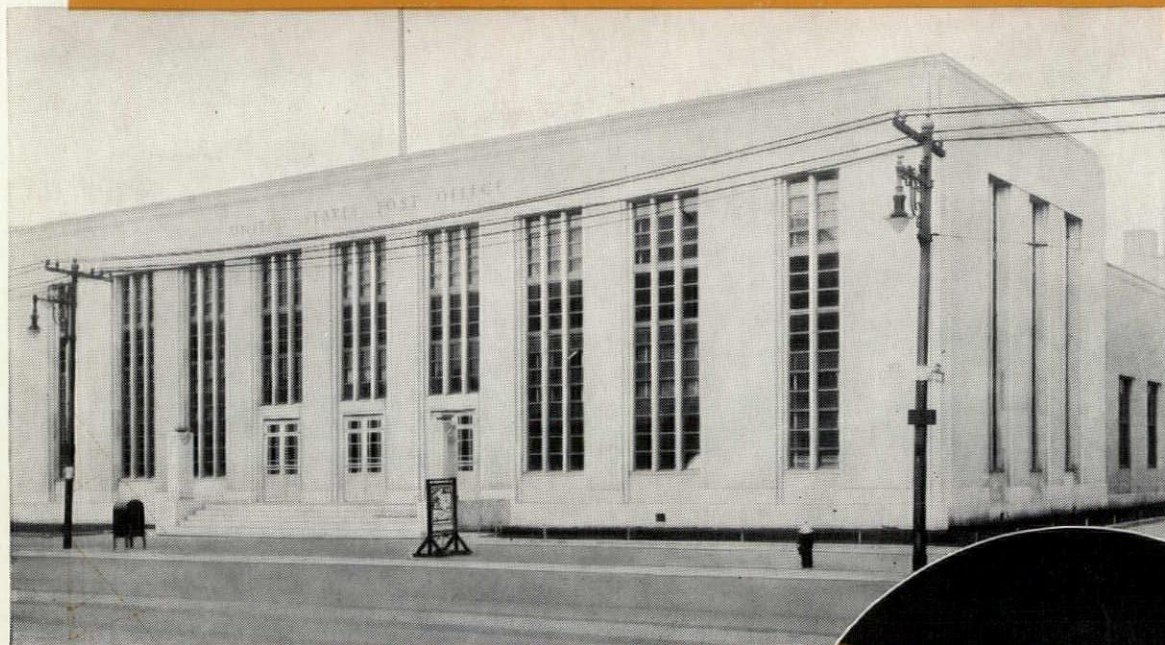


PENCIL POINTS

JUNE
1939



...modern buildings use Anaconda Through-Wall Flashing



The new U. S. Post Office at West New York, N. J., designed by Paul Peter Cayot. Anaconda Through-Wall Flashing installed by C. F. Diefenbach, Guttenburg, N. J., through general contractor Auf Der Heide-Aragona, Inc., of West New York.

*It's moderately priced... easy to install...
provides lasting efficiency*

Masonry walls, being porous, have a tendency to accumulate water until the saturation point is reached...then seepage begins...and unless adequate drainage is provided, outside walls will be streaked and inside finishes damaged.

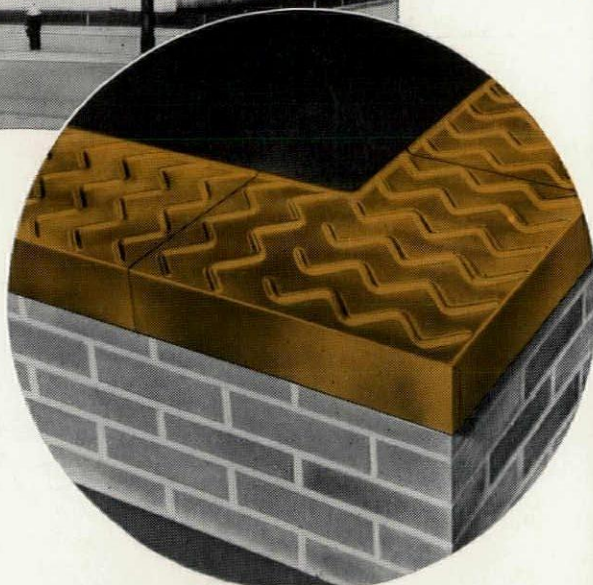
Anaconda Through-Wall Flashing provides the easiest, least expensive and most positive method of drainage control. So designed as to drain itself dry on a level bed, this flashing prevents lateral movement in any direction.

Made of 16-ounce Anaconda Copper, it is available in 5' and 8' lengths in a range of standard and special widths, and with various selvages. Publication C-28 describes Anaconda Through-Wall Flashing in detail.

Visit the Copper & Brass Industry Exhibit in the Metals Building, New York World's Fair—1939.

2988

© N. Y. W. F.



Corner Flashing Assembly—One-piece corner flashings are installed after straight flashings are in place. Lapping the straight flashings by two corrugations, the corner piece fits snug and secure. Note the bent down weatherlip which makes the completed assembly watertight.



Anaconda Copper

THE AMERICAN BRASS COMPANY, General Offices: WATERBURY, CONNECTICUT
In Canada: Anaconda American Brass Ltd., New Toronto, Ontario • Subsidiary of Anaconda Copper Mining Company

D E S I G N

VOLUME XX NUMBER 6

ARTICLES

- 343 Bolsters for Your Arguments *Royal Barry Wills*
 357 Sven Markelius *Talbot F. Hamlin*
 395 Plastics for Architecture *E. F. Lougee*

PLATES

- 342 A Small House *Barber & McMurry*
 348 A Small House *Barber & McMurry*
 350 A Doctor's Residence *Max Colter*
 356 Residence Design *S. Kendrick Lichty*
 389 An Office Building *Janssen & Cocken*
 404 Pen and Ink Study *P. C. Jeffries*

THE MONOGRAPH SERIES

Volume XXV, Number 3

- 373 Some Colonial Wall Cabinets and Kitchen Dressers,
 Principally from Early Massachusetts Settlements,
By Frank Chouteau Brown, with Research and
Measured Drawings furnished by the author, and
photographs by Arthur C. Haskell

COMPARATIVE DETAILS—Group 48

- 367 USES OF GLASS, *the Work of David J. Abrahams,*
William Hamby, Skidmore & Owings, Edwin J.
Kraus, Tucker & Silling, and G. E. Wiley

DATA SHEETS—Prepared by Don Graf

- 391 Seating Capacity With Portable Chairs; Portable
 Chairs, Clearing and Storage; Canvas Roofing;
 Stucco Over Old Clapboard Wall

HERE, THERE, THIS, AND THAT

- 14 News from the Field, Competition Announce-
 ments, Book Reviews, etc.

COVER DESIGN—*by Gustav Jensen*

PENCIL POINTS

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EDITOR

CHARLES MAGRUDER
ASSOCIATE EDITOR

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TECHNICAL EDITOR

The Monograph Series
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 EDITOR

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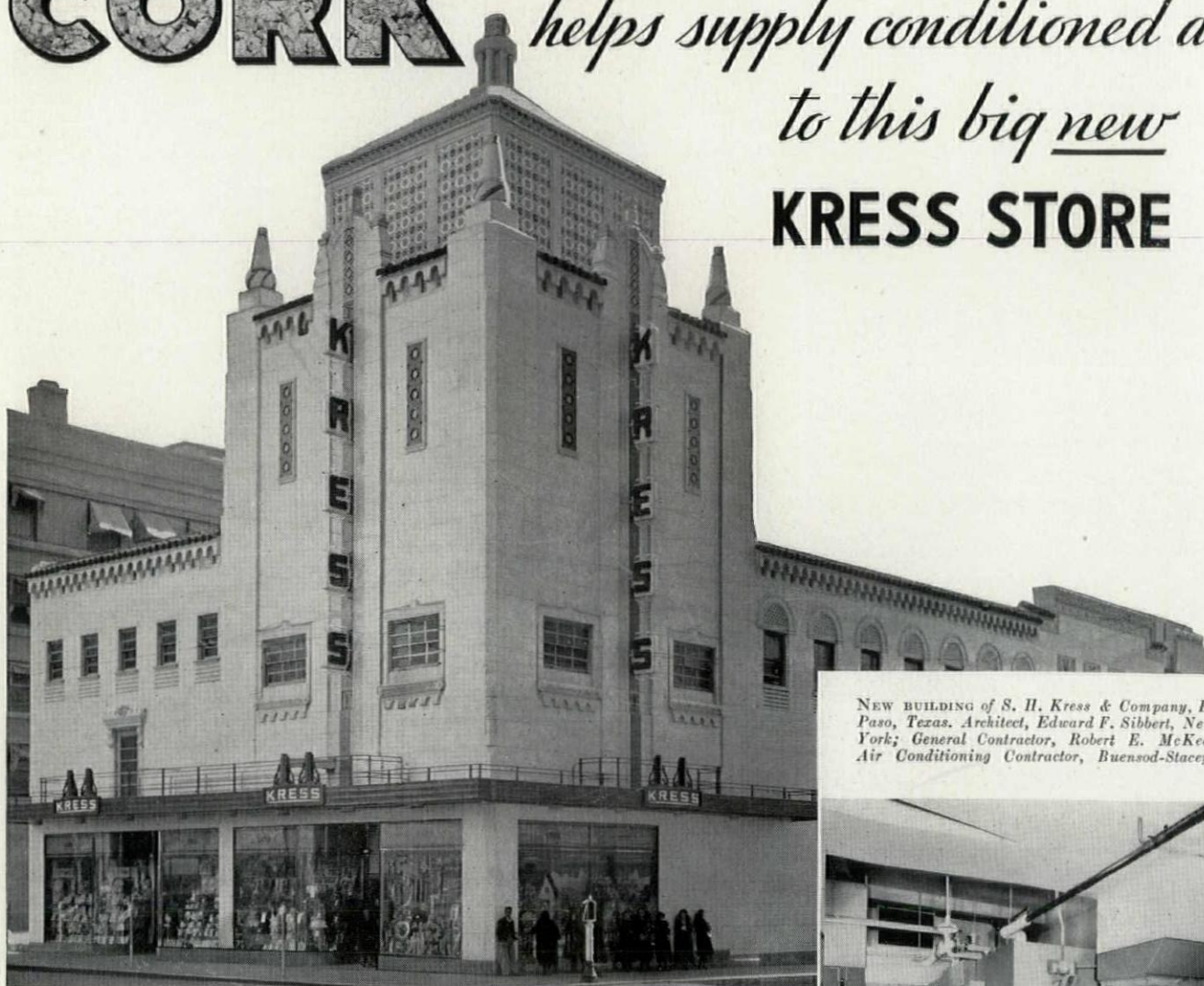
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CORK

*helps supply conditioned air
to this big new*

KRESS STORE



NEW BUILDING of S. H. Kress & Company, El Paso, Texas. Architect, Edward F. Sibbert, New York; General Contractor, Robert E. McKee; Air Conditioning Contractor, Buensod-Stacey.

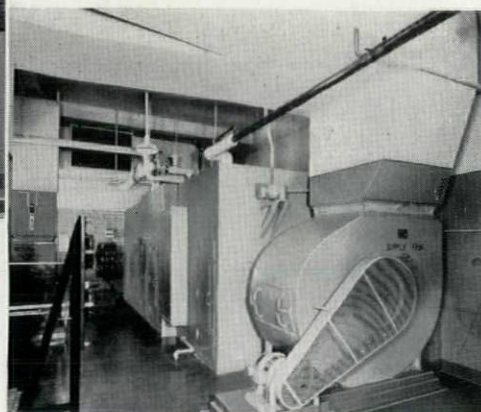
**180,000 cubic feet of store space
conditioned in new El Paso building**

CUSTOMERS flock to the air conditioned store! That's why it pays firms like S. H. Kress & Company to invest in this modern service. It pays them, too, to protect this investment and insure dependable, low-cost operation for years with efficient insulation of Armstrong's Corkboard!

Here's where cork works to improve air conditioning operation: On cold air ducts, walls, and roofs, Armstrong's Corkboard prevents condensation. On cold lines, Armstrong's Cork Covering guards against waste of costly refrigeration. Installed under machinery, Armstrong's Vibracork quiets the noise and lessens the transmission of

shocks that cause annoyance and damage. It lasts indefinitely.

Include cork in your next air conditioning installation. Its unique cell structure assures three-way efficiency: These thousands of tiny, still-air cells bar heat, resist moisture, and supply a resilient cushion to absorb vibration's shocks. The same qualities that have helped Armstrong's Cork Insulation give years of dependable service in cold storage work, offer unequalled advantages in air conditioning.



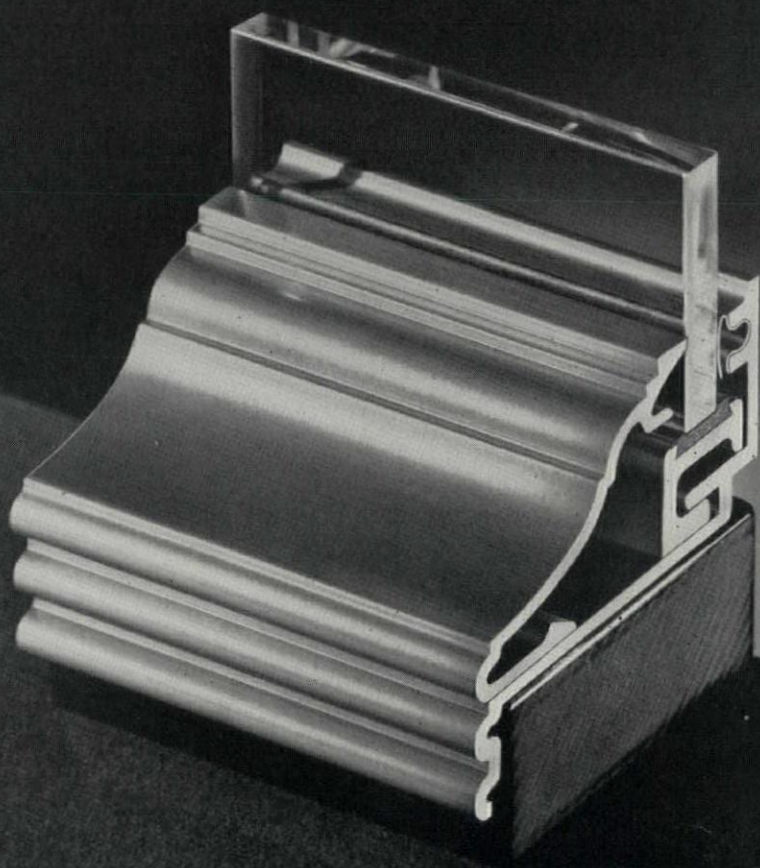
FANS AND DUCTS in the new Kress Store are insulated with Armstrong's Corkboard—two inches on fan housing, one inch on ducts. Armstrong's Cork Covering in ice water thickness guards cold lines.

Call on Armstrong's Contract Service for help in planning and installing insulation. And write today for a free copy of "Armstrong's Corkboard Insulation for Walls and Roofs." Armstrong Cork Company, Building Materials Division, 922 Concord Street, Lancaster, Pennsylvania.



Armstrong's CORK INSULATION

CORKBOARD • CORK COVERING • VIBRACORK



PRACTICAL CONSTRUCTION

THE Pittco Store Front Metal line is notable for its beauty . . . for the sharp contours, the pleasant lines, the harmonious relationship of design which exists between all bars, mouldings and sash. But it is also distinguished by its sturdy practical construction. Every Pittco Metal member has been so styled as to contribute definitely to easier installation, greater adaptability and longer life.

At the New York World's Fair, see the full-size Pittco Store Fronts of the "Street of Tomorrow" in the Forward March of America Building, and the miniature Pittco Fronts in the Glass Center Building. Or, at the Golden Gate International Exposition, see these miniatures in the Homes and Gardens Building.

DETAIL:

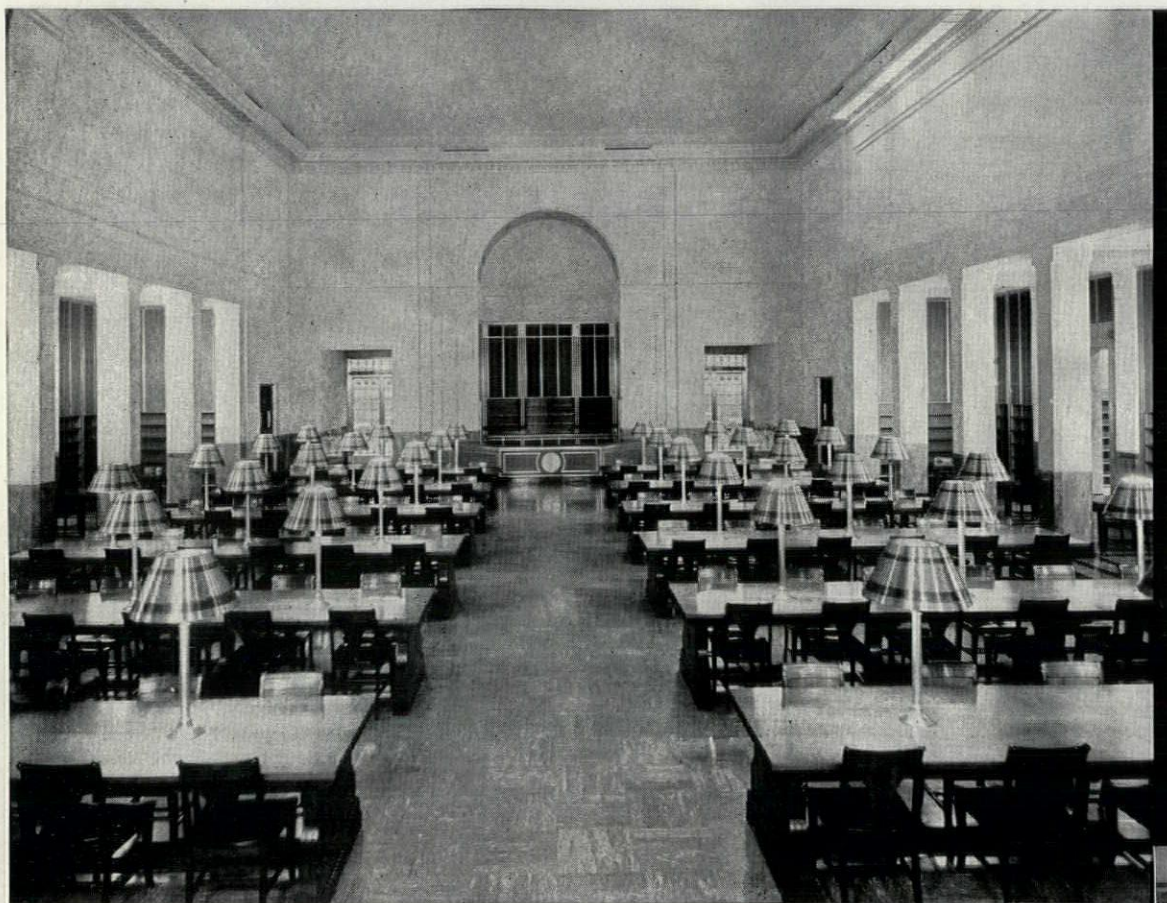


Section of Pittco Store Front Metal Sash No. 16, showing its practical construction. Note (1) the "cushion grip" on glass; (2) adjustability to various glass thicknesses; and (3) that all operations take place from the outside of the show window, simplifying installation.

PITTCO
STORE FRONT METAL

PITTSBURGH PLATE GLASS COMPANY

★ IN THE NEW LIBRARY OF



Formica Realwood table tops in the reading room. The entire desk and paneling with inlays at the rear are also Formica.

Formica Realwood table tops and Formica gray-green book shelves in a small reading room.



Formica table tops, shelving and large wall panels in gray-green morocco with metal trim.

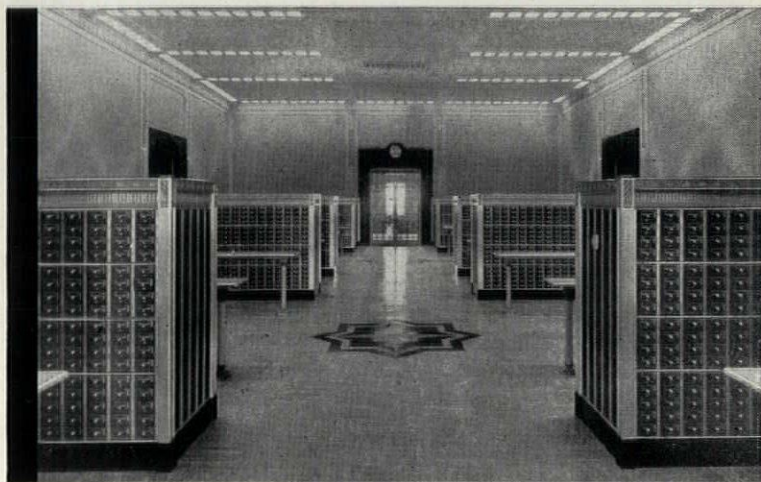
THE FORMICA
4620 SPRING GROVE AVENUE

CONGRESS ANNEX- *Formica finds many uses!*

FORMICA was used for a great many purposes in the Annex to the Library of Congress recently designed by Pierson & Wilson for the Architect of the Capitol.

Chosen for its excellent appearance, its modernity, and its unusual durability and stability of color, it was employed for such diverse purposes as table and desk tops, book shelves, wainscot in corridors, telephone booths, doors, baseboard, chair rails, and fronts of card index cases.

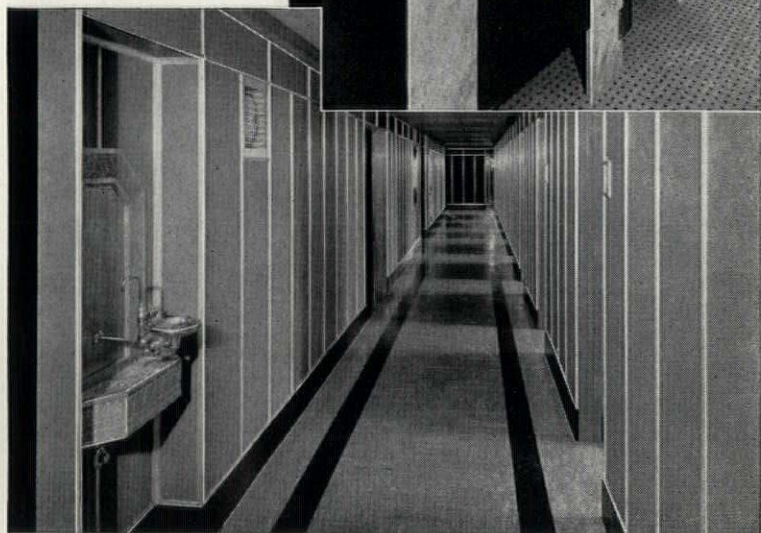
Much of the material is in a subdued gray-green with a morocco surface—some of it has decorative inlays; some of it is realwood. Literature giving construction details is available. Ask for it.



Above:
Formica gray-green morocco fronts of card index cases.

Right:
Formica toilet stall doors.

Below:
Formica corridor paneled in gray-green morocco with metal trim.



FORMICA

INSULATION COMPANY

CINCINNATI, OHIO

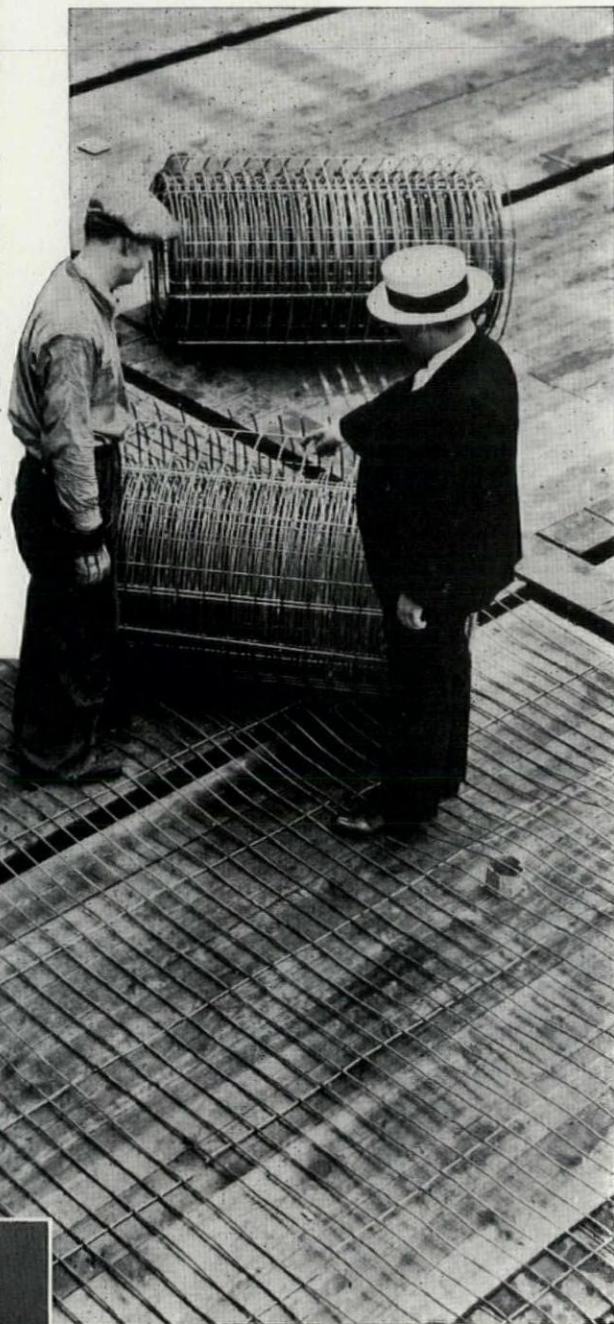
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As an architect, you'll want to have full information about Nu-Wood—about its insulating and acoustical value—and about the scope it gives you in planning modern and traditional interiors for every type of building. Write today for the complete facts.

Balsam-Wool and Nu-Wood are used in House No. 1 of the Town of Tomorrow at the New York World's Fair, and Nu-Wood is used in the Western Pine Association Exhibits at both New York and San Francisco Fairs.



WOOD CONVERSION COMPANY

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ADAPTABILITY. Because of its charming appearance, Nu-Wood is adapted to the widest possible range of interior decoration uses. It is equally at home in residence, church, school, restaurant or theatre.

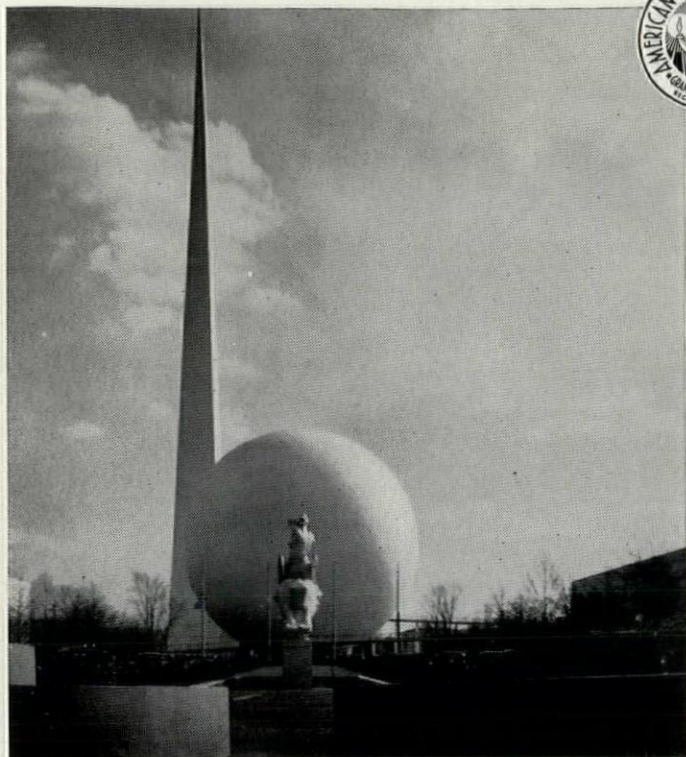
KOLOR-TRIM MOLDINGS. Kolor-Trim Moldings are wood moldings pre-decorated in a range of jewel-like colors, harmonizing with the shades of Nu-Wood. Kolor-Trim Moldings make possible a complete interior decorating job without "extras."

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New York World's Fair, 1939



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Golden Gate International Exposition, San Francisco

NEW YORK WORLD'S FAIR

N. Y. STATE EXHIBIT BLDG. AND WATER AMPHITHEATRE

Architects: Sloan and Behrens

THEATRE AND CONCERT HALL

Architects: Reinhard and Hofmeister

BRITISH PAVILION

Architects: Stanley, Hall, Easton & Robertson

NATIONAL BISCUIT CO. EXHIBIT

Architect: Louis Wirsching, Jr.

ARGENTINE PAVILION

Architect: Armando D'Ans
Associate: Aymar Embury II

U. S. S. R. PAVILION

Architects: Brosi Mayofan and Karo S. Alabian
Associates: Pomerance and Breines

CHRYSLER EXHIBIT

Designer: Raymond Loewy

GOLDEN GATE INTERNATIONAL EXPOSITION—SAN FRANCISCO

ARGENTINE PAVILION

Architects: W. Wilson Wurster & Armando D'Ans

FRENCH PAVILION

Architects: Geo. Besse and Claude Meyer Levy
Associates: Spencer Blanchard and Maher

HAWAIIAN BUILDING

Architect: Lewis P. Hobart

HILLS BROS. THEATRE

Architect: Harry A. Thomsen, Jr.

CAVALCADE

Architect: W. P. Day

TAHOE EXHIBIT

Architectural Commission

FEDERAL THEATRE

Architect: Timothy L. Pflueger

DENVER AND RIO GRANDE EXHIBIT

Architectural Commission

TREASURE MOUNTAIN THEATRE

Architect: Mark Daniels

PETROLEUM BUILDING

Architectural Commission

WORLD IN MOTION

(Julian Harvey Demonstration Theatre)

Architect: F. W. Quandt

SCOTCH VILLAGE

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STATE BUILDING

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American Seating Company

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To give the roof of this new warehouse in St. Louis fireproof construction the Austin Company, contractor-builders, use Wheeling Long-Span Steel Floor and Roof System.

No Premium on FIRE SAFETY

When Floors and Roofs Are Built This Modern Low-Cost Way

THE basic unit of the Wheeling Long-Span Steel Floor and Roof System is a pre-fabricated joist of genuine COP-R-LOY, 12 or 14 gauge 5", 6" or 8" deep and of any length up to 22'. These joists are quickly welded into a rigid deck, the smooth surface of which can be used immediately for the supplies of electricians, plumbers and other tradesmen. No delays waiting for concrete to set! No mess to clean up!

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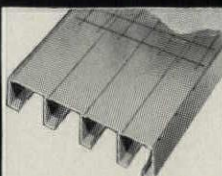
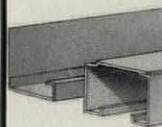
OFFICES AND WAREHOUSES
IN PRINCIPAL CITIES

GOLDEN ANNIVERSARY YEAR

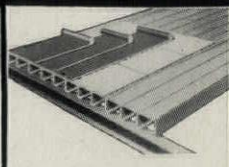


LONG SPAN
STEEL
JOISTS

WELDED INTO A RIGID DECK



FOR ANY TYPE
OF FLOORING



OR BUILT-UP
ROOFING

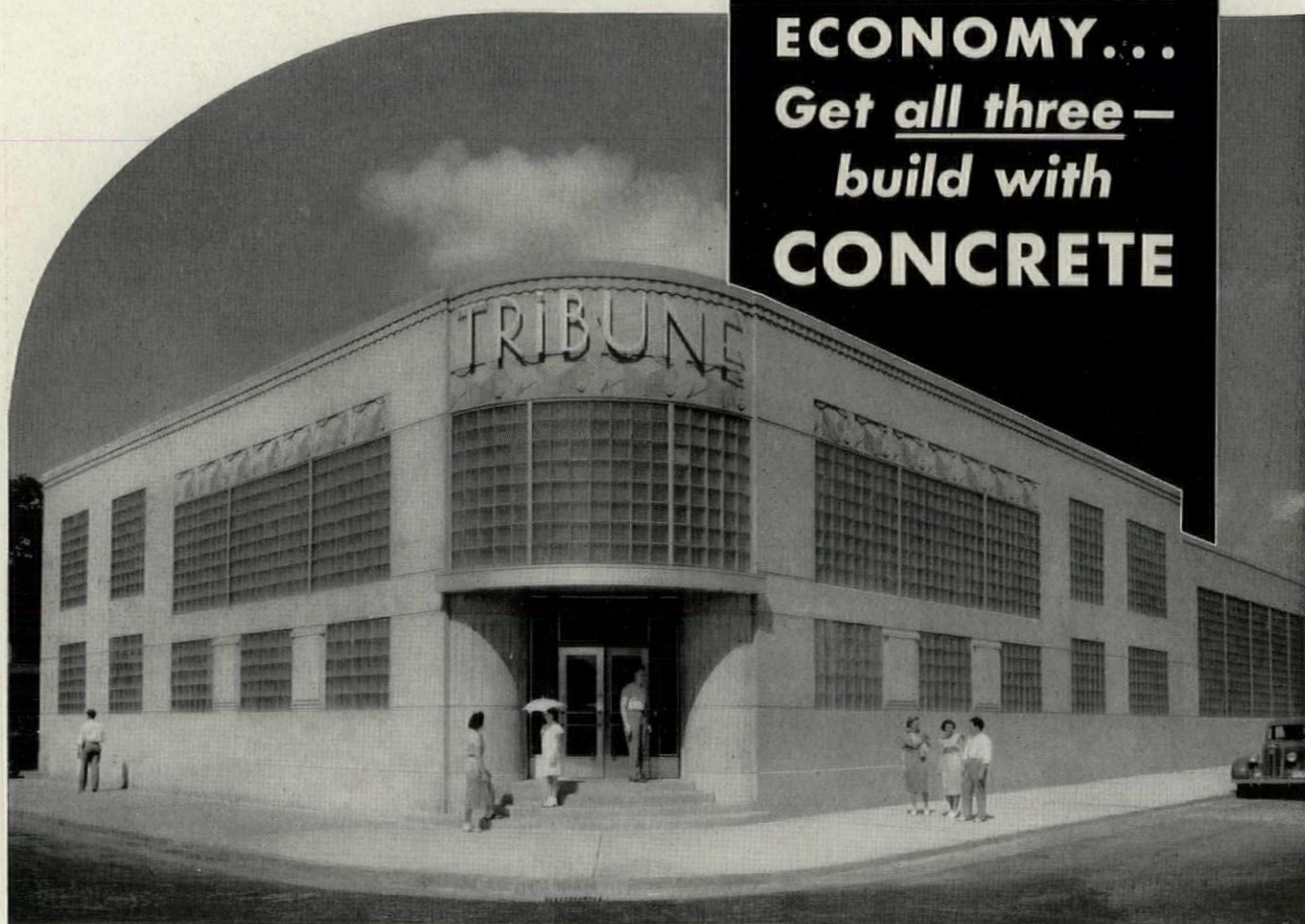
Specify



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ECONOMY...
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Concrete buildings are consistently low in first cost—as shown by awards of scores of new stores, offices, theaters, industrial plants, schools and other buildings. And low maintenance is also assured when the walls, frame, floors and detail are cast as one rugged reinforced concrete unit.

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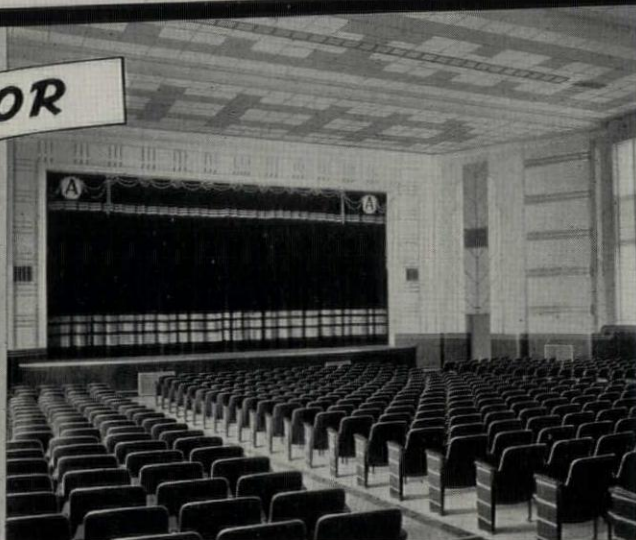
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Architectural Concrete
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FUNCTIONS COMBINED IN ONE
FIRESAFE, ENDURING MATERIAL

Schools need the three-fold advantages that **TEMLOK DE LUXE** offers

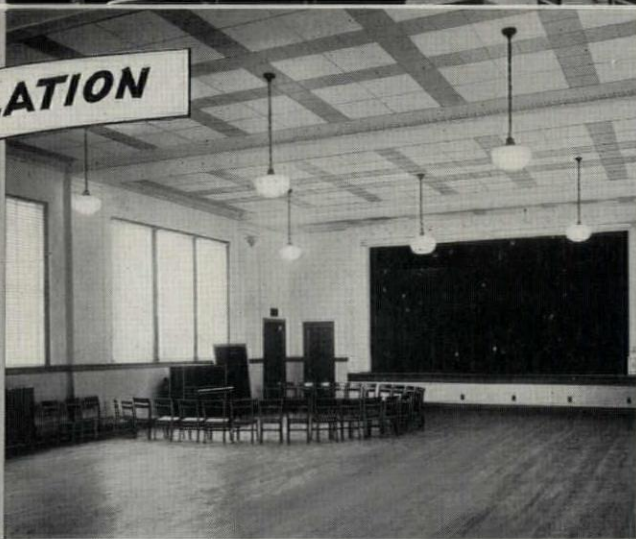
COLOR

Shown here are three rooms of the Alvin School, Alvin, Texas. A field of white, with design of ash Temlok De Luxe adds color to this auditorium ceiling. The architect was Blum E. Hester of Houston.



INSULATION

Music room of the Alvin School, where Temlok De Luxe both insulates and decorates. Another design of white and ash. The general contractor was Smith & Walker of Corpus Christi, Texas.



NOISE-QUIETING

In the cafeteria of the Alvin School, Temlok De Luxe helps quiet unwanted noise. Sub-contractor was S. H. Tummins, Houston; wholesaler, Moncrief-Lenoir Mfg. Co., Houston; dealer, Robinson-Laird Lumber Co. of Alvin.



This factory-colored interior finish insulates, decorates, and quiets noise

WHEN you plan public rooms of any kind—especially schools and theatres—consider Temlok De Luxe. This modern insulating interior finish, made by the makers of Armstrong's Linoleum, offers a combination of three important advantages in one money-saving material.

In the first place, Temlok De Luxe is an efficient insulating material, which helps to reduce fuel bills and promote comfort. This smooth-surfaced board is factory-finished in six harmonious colors (ash, coral, cream, green, walnut, and white) which lend themselves to almost any type of interior treatment. Its noise-quieting factor is important in public or business rooms.

Armstrong's Temlok De Luxe is made in small and large panels, planks, and boards. Used in combinations, these shapes permit a wide variety of design and pattern. With the factory-applied colors available, they make Temlok De Luxe a highly interesting material with which to work, both in new construction and remodeling.

See data describing Temlok De Luxe and showing some of its uses in *Sweets*. Write for samples and further information to Armstrong Cork Company, Building Materials Division, 911 Concord Street, Lancaster, Pennsylvania.



Armstrong's TEMLOK INSULATION

De Luxe Interior Finishes

TEMSEAL SHEATHING

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HERE, THERE, THIS & THAT

Boston Notes

'Twas May in 1937 and again last year, when these notes carried word of an essentially moribund profession. One fine day, draftsmen will be minded to say, "It steenks," and form an arson squad.

Housing is the best bet of the season. Reports from these offices indicate that skilled men are being fairly dealt with by their bosses, that minimums are not always maximums.

While the item of "raises" is before the house, let it be known that there are three set-ups in Boston offices bearing on this delicate point. A little on the *unique* side is one respected concern which has the theory that if an individual's wages can not properly be raised each year, commensurate with his increasing ability, then he is not the man they want. There is the *minority* case of an architect who culls a small, efficient group and vol-

(Continued on page 16)

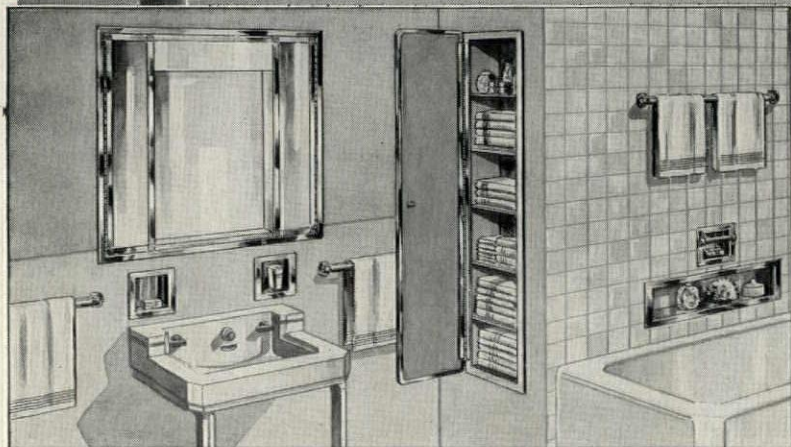
MODELS MODELS MODELS

Models of wood, of cardboard, of plaster;
Models of gigantic projects and tiny ones;
Models of World's Fairs in New York and Frisco;
Models of Housing Groups, Landscapes, and Houses;
Models of exterior views and interiors,
Made by professional craftsmen and amateurs;

WHAT! No photographers' models?—NO!
But surely, some artists' models?—NO!
Not even lingerie models?—NO!

But page after page of nothing but models;
Scale models only—of interest to Architects;
Completely described, with notes on their making;
All in the special June Issue of PENCIL POINTS.
Be sure to get yours, so you'll have it for reference!

MODELS MODELS MODELS

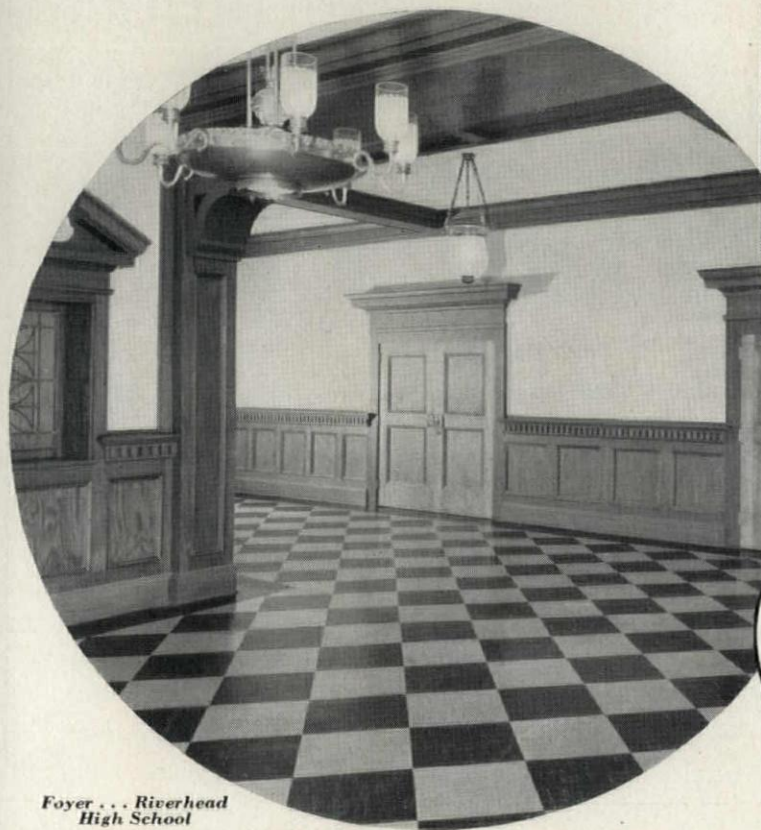


Beautify bathrooms with MIAMI
Cabinets, Mirrors and Accessories. Large cabinets for husband and wife; smaller cabinets for children; recessed shelves for sponge, brush, bath salts and other supplies; towel supply cabinet—all designed to make efficient use of wall space. New ideas, modern styling. Over 140 models—from low cost housing types to Deluxe Ensembles.

See the Miami Catalog in Sweet's, No. 98, Section 27, or write Dept. D for a copy.

MIAMI CABINET DIVISION
The Philip Carey Company
MIDDLETOWN, OHIO

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Foyer . . . Riverhead High School



Riverhead High School, Long Island, New York

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• Let's look at Tile-Tex and see how it answers the cost problem. The original investment is exceptionally low—lower than practically all other kinds of resilient floor coverings of equivalent thickness and color. The wide use of Tile-Tex in schoolhouses gives ample proof of its ability to fit lean budgets.

• And, there is the all-important question of how much Tile-Tex costs to maintain, keep clean and presentable-looking. Since it is cut accurately and can be laid with tight, close fitting joints, and since it has an exceptionally smooth, closely-textured surface, Tile-Tex costs little to keep clean and bright.

• What about the cost of repairs? Tile-Tex is installed by skilled approved contractors who know their business, with time-tested adhesives that refuse to give up after a few years of traffic. The result is a minimum

of replacements due to normal usage and wear.

• Last, but not least, is anything sacrificed by using Tile-Tex in preference to more expensive materials? Is an architect's client satisfied with a finished Tile-Tex floor? Does Tile-Tex reflect favorably on the architect's reputation for selecting proper materials correctly applied? We think the answers to these questions lie in the sustained "repeat" use of Tile-Tex by architects who have had experience with it.

★ ★ ★

Tile-Tex quality is standard and uniform, no matter what colors may be used. Tile-Tex cost is flexible, depending on colors and designs. We are always ready to help you by demonstrating how Tile-Tex can overcome floor budget limitations on any of your projects.

The TILE-TEX Company

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CHICAGO HEIGHTS, ILLINOIS



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NEVER FILE THE WADB!***

*Westinghouse Architects' Data Book.

We agree, Mr. Architect! Keep that WADE close at hand. It's an indispensable reference to all who want to save time on electrical details and specifications. To those unacquainted with WADE'S many easy-to-use features, may we suggest a look at the office copy or Sweet's?

J-94062



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10^C *each*
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Made in our new
American Factory



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for distribution

KOH-I-NOOR PENCIL CO., Inc.
373 Fourth Avenue, New York

(Continued from page 14)

untarily raises their wages to induce a high spirit of co-operation, which is synonymous with hard work. These men almost always speak well of their employers, proving that the system is effective. In the *average* situation you get a raise by finding out when a large payment has just given the boss a spiritual uplift, and then approach him with an earnest plea or a charge of dynamite, depending on circumstances. A few offices remain whose magical atmosphere so hypnotizes their contented, Grade A employees that the latter have to do houses on the side to make both ends meet.

The following "morale builders" have been lifted from typical conversations and are offered gratis:

1. Maintain a businesslike attitude in all matters pertaining to filthy lucre. Don't dodge the issue of overtime pay or "supper money," hoping that no one will have the nerve to ask for them. Remember the draftsman is doing you a favor, too; he wouldn't work for some architects. He never expects to become affluent, but he still wants what he earns.

2. Observe the routine conventions punctiliously, *not punkly*. That includes such matters as "summer time" with Saturday's usual four hours made up during the week. Don't forget that

most of the leading Boston offices only work on a 35-hour week the year round. Announce State holidays some time in advance, without waiting hopefully to see if there will arise an anti-State-holiday movement in the best circles. If there are vacation eligibles in your employ tell them so by late spring, as if you were really happy about it. If you aren't an actor, hire one; but don't duck. It makes all the difference between being called a "cheap skate," or a "great guy."

For these favors you should expect and receive honest services for seven hours per diem, and your wife a bouquet of violets at whatever season they are most expensive!

May is also the month of poles and elections, of prizes and straw hats. On the 2nd came an important meeting of the Boston Society of Architects, President Whitmore in command. Regular business was deferred and everyone concentrated on the distribution of honors.

Tech's Chandler Prizes went to (1) C. A. Lawrence, Jr., (2) Richard M. Samuels, (3) B. Leonard Krause, and (4) I. M. Pei. There were no Chamberlain awards this year.

The B.S.A. Weekend Prize was won by Arthur Malsin of Harvard, and the regular B.S.A. Prize by John G. Kelly of M.I.T.

For the first time in forty years Clarence M. Blackall was unable to make the Rotch Prize award, and the company present voted an expression of its cordial regard, and sincere regret that he could not be there. William E. Hartmann won the 54th Rotch Prize, a problem in airport dependencies, which Critic Edward D. Stone called the best Rotch he had seen since Nero was a pup. Harvard's Saunders came second, Tech's Blessing was third.

The Harleston Parker Medal for meritorious architecture was awarded to Cram and Ferguson for their conventual chapel of St. Mary and St. John, in Cambridge. James Mooney, Boston's Building Commissioner made the presentation, and Mr. Cram accepted. He was followed by Charles D. Maginnis—so there you have the two greatest architectural speakers of all time coming one after the other; a waste of riches I calls it.

Mr. Bellows spoke about Dean Emerson's approaching retirement from M.I.T. and Joseph E. Chandler read an appropriate poem composed by himself. President Whitmore then presented Dean Emerson with a salver in solid argenteum.

The Boston Architectural Club held its annual ball on April 28th. Costumes were based on the theme—"A

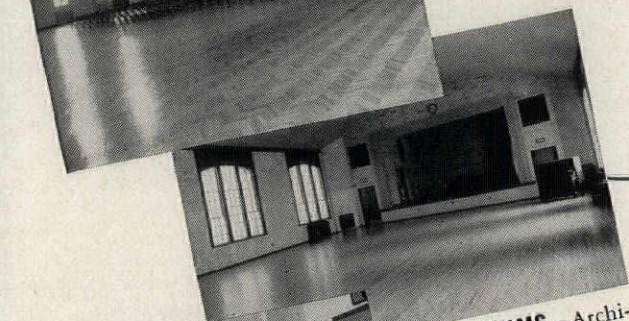
(Continued on page 18)

AUDITORIUMS—"There is no substitute for a Hard Maple floor," says the architect. Below, in herringbone strip pattern.



MFMA*

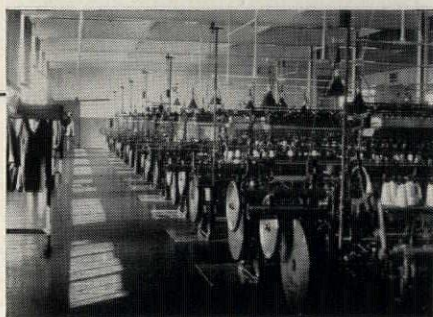
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GYMNASIUMS—Architects, athletic coaches, and maintenance men agree, "Nothing takes the place of Hard Maple."



CLASSROOMS—Warm, dry, resilient Maple is the preferred flooring.



FACTORIES—"As sound as the day it was laid," says the mill superintendent, about this 22-year-old Maple floor.

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Second, when you order your Maple Flooring, be sure it's trademarked MFMA*.

This mark on the wood means that the Maple Flooring Manufacturers Association, as well as the manufacturer of the flooring, guarantees that it is *all* Northern Hard Maple of the grade stamped thereon, in accordance with exacting Association standards. There is no question, then, of species substitution, or risk of inferior grade. You are sure that the same Hard Maple quality proved in countless installations, is present in the flooring you lay.

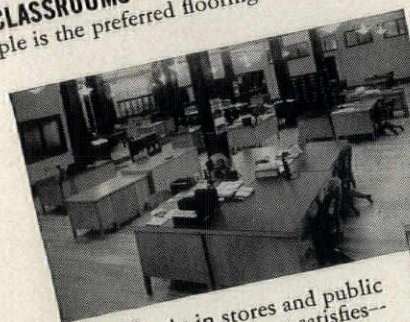
The safe rule for builders is the safe rule for architects: For certain satisfaction—in factories, mills, bakeries, auditoriums, office buildings, schools, stores, or homes—choose Northern Hard Maple, (in strips or blocks) and look for the MFMA trademark on the flooring you buy.

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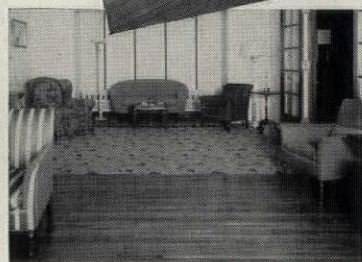


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*The MFMA trademark, indented and stamped on Maple flooring, guarantees it to be all Northern Hard Maple, graded and supervised in accordance with the Association's exacting standards.

Floor with **MFMA** Maple
(N O R T H E R N H A R D)

(Continued from page 16)

Night in the Bavarian Alps"—and fortuitously the Club is situate on Beacon Alp above Old Howard Valley, so all the celebrants arrived puffing.

The Architectural League of Boston held its Annual Meeting on May 12th. Robert McIntosh is the new president. Robert Reid became vice president, Edward A. Clancy the recording secretary, George Lewis the corresponding secretary, and Carl Priestley once again the treasurer. Everybody hopes that the new regime's strong Scotch flavor will have a beneficent influence on the treasury, after the prodigalities of the Keach administration.

A clipping from Dallas has reached here by dusty Indian runner. The half-tone shows Robert T. Gidley hitting the jack-pot again. Fact is the Gidley jack-pot has been reduced to shards so many times that it takes a museum pot expert to put it together in ever smaller pieces. Back in July, 1937, these notes told of R.T.G.'s shift from architectural to advertising contests: at that time he had just won \$5,000. This goes on continuously and now it is another automobile. He has not had to buy one in years.

The Boston Local No. 2, Pest Club of Rome, was delighted to hear of Brother-in-Pest Jack Skinner's appointment to the Florida State Board

of Architecture and voted for an immediate celebration.

We are sorry to report that Emil Camus, President and Treasurer of the famous Locke Ober Restaurant (scene of many P.C.R. banquets) died recently, at the age of seventy-six. Several hundred of his patrons attended the services, and the pallbearers were the employes who for years have been familiars in Winter Place.

As everyone knows, the final round in the Smithsonian finds three local teams still in the running, all recent men of Harvard. Right about now many of the also-rans are probably thinking that open competitions are a sucker's game, unless you are free, white and twenty-one, and have never been contaminated by "traditions."

LEON KEACH

Individual Work

More than 200 works of art, representing a method of artistic instruction which emphasizes individual inspiration and forbids students to stand in groups copying one model, are on view in the Third Annual Art Show of Columbia University, in East Hall, 1145 Amsterdam Avenue, New York. The exhibition will continue through August 12 as part of Columbia's program for the World's Fair visitors.

Alt Will Discuss Air Conditioning

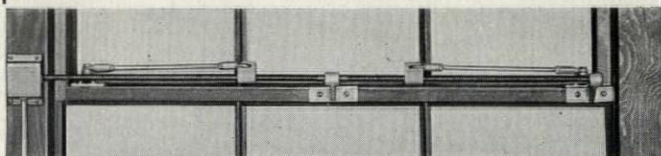
In the March issue of PENCIL POINTS we announced the inauguration of a series of technical articles to appear in the magazine on materials and equipment. This March announcement promised an article on air conditioning, prepared for architectural consumption. Harold L. Alt, well-known engineer and authority on air conditioning, has prepared an article for our August issue on new developments on air conditioning equipment. The editors of PENCIL POINTS feel that, although the principles of air conditioning are well understood by the architectural profession, there is a distinct need for an article of the type we propose to publish, to indicate the direction of engineering experiment and development in this important field. The article will be illustrated with drawings and diagrams and will be written specially for architects' needs.

Porcelain Enamel

The following addition to the Directory of Porcelain Enamel manufacturers published in the March issue of PENCIL POINTS should be noted:

Porcelain Enamel Fabricators—The Kawneer Company, Niles, Mich.; and Standard Store Fronts, Niles, Mich.

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Proper design of this operator concentrates the closing effort at the sash extremities furthest from the hinges and insures uniform positive closing and locking thru the adjustable duplex twin screw feature. Your inquiries are invited. Ask for our catalog.

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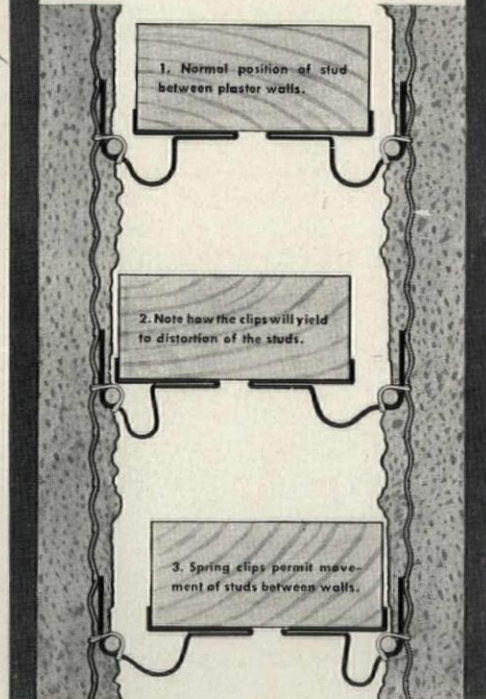
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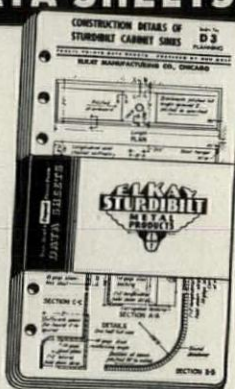
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Los Angeles Celebrates

Los Angeles loves a celebration—perhaps a survival of the old Spanish custom of fiestas, or perhaps just another way of entertaining our visitors and supplying good copy to the daily papers. New York and San Francisco are having Expositions this year, and in her own way Los Angeles is having a miniature fair in the excitement attendant upon the opening of the new Union Passenger Terminal, an event that has been awaited now for eighteen years. This opening has been the occasion of much reminiscing on the part of the old-timers and much prophesying by the young leaders of the city as to the future importance of our once tiny pueblo of Nuestra Señora la Reina de Los Angeles.

There was a good bit of running and jostling by some people in the effort to be "firsts" in one thing or another. A printer from Whittier jumped out of a window of the first train as it entered the station, thereby being the first passenger to arrive and anticipating the Mayor of Brawley, who was standing ceremoniously waiting for the train to come to a stop. Altogether, the opening was attended by several hundreds of thousands and the station still continues to be a great attraction even though the regular service has begun. The public

generally was impressed with the size of the building, the wide use of bright colors in tilework, and the quality of the furnishings and appointments.

Another group, none the less interested, but a bit more exacting and critical were the architects who attended the May meeting of the Southern California Chapter, which was held on the mezzanine of the main dining room of the new Terminal. It was a bumper turnout; eighty members and guests being present. After an excellent filet mignon had somewhat mellowed our hyper-critical faculties, the group filed out for a tour of the building, Architect Donald Parkinson and Maintenance Engineer Meigs.

While I am not one to dwell upon the idea of Los Angeles as a community unique, it is nevertheless difficult to compare this Terminal with the passenger stations elsewhere. Certainly, I know of no other city in which the arriving passengers leave the station through an open patio, filled with bright flowers and shady pepper trees, and flanked by tall palms. This scheme undoubtedly originated with the local publicity men, but they have certainly hit upon an ideal introduction to Southern California. Balancing this, on the other side of the main waiting room, is another patio for women and children, with lawns and orange and

eucalyptus trees. At this point in the trip as we stood bareheaded in the balmy air of the evening listening to an account of how many yards of concrete went into the building, a woman passing by remarked, "These Communists, why do they let them hold meetings in here!" I guess architects aren't so impressive after all.

As far back as the late Twenties, Spanish was no longer considered a smart architectural style, and it is not used much any more even by the speculative builders. So that when it was generally learned that the railroads had voted to clothe the steel frame in Spanish dress, the more progressive members of the profession threw up their hands. If the station, however, is viewed in a calm state of mind, and with the understanding that every part of the building is a compromise expression of the wishes of the staffs of three different railroads, the result may be found rather pleasing, and certainly far better than many of the large structures done here during the height of the style.

It will be interesting to see whether or not the convenience of a union terminal and the glamour of a new station can popularize in Los Angeles, where the automobile is king, the use of the railroads for distances shorter than transcontinental. PAUL HUNTER

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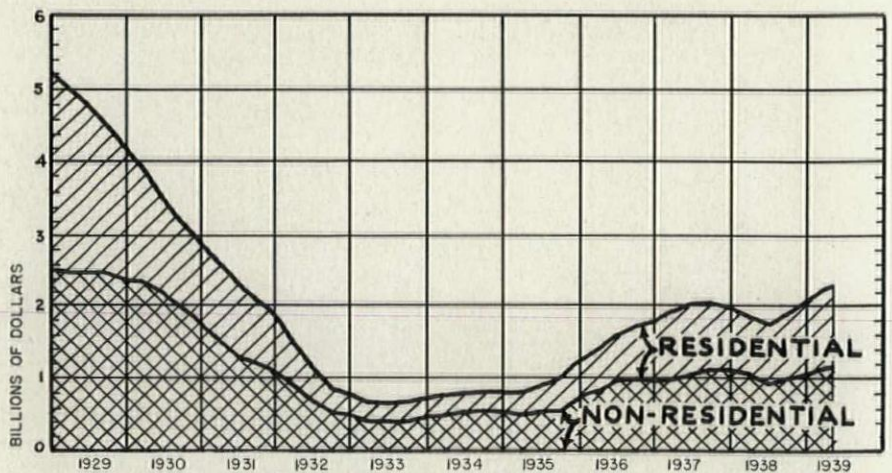
NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

Prevailing Wage Rate Guaranteed

The following statement on recent New York State legislation of interest to draftsmen is furnished by the Architectural and Engineering Guild Local 66, 15 East 40th Street, New York, for information of our readers.

"Because of the action of Local 66 and the New York State Federation of Labor, the Public Housing Act passed at the recently ended session of the legislature has a clause in it which guarantees the prevailing rate of wages to architects, draftsmen and technicians. At the request of Guild Local 66, George Meany, President of the New York State Federation of Labor, communicated with Senator Desmond, sponsor of the housing legislation, and requested that he include protection of wage rates of architectural and engineering employees, on or off the job site, in his Bill.

"To the extent that the A. F. of L. was able to combat pressure of anti-labor groups upon the legislature, the guarantee of prevailing wages as asked by President Meany for a large section of technical workers is now in the Housing Act. The machinations in the legislature of the group that caused 'engineers' to be stricken from this Act will be described in an early issue of the Guild Bulletin.



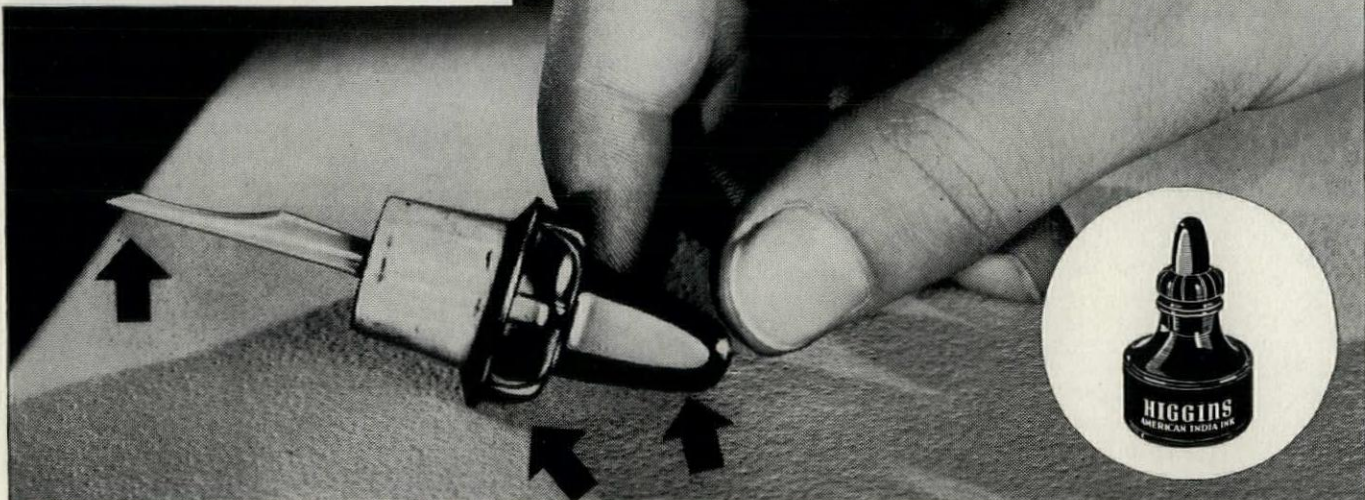
"'Prevailing wages' for architects, draftsmen and technicians on any work done under contracts for State-subsidized housing can now be determined after public investigation in which trade unions have a hearing. Once set, these rates are annexed to and form a part of the specifications for the construction."

The Architectural and Engineering Guild Local 66 is a local union of the International Federation of Technical Engineers' and Architects' and Draftsmen's Unions, one of the constituent bodies of the American Federation of Labor. It is affiliated with the New York State Federation of Labor and the Central Trades and Labor Council

As no figures exist to show employment of architectural men, this 10-year chart of total building in 37 Eastern States (12-month moving totals) is submitted by the Architectural and Engineering Guild Local 66, New York, from data of the Dodge Statistical Research Service, as the best substitute readily available. Due mainly to relaxed activity on the part of PWA, non-residential building has begun to level off and increased activity on the part of private industry, to offset this slump, has not yet appeared

of Greater New York. Membership meetings of the local are held on the fourth Thursday of each month.

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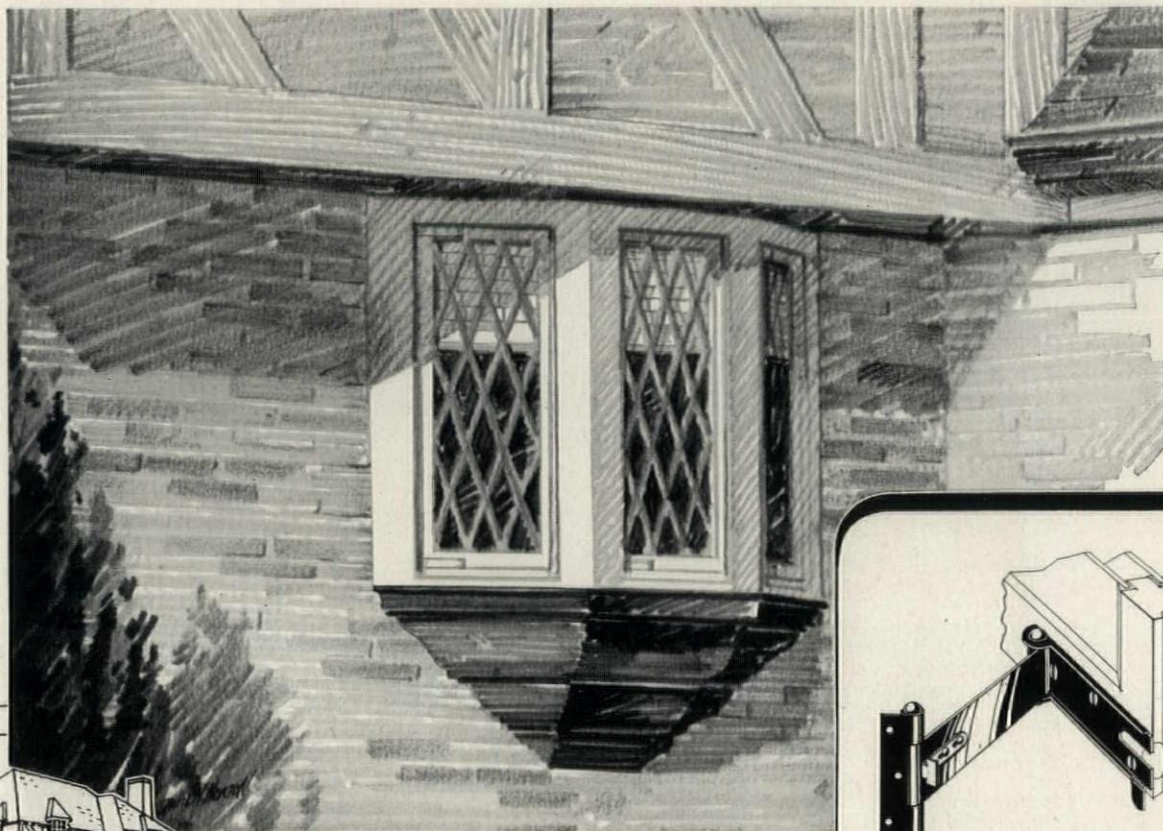
- 1 Shoulder ridges make stopper easy to grip for turning to remove from bottle neck and prevent rolling when stopper is placed on a sloping drawing table.
- 2 Stopper is weighted so it always rests with point of quill up.
- 3 Flat side on steeple provides a thumb rest which is so arranged that open face of quill is always uppermost when thumb is placed upon it, thus guarding against spilling.

- 4 Quills are genuine feather quills which will not splinter or break and are just right to take up enough ink for one filling of ruling pen.

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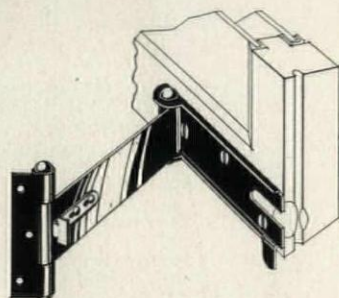
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Modern Museum in Its New Building

The opening of the \$2,000,000 metal and glass building of the Museum of Modern Art, at 11 West 53rd Street, New York, was celebrated early last month with ceremonies climaxed by a 15-minute talk by President Roosevelt, broadcast from the White House, emphasizing the national scope as well as the cultural significance of the Museum's program. Nelson A. Rockefeller, new president of the Museum succeeding A. Conger Goodyear, retired, presented the Museum on behalf of the Trustees, in the presence of a distinguished company in the Museum auditorium.

The new five-story museum building and sculpture gardens, and the first exhibition presented there, "Art in Our Time," will be discussed for PENCIL POINTS readers by Talbot F. Hamlin, in our next issue. The exhibition also celebrated the tenth anniversary of the founding of the museum, which has been located in Radio City awaiting completion of its new home.

New Etching Set

The equipment necessary for making etchings or dry points is offered in a compact set recently marketed by Etchcrafters of America, Inc., Balti-

more, Maryland, which includes a small portable press, five etching plates, a special etching tray, powder, ink, and other materials required.

The plates are of special interest as they are made of aluminum with a hard, durable surface coating which permits large editions from the etched plates. The sets may be purchased separately from the press, if desired.

Traveling Exhibit

An educational exhibit of the varied uses of Nairn linoleum, sponsored by Congoleum-Nairn, Incorporated, started a tour of the Northeast in April, at Newark, where it was visited in two weeks by architects, contractors, supply dealers, decorators, and real estate men. The itinerary announced for the exhibit includes Boston, Buffalo, Cleveland, Detroit, Pittsburgh, Philadelphia, and New York.

Demonstrations of Nairn methods of cutting linoleum and installing floors, walls, ceilings, or special surfaces are conducted daily. The exhibit is arranged in four sections to acquaint the visitor with Ingredients, Nairn Personalized Floors and Nairn Walls, Installation Methods, and the Nairn Adhesive and Treadlite Linoleum. Congoleum-Nairn representatives and craftsmen are on duty to explain and show the products.

Architects' Day At New York Fair

Delegates to the Fifteenth International Congress of Architects, to be held September 24-30 in Washington, D. C., will be guests of honor October 2 at the New York World's Fair 1939, when Architects' Day will be observed. Stephen F. Voorhees has been named chairman of a New York Committee of the A.I.A. to direct arrangements for reception of the delegates.

Invitations to attend the Congress have been issued to more than 100 foreign architectural societies and to 50 foreign governments through the Department of State. Charles D. Maginnis, Boston, who has been elected president of the Congress, will head the architectural delegation to the World's Fair. Maginnis also is president of the A.I.A., which will hold its annual convention in Washington concurrently with the Congress.

In a letter to President Maginnis inviting the architects of the world to participate, Grover Whalen, president of the World's Fair, announced that the events of Architects' Day had been planned "to promote understanding of the international language, the arts."

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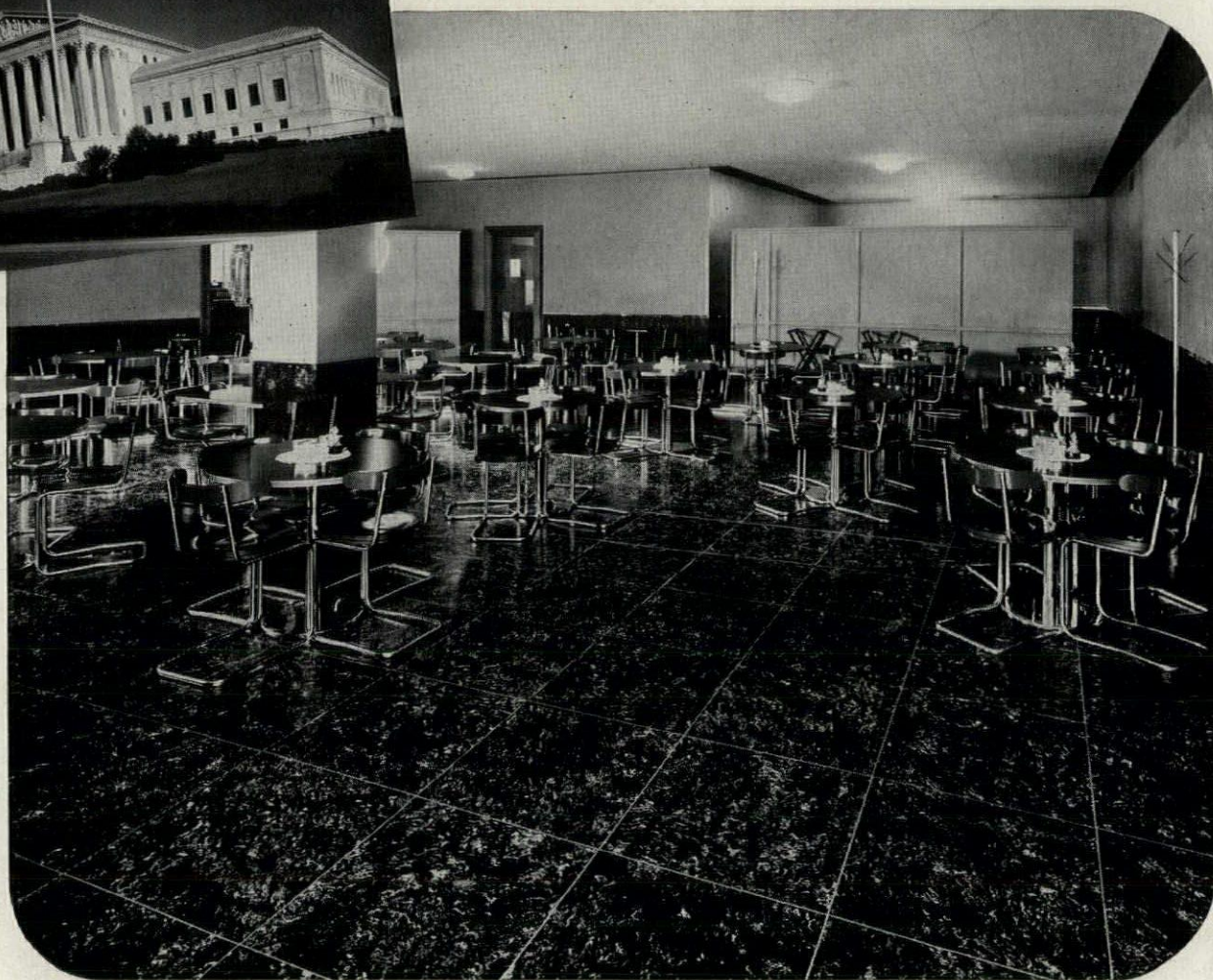
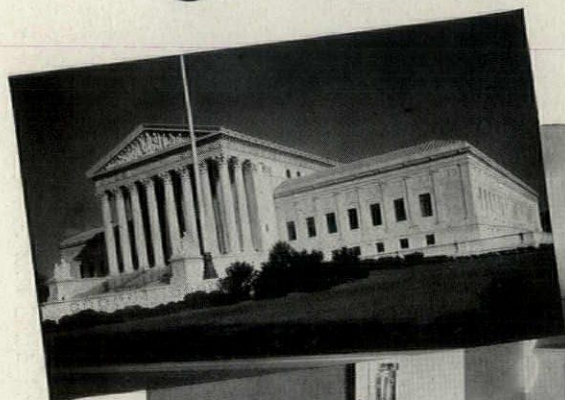
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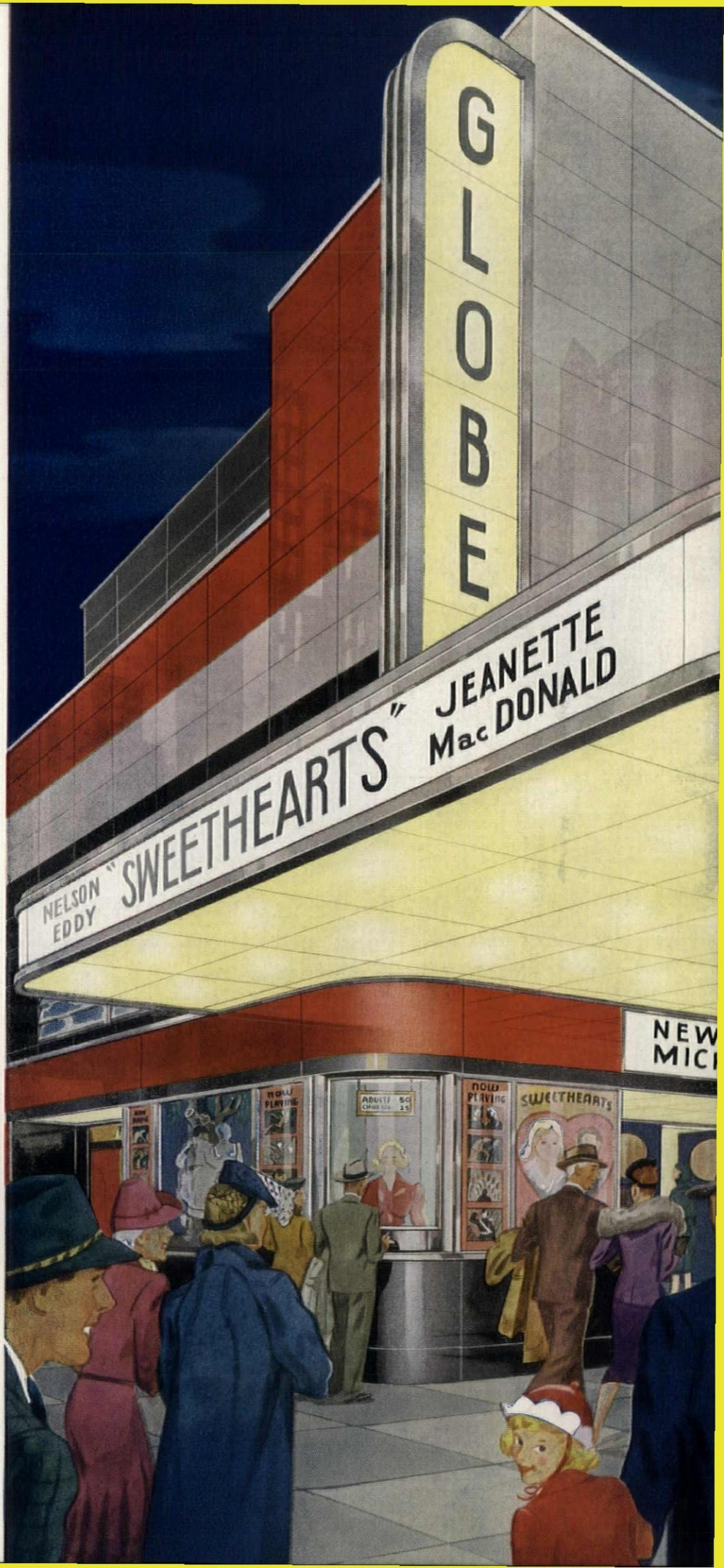


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This simple cottage designed by Barber & McMurry, Architects, of Knoxville, Tennessee, for Robert McClellan, is the home and studio of two singers. Therefore its spacious, friendly living room, shown with the plan and a closer view of the house on pages 348-349, is the most important unit. The wood shingles used on the exterior are painted white and the cinder block chimneys whitewashed, in effective contrast to the gray-green slate roof and blue-green shutters. Photo by Robert W. Tebbs

BOLSTERS FOR YOUR ARGUMENTS

SELLING PROFESSIONAL SERVICES BY DIRECT MEANS

BY ROYAL BARRY WILLS

EDITOR'S NOTE:—In this article, which is one of the chapters of his forthcoming book on the business side of the architect's practice, Mr. Wills discusses a most vital matter — the technique of persuading potential clients to become actual ones. The application of common sense sales methods to this all important phase of business makes the difference, in many instances, between successful practice and its converse. The author has demonstrated, through his own career, that a good working knowledge of the business side of architecture is not at all incompatible with either professional ethics or design talent. Architects who feel less than certain of their mastery of the psychology of persuasion will find Mr. Wills' experience worth study. In setting it down he enjoyed the collaboration of Mr. Leon Keach.

DIRECT selling occurs through an interview, or several of them, where you have positive information identifying a prospective owner, or where circumstances point to an individual's intent to undertake construction of some sort. It may be extended to include owners whose property is obviously in need of remodeling, maintenance, or has an unprofitable look of obsolescence, and if these last items seem far-fetched be it known that a Boston architect recently got two good jobs by casually mentioning desirable changes to a restaurant man, as he paid his check.

Direct selling is often the final step in closing a business arrangement that has been inspired by indirect selling (such as newspaper articles, lecturing, exhibits, competition winning, exhibition houses, etc.).

Thus it will be seen that although the science of direct selling is wholly positive, its existence is made possible only by the previous isolation of a prospect: that such discoveries are effected in the negative manner of awaiting leads via the spoken or printed word, or more positively by encouraging prospective clients to declare their identity in person, through the valid enticements of advertising in some form.

These are common sources:—

1. Information offered by friends or acquaintances, which may be first in im-

portance if you do not employ regular publicity as a means of attraction.

2. Building intentions of municipalities or private concerns, that are published in newspapers or a trade magazine.
3. Land sales recorded in newspapers or elsewhere.
4. Building reports.
5. From having observed property in need of remodeling or redesign.
6. From devices of indirect selling, where the prospect has still to be convinced.

We all agree that door to door selling had better be left to stocking and vacuum cleaner salesmen, for even in a modernized profession there remain vestiges of fitness and dignity.

But you must have an interview, and it may be precluded or obtained by a letter, or preferably through an introduction from a friend, acquaintance, or sometimes from architects not interested in that particular building.

The value of such a preliminary foundation should not be under-estimated, for it predisposes the prospect to have some confidence in the architect and to give him a fair hearing.

The embarrassments attendant to going in "cold" are somewhat lessened when you are a specialist of established reputation, for your potential client will probably have heard of you. As a general practitioner, on the other hand, you will find laymen in ignorance of your existence, and certainly so if the prospect is out of your own town.

A dyed-in-the-wool salesman will seek the line of least resistance towards an interview, if there is any discoverable way, even at the expenditure of considerable time and trouble. In an extremity he may resort to tricks.

An architect, as salesman, should have some advance intercession in his behalf, else he must lean on the variously sturdy supports of professional dignity (as a superficial matter) or reputation, in order to get an interview. The immediate circumstances may decide him for

or against persistence in his demands, if there is any clue to be obtained anent the prospect's state of mind, or his current press of business. Clearly there is nothing gained by interviewing a distraught prospect, even though an introduction has ameliorated the hazards of initial contact.

The sales talk that constitutes the direct selling of architectural services, will seek to convince the prospect of one or all of these three things—

- (a) The need for an architect.
- (b) The fact of your general ability.
- (c) The fact of your specialized architectural knowledge.

The last mentioned does not lend itself to detailed discussion, being too great in scope, and dependent on the special information and experiences of lengthy practice. It will involve data about the plan, function, construction, or financial considerations concerning the design of banks, schools, houses, etc., etc.

The second, and particularly the first, have a substantial core of identical material which relates to the value and details of an architect's services, and they have many general conditions of common application. These are well worth a scrutiny.

BASIC DATA FOR THE COMPOSITION AND DELIVERY OF A SALES TALK.

1. General Note on Subjects Discussed:

As an essential first step before going to an interview, prepare yourself by ascertaining what you can of a prospect's characteristics and specific needs. Have a general knowledge of his building lot, if possible; his probable requirements and their rough cost.

If he is "architect-minded," your campaign may be narrowed to a discussion of practical details; if he is "architect-shy," there is the added burden of justifying your existence.

Many prospects who accept the value of architectural services will take your satisfactory ability at stylistic design for granted, and all of them will concentrate their questioning on matters connected more or less directly with cost; the cost of work by volume, or the relative cost of materials, checked against their comparative virtues.

No matter how improbable the query you are expected to have a reassuringly firm answer, for you are under examination by a vitally interested person in that most critical of matters, the expenditure of many dollars.

The varied general information, of a practical nature, is your natural equipment when you have won your spurs; it is almost as diffi-

cult to summarize as a specialist's infinite details. What is possible and vital, is the analysis of an argument to prove the worth of an architect's services.

2. Definition of an Architect:

(a) You are a professional man, dealing only in disinterested personal service.

(b) Years of study and apprenticeship have made you an expert in the problems concerning the design of buildings and the superintendence of their construction.

(c) Your whole professional function is to put this knowledge at the disposal of a client in order to protect his interests, to fulfill his practical demands in a building problem, and at the same time to achieve a result that is aesthetically satisfying.

(d) You are morally disciplined in all your work by a high standard of ethics, which identifies your interest with that of the client's and forbids the taking of any favors or gratuities beyond the stated fee for services.

3. Non-professional Competitors:

Some individuals or concerns, in the following categories, will be your occasional competitors for architectural commissions.

1. Building supply houses.
2. Contractors.
3. Lumber dealers.
4. Real estate men.
5. Structural engineers.
6. Others connected with the building industry in some capacity.

The essential argument of these elements is that they cut out the cost of an architect's services. This fact, *per se*, carries great weight among the normal, unenlightened laity, so you have to supply the unmentioned but related facts, which prove that the elimination of the architect is no saving either now or in future.

4. The Mental Attitude of a Normal, Architect-shy Prospect:

(a) He has a very natural desire to own a larger or more expensive structure than his financial status warrants.

(b) He prefers to buy something tangible, rather than to become involved in the little understood matter of architectural services.

(c) He shrinks from the prolonged effort and responsibility of a building operation.

(d) He is more interested in the plain fact of shelter, simply obtained, than in the varied and vital implications of good design and construction, of which he has no clear idea.

(e) He is the victim of anti-architectural propaganda, tending to belittle the architect's

value and picture him as impractical, extravagant, and unnecessary.

5. *Outline of Comparative Cost Data:*

The average architect holds his services too cheaply, and the prospect is quick to sense this fact. Why should a skilled professional man, who has trained so long and thoroughly towards the mastery of a building's technical, practical, and æsthetic details, take a weak-kneed, evasive position in asking for fair compensation for his efforts?

Here is some comparative information which ought to be useful in presenting your case. Minimum fees, established by conservative professional organizations, range from 5% to 15% for full architectural service, depending on the type of work. If a commission is undertaken on this basis and no unexpected hitch occurs, the architect's net profit will be 2% of the building's cost, or less. Meanwhile the contractor is making a profit of 10% or more, above his operating costs.

Take the advertising man, who charges 15% for his services with extras. His average outlay in money and time per job, is far less than an architect's long period of design, discussion, detailing, checking, and supervising. Sometimes he does little more than place the advertising for the undisputed levy of 15%.

The real estate man knows full well the value of *his* services, and receives 4% to 6% or more for selling a building. The effort in this endeavor, however intense it may be, is trivial when compared to the architect's long responsibility. Furthermore the latter has frequently to undertake the comparable effort of selling his services before beginning the major job of putting these services to work. Then, if his total recompense is 6% to 8% it is too obviously modest, compared with the property broker's 4% for the sale alone.

Obstinate prospects will sometimes demand a more detailed analysis of their service-dollar's final break-up. You will be prepared to give the average cost of preparing your plans, which may be such as 4% or 4.2%. Your supervision of construction may come to 3%, and the residue of 1% or less is not infrequently your profit. This is hardly exorbitant, to which a noteworthy testimony is the fact that few architects ever grow rich.

The obvious deduction is that practitioners who are able to cut their rates and keep in business, do so at the client's expense through slighting some or all details of the work.

6. *Advantages of an Architect's Unprejudiced Services:*

A. Help in deciding where to build.

(a) With reference to a locality's future prospects in sustaining property values.

(b) Where the problem is a house—guidance in weighing a neighborhood's qualifications for school and child-recreational opportunities; in checking for easy and cheap transportation; in general cost of food and fuel, etc.; in advising on quality of local administration, and tendencies in taxation.

(c) Help in the important choice of a site: for its square foot cost, its natural features, and their bearing on plan and cost of the building (such as orientation, ease of excavating, foundation minima, or drainage).

SUMMATION:—The architect thinks of many essential preliminary angles some of which the client would entirely overlook, and he is not influenced in his judgment by any desire to sell land or linoleum.

B. Buying "ready-made" buildings.

(a) Old buildings (second-hand):

The purchase of existing structures has a fund of contingent conditions for and against it. Through unusual circumstances a well located and designed building, of supervised construction, may be offered at a bargain.

A qualified person should verify the prospective purchaser's judgment as to its apparent merit by (1) considering the locality in relation to the person, (2) checking construction as far as possible, (3) applying the prospective owner's idealized notions of plan to its existing layout, (4) estimating the cost of altering or adding, to bring it into acceptable shape, (5) if the building is historic or old without being artistically meritorious, deciding how much would have to be sunk in sub-surface repairs to make it habitable, in superficial changes to make it modern or convenient, and (6) determining whether the re-sale value would warrant the immediate investment, plus the cost of alterations?

The architect is the only person of broad enough training and sufficiently impartial judgment, to make a survey of all the questions relating to the structure's value from a specific individual's point of view. He may confer with others, whose opinion has some special bearing on the problem (such as in financing, the practical real estate viewpoint, or the contractor's costs for changes) and correlate them in a general report to the client.

(b) New buildings (speculative):

These are subject to the uncertainties above-mentioned, regarding location, adaptability, and sound construction. There is no

absolute check on the last named but the sum of human experience in building points only too clearly to the constant necessity for supervision during construction. A man who is building to sell will use the cheapest materials possible which measure up to the untutored eye of the layman, and he will slur construction processes that are vital to sound, weather-tight building. Why? Because good materials and good workmanship cost more money and reduce his profit. *But*, he will base his charge on the cost of a good job. This is plain human nature.

The speculative builder's ineptitude at economical, well co-ordinated planning, and his lack of an æsthetic sense governing mass, texture, color, or beauty and scale of detail, are all established facts. When he has partially overcome these deficiencies by engaging abridged services from a capable architect, there still remains his unsupervised interpretation of the architect's details, and, as ever, the unchecked quality of the construction. As to the prospect's hope of saving by eliminating the architect, what is actually the case?

The speculator's price includes—

- (a) Cost of the land.
- (b) Construction cost and contractor's profit.
- (c) Cost of financing, and carrying project while awaiting sale.
- (d) Insurance.
- (e) Occasionally, accumulated taxes are included.
- (f) Speculator's own profit.
- (g) Real estate agent's profit if he negotiates the sale. This is based on a percentage of the total above-mentioned items, excluding cost of land.

SUMMATION:—People intent upon buying "second-hand," ready-built property have need of an architect's unbiased, broad-gauged opinion as to its real worth, from the purchaser's special point of view.

Those who buy speculative buildings are sacrificing their desired program for a substitute of dubious inward quality (meaning high upkeep), and of æsthetic inadequacy. They hoped to save an architect's commission, but by engaging an architect they could have got what they wanted, better planned, better designed, and better built, and at the same time eliminated a speculator's commission and probably a real estate agent's commission as well as possible carrying charges, costs of financing and taxes.

The one thing the purchaser has avoided is the effort of going through an owner's ex-

perience in a building operation. If he envisages this participation, erroneously, as a terrible ordeal, then he may have broken even in getting an inferior product for possibly a greater sum than a properly handled, professional job would have cost him. That is for him to decide, but most people are practical minded when they understand all the facts.

C. Planning, Stock Plans, Contractor's Plans.

(a) Stock Plans:

Stock plans are seldom satisfactory, owing to their failure to meet, exactly, an individual's special requirements, even though they chance to be applicable to a chosen site and are well designed. Changes in them, by a contractor, are risky adventures that increase the cost of the building and eat up the initial saving in price of plans. In the end the owner has a makeshift result, without benefit of protective supervision.

(b) Houses Planned by Contractors:

It is patent that all types of planning call for a minutely careful apportionment of area among the various space units in a building, and none more so than in small construction. Furthermore, the arrangements of plan, as related to a client's particular demands, are all important from the aspects of functional fulfillment, convenience, proper orientation, general circulation, adequate storage, etc.

A contractor may be competent to assemble and control a construction crew and put up a building, but how can he be expected to understand the vital details of economical good planning, by training or sufficient experience. The æsthetic element, which also has a paramount importance in establishing a building's worth and re-sale value, is even more obviously and completely beyond his capability. That, alone, should prohibit the use of contractor as architect.

Finally, let me reiterate the point that there is no supervision of construction without an architect.

SUMMATION:—A client has specific demands, resulting from the complexion of his home life or his business, but he cannot co-ordinate the details and integrate them in a clear cut visualization of a completed building. It is little short of a miracle if he meets the realization of his wishes through the hazards of stock plans or contractor's planning service, but he will not be fully able to tell until construction has gone forward enough to help visualization and at the same time make adjustments difficult or expensive.

The architect's training and service is dedi-

cated to the interpretation of a client's uncrystallized ideas; to rationalizing them and making them readable to him, as a picture or model, in advance of construction, to foreseeing their occasional impracticality from the standpoint of re-sale.

Non-professional services almost always lack æsthetic capability, as well as essential fine points of practical planning, and the architect's supervision of construction to safeguard his client's interest and his own professional reputation.

7. Affirmative Salesmanship:

No matter how lowly an opinion an architect has of selling, as an end in itself, he has got to know some of the primary facts of successful salesmanship.

Certain aspects of faith, or the eager adoption of enthusiasms, may seem unintelligent to a skeptic, and a skeptic makes a poor salesman. On the other hand a fanatic knows not the meaning of self-restraint, to make himself plausible, but controlled fanaticism or its similitude comes pretty near to a salesman's needs.

You have got to be enthusiastic about your own capabilities, and optimistic about things in general, especially as they relate to the desirability for present building. If you cannot convince yourself that the latter is true you have no immediate justification for sales effort.

There have been few periods in recent local history when building has not been advisable, given a legitimate need for it. Even during the peak of 1929 prices a man who transferred his stock holdings to real estate was not doing himself an ill turn, as we see in retrospect. Better to have your property value sink 50%, than have your stocks tumble 300%; the fruit of our disillusionment has been plucked chiefly among paper profits.

Affirmative salesmanship is here meant to be the process of forcing a prospect to give a clear or at least a qualified "Yes" in answer to your questions, by phrasing them towards that end. If you permit him to hurl a barrage of defensive "No"s at you it's a sign that shortly he will give you the *coup de grace* and you will stagger out, a good architect may-haps, but a beaten salesman.

From your point of view only the "Yes" frame of mind is healthy in a prospect. Like many chemical situations it does not often exist in nature, and must be carefully extracted from a defensive combination of sales resistance and ignorance of the value of architectural services. The invaluable replies

of "Yes" will, in their accumulation, tend to produce a state of mind favorable to the acceptance of your argument.

Remember that through one of the six sources outlined above we assume a need for building, and the very probable susceptibility of the prospect to ideas on new construction. Then you might inaugurate your attack by saying, "Mr. Hardscrabble, I have given some thought to the matter, and it seems to me that your company needs a well-planned and attractive building. Isn't that so?" Granted our premise he cannot honestly answer "No," but he may hedge the question and reply that he has a builder in mind who will do the job without an architect's assistance. Upon which it should be your pleasure to tell him that he does not understand the type of building you have in mind. Amplify the original question and try again to get an affirmative answer. To the best of your ability avoid being put on the defensive or in the equally weak position of asking questions which permit of a resounding "No" in reply. Every time you are smacked down the odds against you are doubled. This may sound rudimentary, but it is of value to the average architect, who has a penchant for being jockeyed into defensive positions which do not win commissions.

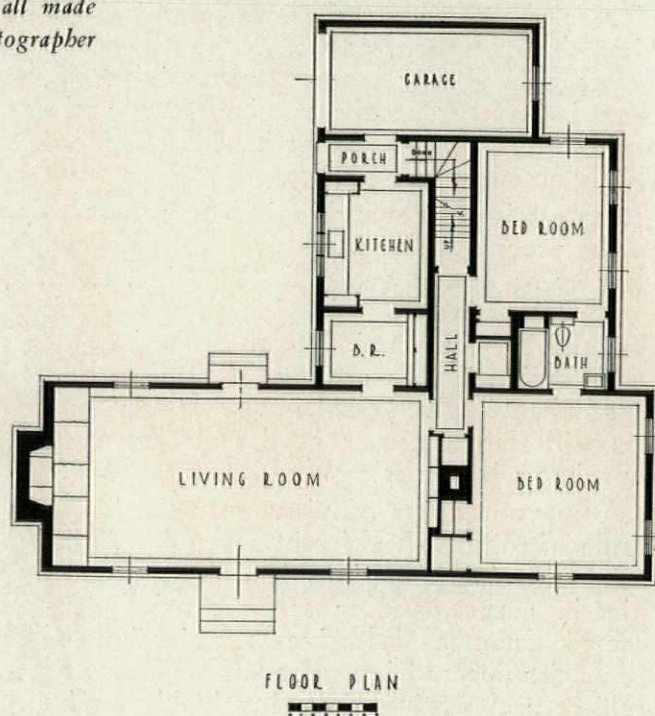
Once a prospect is open to reason he will plump on the question of cost and stay there. Your resources in this department will serve you according to their worth, but there is a simple expedient to be mentioned. Ask him to take pencil in hand and check the cubic and square foot estimates you will presently make. This gives him the reassuring certainty of his own mathematics and sustains interest, while you enhance your reputation as a practical man, by presenting unit costs and by thinking out loud from his personal point of view, as one who has a limited budget and must move cautiously.

With the assurance of a fair reception it is useful to mention the ability of your organization, which is the instrument through which you make your services generally useful. Some clients will overlook its existence or take its efficiency for granted, but not all.

The architect's dignified position and his usual sole-proprietorship, gives him a definite personality in these meetings, something more than that of an agent who is peddling a commodity. He may take the attitude that a friendship is in its incipency, for a successfully executed commission brings a client's respect and admiration, and makes him one of your most valuable boosters.



An appropriate setting for song in a cottage was created by Barber & McMurry, Architects, of Knoxville, Tennessee, when the small house shown here and on the opposite page was designed for Robert McClellan. The large living room serves as the studio and recital room of two singers and is in character with the exterior shingles, painted white, the white-washed chimneys, and simple blue-green shutters. The roof is of gray-green slate. The cost of the house was \$5,300. The photographs were all made by Robert W. Tebbs, New York, Architectural Photographer



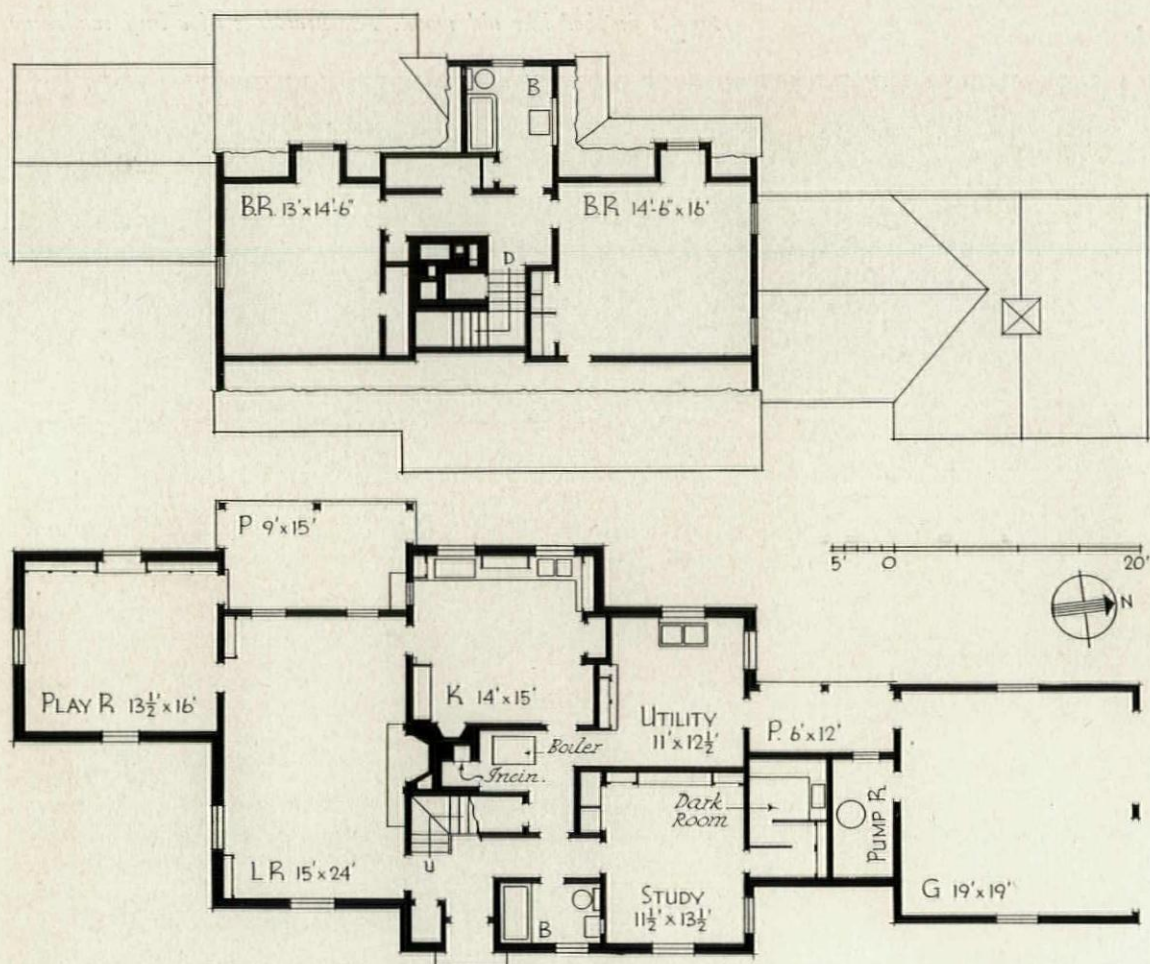


The knotty white pine in the living room of the McClellan cottage is finished like old wood. The hearth is of a buff sandstone



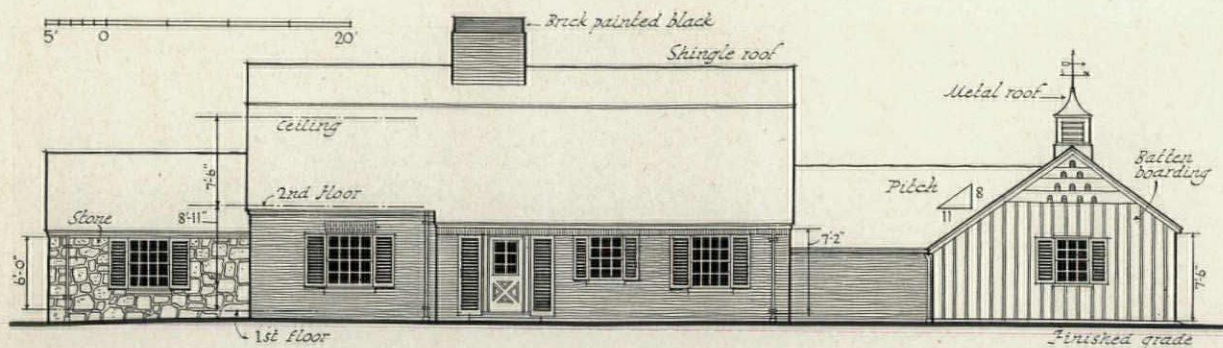


The residence of Dr. Dwight C. Ensign, shown here in photographs by Robert W. Tebbs, Architectural Photographer, of New York, was designed and constructed by Max Colter, Detroit Builder

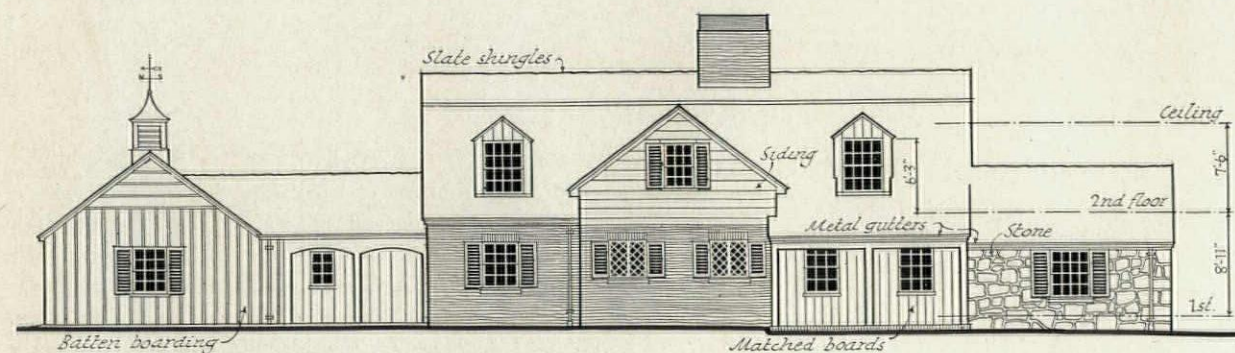
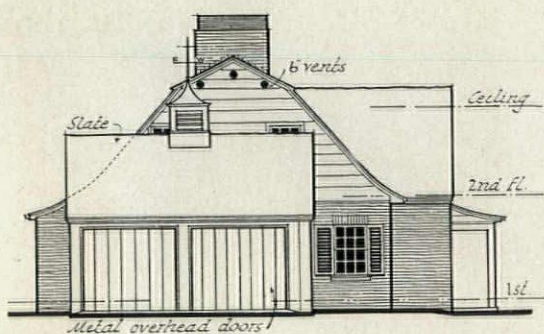
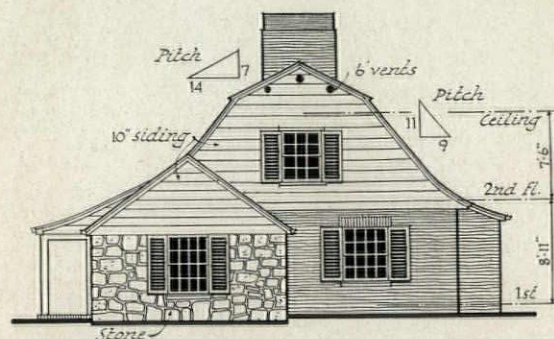




The entrance to the Ensign residence is characteristic of the pleasant detail used by Max Colter. The door is painted blue-green as an accent for the exterior color scheme—white walls and weathered gray-black slate shingle roof, with faded gray blinds. The doctor's study, with adjoining dark room and the nearby utility room, are special features of the plan of the principal floor



Four elevations of the Ensign residence show the interesting combination of brick veneer, stone, and vertical boarding. The house is of wood frame construction, on a concrete slab over hollow tile, as there is no basement. A hot water heating system, an incinerator and two fireplaces are served by the big chimney at the center of the house

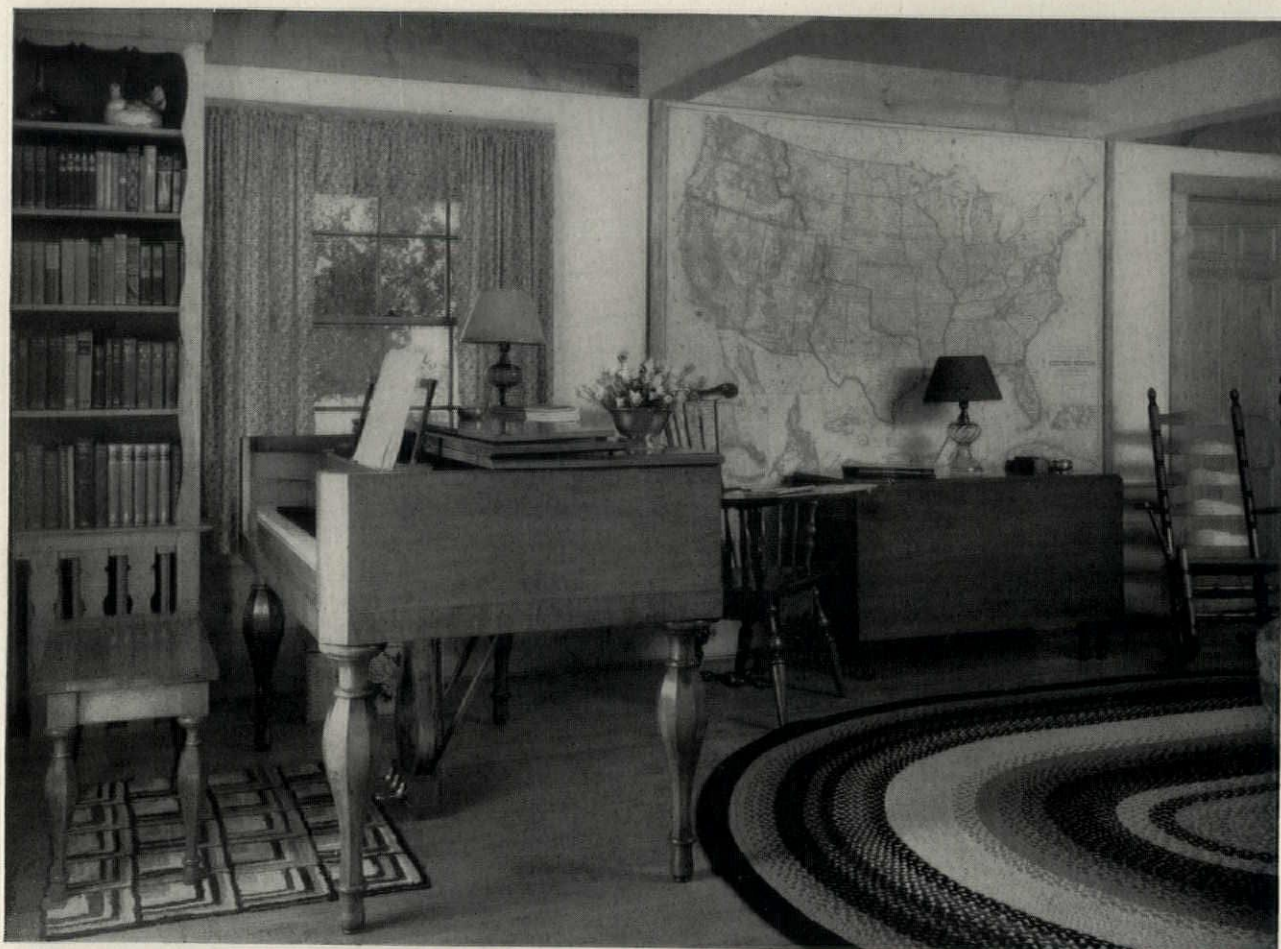


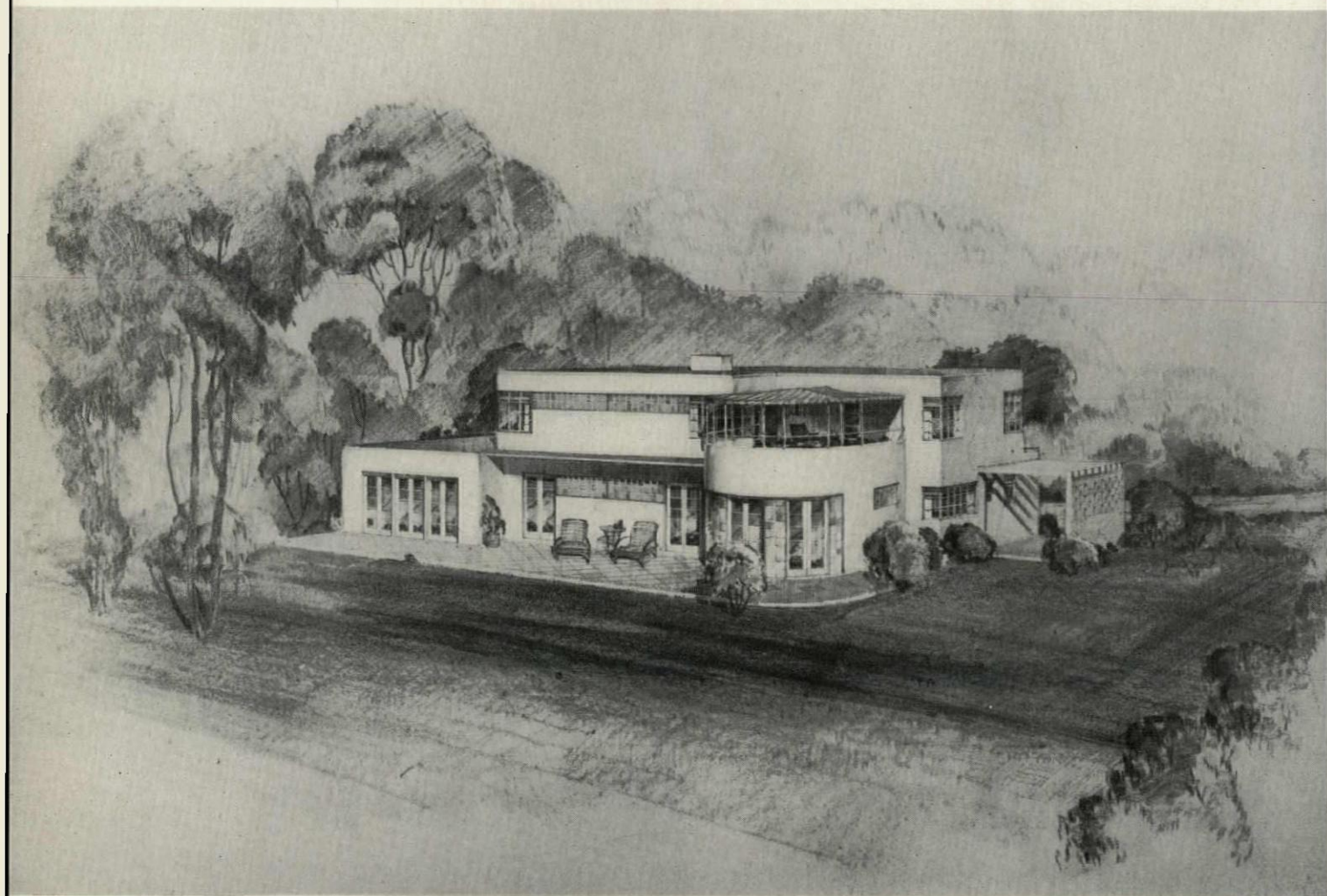


Another view of the front of the Ensign residence illustrates the handling of varying roof pitch and contrasting wall treatments. The garage, connected to the main house, is given the appearance of a minor service wing

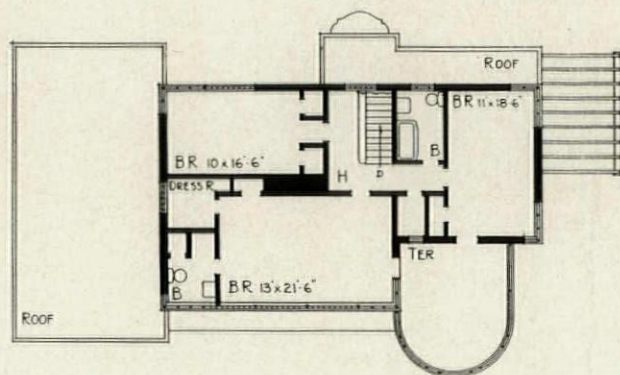
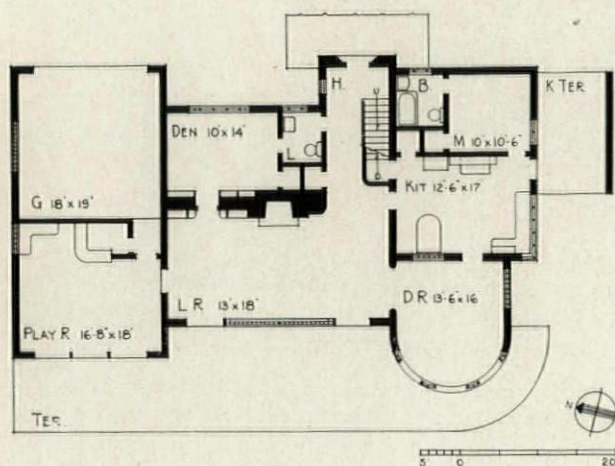


Two views of the living room of the Ensign residence, above and on the opposite page, and a photograph of the wainscoted kitchen are typical of the interior design. Fireplace tiles of Delft blue were used in the living room, where the wainscoting is of old pine and yellow wall paper covers the plastered walls. It is entered through a stair hall which is finished in gray and blue. Colors in the kitchen are as follows: red floor, mustard yellow walls, with mellowed pine and gray blue ceiling





S. Kendrick Lichty, Architect, of Secane, Pennsylvania, designed this residence recently completed at Pottstown, Pennsylvania, for George L. Egolf. The cost was \$19,800, or 45 cents a cubic foot, including landscaping, a 950-foot entrance drive and gates, and a deep well and pump. Glass brick, featured in the living room and principal bed room, may be seen in the rendering of the west front. Portland cement stucco was used on exterior walls, with sash and wood gutters painted white, but exposed copper was left unfinished, to weather



SVEN MARKELIUS

BY TALBOT F. HAMLIN

AMERICANS have for some time been looking at Sweden with a mixture of wonder and envy. Sweden's "middle way" of solving her social and economic problems, Swedish arts and crafts, Swedish food and Swedish novels have been dinned into our ears so much that they have become almost commonplaces; we wonder if there is enough behind all the talk to justify it, as a good Swedish dinner justifies the piquant smorgasbord which precedes it.

In architecture, at least, the answer must be an unqualified "yes," and the work of Sven Markelius offers an excellent opportunity for learning why this answer must be so enthusiastically given. His work, it seems to me, is particularly characteristic of the country of its author, and its virtues are the direct expression of many things which, at least to a foreigner, seem qualities essentially Swedish.

Sven Markelius, born in 1889, at Stockholm, received, for instance, a training entirely within his own country. It was the usual education of the Swedish architect. He was graduated from the Teknisk Hochschule in Stockholm, studied at the Royal Academy of the Fine Arts, and went on to work as a draftsman under Ragnar Ostberg, whose office was probably the outstanding atelier in Stockholm at the time. When Markelius was there, the office was engaged on the Stockholm Town Hall. Markelius claims that he was not influenced by Ostberg; it is certainly true that between the work of the two men there is little obvious similarity, and there are many obvious contrasts. Markelius has always stood for functionalism, he has always been one of the Swedish architects who seem most akin to the logical simplicities of what is called the "International Style." The Stockholm Town Hall, on the other hand, was a richly decorated, lavishly textured work, with a design founded firmly on native Swedish architectural traditions.

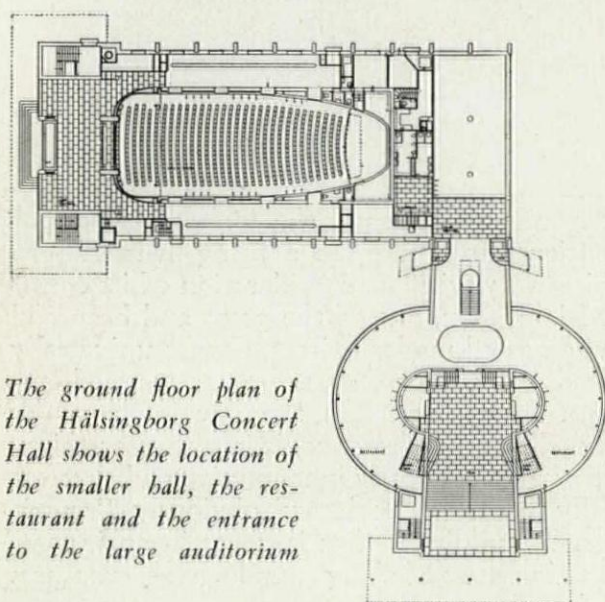
Yet this building, which is one of the distinctive works of its period, and certainly one of the most popular pieces of nationalistic architecture of the 20th century, has other qualities besides its loving synthesis of Swed-

ish elements and its rich color and decorative carving—other qualities which cannot fail to have impressed any sensitive architect who was in close contact with them. Markelius may have rebelled against what seemed to him the sentimental charm of that building, its nostalgic re-working of the northern baroque, its hesitant and inconclusive steps towards awareness of the present. Nevertheless, by its quality, its perfection within its own category, he cannot have been unaffected.

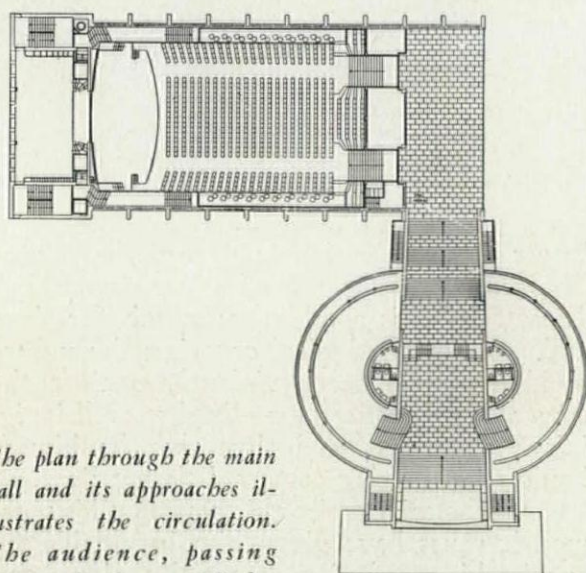
For the Stockholm Town Hall is much more than the mere expression of an incomplete rebellion against the 19th-century conventions. It is also, as a thing-in-itself seen objectively without consideration of its causes and its merits, one of the great and beautiful buildings of modern times, almost universally loved and admired by the great mass of laymen. In a sense, like the Pazzi Chapel by Brunelleschi in Florence, it is a perfect thing, although historically inconclusive and theoretically hesitant. Both are obviously "transitional" buildings; that is, steps in an incomplete process of change, full of half-measures and half-expressions.

Now, such a transitional building is always the most dangerous kind of precedent; for there is the instant possibility that its very lack of complete statement, of logical following through of ideas, may become crystallized as ends in themselves, which would be manifestly illogical and undesirable. And the more beautiful the building is, the greater this danger becomes. It is not strange that a man like Sven Markelius, one of whose outstanding characteristics is a relentless search for thoroughness, for the logical carrying through of an idea, should react violently against this danger, just because he realized so well its insidious character, and thus that he himself should design along totally different lines.

Nevertheless, despite this reaction, his work upon it must have given him invaluable lessons in his profession, especially along two lines—care in thoughtful and sensitive detail, and the ability to demand and to make creative use of the perfection of craftsmanship for



The ground floor plan of the Hålsingborg Concert Hall shows the location of the smaller hall, the restaurant and the entrance to the large auditorium



The plan through the main hall and its approaches illustrates the circulation. The audience, passing through the vestibule, mounts the curving stairs on either side, which lead into the large cloak rooms. These, in turn, lead back to the central axis and the stairs up to the lobby of the hall

which Sweden is famous. Certainly these two qualities are in almost every inch of the Stockholm Town Hall, and are responsible for not a little of its success.

Markelius's real sympathies were naturally with the other, more revolutionary, type of contemporary Swedish architecture. Sweden was perhaps more self-conscious in its reaction to the great modern architectural revolution than any other country. It had, during the 1920's, built up a school of skilful designers, who, re-working the national heritage with a remarkably sure touch, had produced a series of beautiful buildings, of which the Stockholm Town Hall is but one example. Yet essentially these buildings were still untouched by the great movements that were sweeping the architectural world of Europe—movements towards functionalism, towards complete creative freedom, towards an architecture of space rather than mass,—and no thinking architect could fail to be impressed by the contrast between the two ideals; but to desert the style which had produced and was still producing buildings of such high excellence in many ways was a step only to be taken after the most careful thought. To this problem the remarkable series of buildings designed by Asplund for the Stockholm Exhibition of 1930 brought a new reality, and in their almost wilful eccentricities of form revealed at once both the extraordinary possibilities of the new movement—the International Style—and at the same time a complete and dramatic revelation of the fact that between it and such traditional work as the Town Hall there could be no compromise.

Markelius, like most of the brilliant young men of the time, almost inevitably followed the new movement and approached design with an attitude of almost exaggerated puritanism. This quality appears in the first work which brought him international repute—the Concert Hall at Hålsingborg. In this, the strong rectangular mass of the hall itself counts as a unit, unbroken save by the necessary openings and the projection of the piers along the flanks. Extending from this simple form is a wing containing not only the necessary lobbies, check rooms, and entrances, but also a public library and a restaurant. The expression of the difference between these various elements was forced to the degree that there seems in many views some obvious lack of unity in the whole, although from the front the curved and rectangular forms serve as pleasant foils to each other.

The same quality of an almost wilful departure from the obvious is seen in the plan

of the entrance, where the natural flow given by the long high corridor is interrupted dramatically by a break in level, as though purposely to confuse directness of approach in the effort to achieve interest in spatial arrangement. Yet the Concert Hall has unique qualities of effectiveness. The bold rhythm given by the projection of the supports of the Concert Hall roof is excellent, and the relation of the curved wings to the rectangular vestibule unit gracious and lovely. Even in the wayward treatment of the entrance there is something of that imaginative character of space treatment which one associates usually with baroque architecture, and the lighting of the simple rectangular shapes of the whole by a series of spherical lamps hung at differing levels is striking and successful. When once mastered, the flow up the stairs at the side, through the cloak rooms, and then to the center again and up the central stairs to the hall, is unconventional and interesting. Moreover, the hall itself, with its walls of beautiful wood veneer and its long hung lighting troughs, has an elegance in color and finish that is characteristic of the best Swedish work.

The treatment of the hall at the stage end, with its reflecting sounding board hung down over the orchestra, is strikingly original; and the use of its changing planes, which are designed not only to reflect the sound out to the audience but also to furnish adequate concealed flood lighting for the stage, is brilliantly conceived, although its division of the height of the hall is not entirely happy and the space between the sounding board and the ceiling seems somehow lost. When the hall is darkened, however, and the light concentrated on the musicians, this emptiness above disappears and merely gives a feeling of mystery which is not unpleasant.

The whole building is characteristic in another way. The refined and neat perfection of its metal and glass work, the delicate elegance of its railings, the beauty of its wood veneers, the simplicity and yet the loveliness of such elements as the vertical grilles in front of the radiators — in other words, its particular flavor — are the result of that beauty of workmanship, that fine feeling for the study of each tiniest detail, that sensitiveness to materials, which is an essential quality of the best Swedish work, and which appears, in a different guise, in the Stockholm Town Hall.

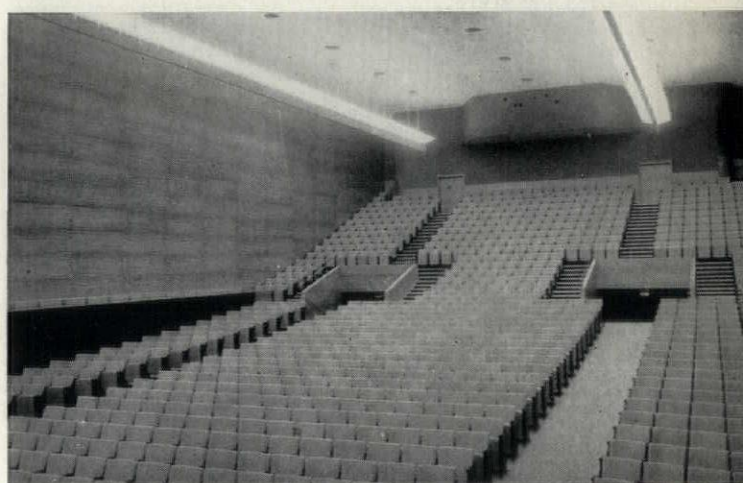
The eccentricities of the building are the result apparently of a perhaps over-enthusiastic but deeply sincere rebellion against the illogical conventions of a tradition felt no longer to be valid. They are a definite state-



View of the main lobby of the Hålsingborg Concert Hall, from the axis of the curved stairs. The steps at the rear lead down to the restaurant. On the upper level, the exits from cloak rooms to the hall may be seen

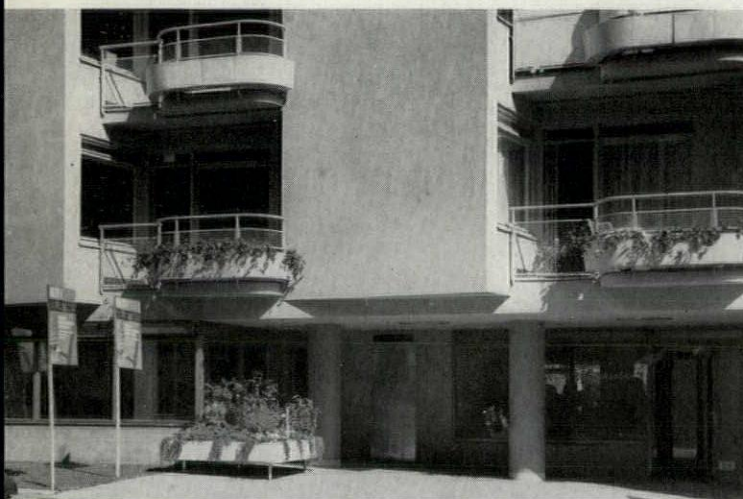


Interior views of the Concert Hall, above and below, illustrate the architectural character. The hanging sounding board incorporates the concealed stage lighting





The street front of the Kollektivhus in Stockholm shows how the sawtooth plan provides private balconies with views down the street and out over the water



The main entrance, above, and the garden front, below, are examples of the simplicity and the frank expression which distinguish the building and give it character



ment of artistic aims—primarily a proclamation, perhaps, rather than a building;—and it is significant that, once having made this daring affirmation, Mr. Markelius's later work has gone on, growing more and more real, more and more essentially a matter of building and less a doctrinaire expression of theory. It is as though, having in his first enthusiasm thrown his gage to the world, he need no longer worry about expressing himself or explaining his ideals, and could devote himself from then on to being an architect—a master builder—with all his energies.

All the daring of the Hålsingborg Concert Hall appears in his next great work, the Kollektivhus in Stockholm, but this time schooled and disciplined by the necessities of the building itself. The problem was a new one, significant of the Swedish attempt to find creative answers to questions of modern living. In essence the Kollektivhus is a rational attempt to take all possible advantage of communal service for a group of small private dwellings—in other words, to make the conveniences which in America are associated only with high-class apartment-hotel living available to young people of quite moderate means. The whole building has been designed around this ideal. The ground floor is completely communal, with a bar and restaurant at one end, kitchen and service in the center, and the other end occupied by a nursery school to take care of the children of married couples both of whom are employed. The whole is so arranged that dumb-waiters from the kitchen area serve every apartment direct, in order that the tenants may have communally cooked meals served in their own apartments as well as in the restaurant below.

On the upper floors, the same care which has so brilliantly arranged these various community facilities has been exercised to give to the two- and three-room apartments the greatest possible open space and privacy. Every apartment has its own balcony, as is the case in all of the best Stockholm apartment house work. In this case, the true originality of the design does not stop with that, but is shown especially on the street front, where a most interesting change of plane has been adopted, not only to give privacy to the individual balconies, but also to give each front apartment a view down the street towards the water and to guarantee to each the maximum of possible sun. The result is of course remarkably different from the average Stockholm façade, and the strong rhythm of plain wall, recessed balcony banded with glass, and delicate balcony rail is one of the most interesting

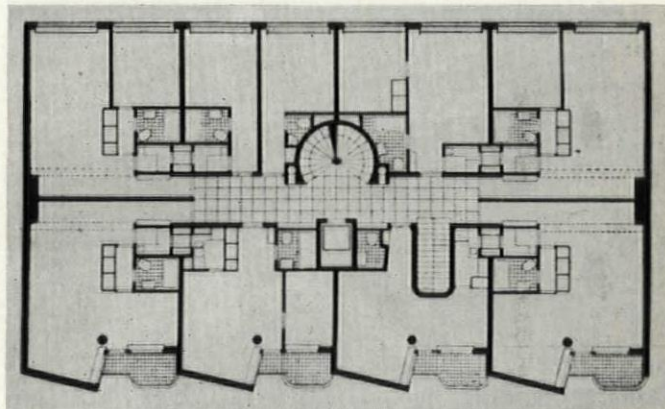
notes in an interesting city. Similarly fresh and exciting is the use of glass sheets on the upper floors to frame the living balconies, to let some of the feeling of light come through, and so to make a pleasant transition between the building and the sky. It is significant, too, I believe, of Markelius's logic that on the garden front of the apartment, where the view problem of the street front did not exist, he is perfectly content to do the simplest of direct window-and-balcony designs, only seeing that privacy is given by separating the units of double balconies by means of opaque glass and metal screens. The wide and interesting proportions of the windows, horizontal at the side, with vertical notes at the French doors to the balconies, make a singularly satisfying composition. In this exterior, as in most of those which he has designed, Markelius has welcomed the opportunity of large, simple stucco surfaces. This stucco is always a pure lime stucco, the elasticity and finishing qualities of which allow him to obtain the unbroken simplicity of surface which he desires.

The plans of the individual apartments are studied with the same care, and, though the space was limited in order to keep the whole within the economic level for which it was designed, the arrangement of the space is unconventional. Especially interesting are certain large and unbroken living spaces occurring in some of the apartments, so designed that the individual tenant could have an opportunity to subdivide them by furniture into various functional areas as he desired. In accordance with the general purpose of the house, nearly all the apartments have small dens or studies where the adults can carry on specialized work unbothered by the noises of a family sitting room. Here again, it seems to me, not only is this work of Sven Markelius an interesting example of carefully studied and brilliantly integrated details, but it is also as essentially Swedish in its social idealism as in its design, in its attempt to apply to the living of medium-income families those advantages of mechanization which elsewhere are associated almost wholly with the well-to-do. Swedish, too, is its search for the most ample sun, light, and air, and the way flowers are used on the balconies in most ingenious flower boxes to give life and vitality to the design. Especially successful, I think, is the frank exposure of the supporting columns on the exterior at the entries, and the frank expression that the whole is a framed and not a solid construction.

In the building for the Stockholm Building Society—a club for builders and architects, which is in essence Stockholm's Architectural



The greater part of the ground floor of the Kollektivhus is taken up by the day nursery, above, and the restaurant and bar, shown below, available for all tenants

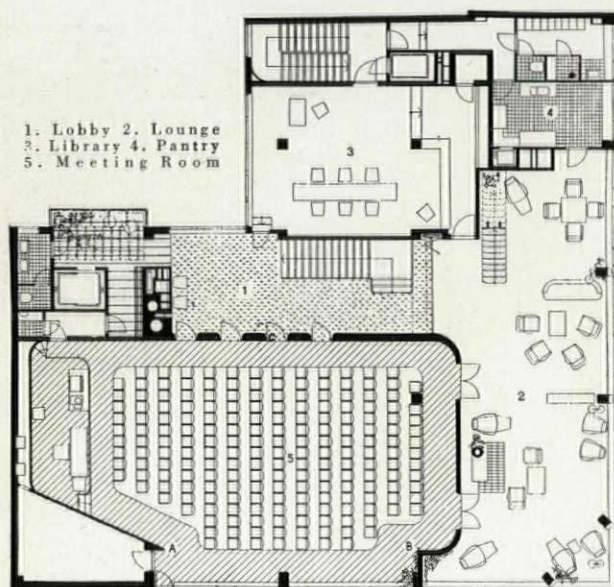


A typical floor plan illustrates the large, unbroken areas of the corner apartments, arranged to permit tenants to divide them as desired. Dumb waiters serve each kitchen





Two views of the lounge of the Stockholm Building Society building show curves and furnishings that are characteristic. Plan of the lounge floor appears below



League—Markelius has designed a building of the greatest exterior simplicity, characterized by those broad horizontal windows of which he is so fond, with interior spaces full of an especially interesting variety of shapes. It is the architecture of space flowing not only horizontally but vertically through an unusual use of mezzanines and stairs. Its basic structural treatment has that same almost puritanical restraint that was seen in the Hälsingborg Concert Hall; yet here the whole is handled with such beauty of color and perfection in material choice and treatment that the result is gracious rather than mechanical, and the structure itself has been worked imaginatively into curved lines, as in the upper part of the lounge, so that a rather fresh type of neo-baroque interest runs through the whole, and instead of the rigid rectangles of the chief Hälsingborg interiors one has in view after view symphonies of interesting intersecting curves, horizontal and vertical, given by the stair soffits, the curves of the stair well, the stair railings, and the curved roof of the lounge. Wood and plaster, rich textiles in carpets and furniture, all give warmth to the whole, and in the dining room ventilation is most ingeniously taken care of by a mat of thin plywood, pierced with small holes bored at regularly spaced intervals, slung below the ceiling and allowed to hang down in natural curves under the cross-beams, so that the air blown into the space between slab and plywood layer is diffused through all the holes efficiently and imperceptibly. It is interesting to note also that individual table lamps are used in the restaurant, hung over each table and so arranged with loose wires and tracks that the arrangement of tables can be quite varied and yet a light occur over each. With the present-day growing convention that all lighting shall be from ceilings by indirect means, it is a pleasant variation to find here in one of the most recent Stockholm buildings a frank recognition of that intimacy of effect which can only be gained in a public dining room through the individual and low-set lighting of each individual table.

These qualities of imagination and of humanity, of always considering buildings as a place where people live or do things, show clearly in the few houses which Markelius has designed—especially the Myrdal house, with its lovely projecting bay window and its pleasant glassed-in upper floor terrace, and his own residence outside of the city. In both of these, the simplicity of the program has been allowed to develop simplicity of aspect; and, although the arrangements of windows and walls and

the space relationships have been designed in the closest accordance with their natural functioning, they have nevertheless been integrated into a whole that is composed, quiet, and unified.

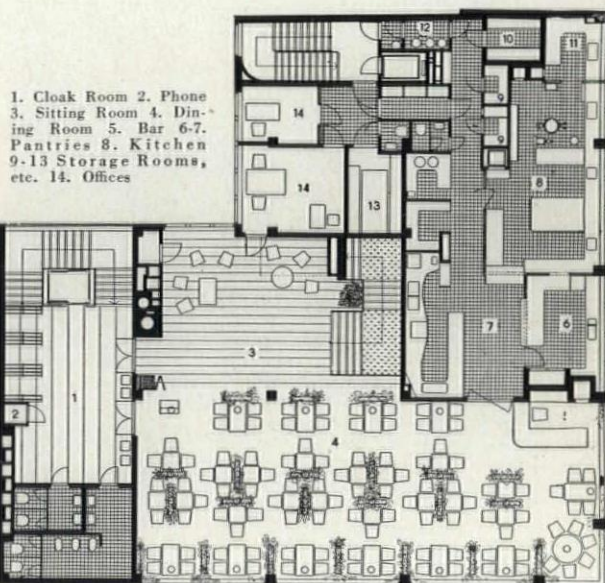
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The building which Markelius* has designed for Sweden's exhibit at the New York World's Fair seems to me in some ways his masterpiece thus far. Rigidly limited by a curtailed budget, the architect has made this limitation itself an opportunity. He has designed a building which is nine-tenths court, with simple open porticoes on two sides, a pool in the center, with an Orrefors glass fountain which is gaily rococo in tone, a few birch trees exquisitely placed, a beautiful pavement of a soft gray-blue Swedish stone, two exhibition halls of Spartan simplicity, a restaurant, a small cinema—that is all. Yet with what mastery, both as a practical matter of circulation for those who wish to see the exhibits and as a matter of pure æsthetic composition in all the relationships, these elements have been combined!

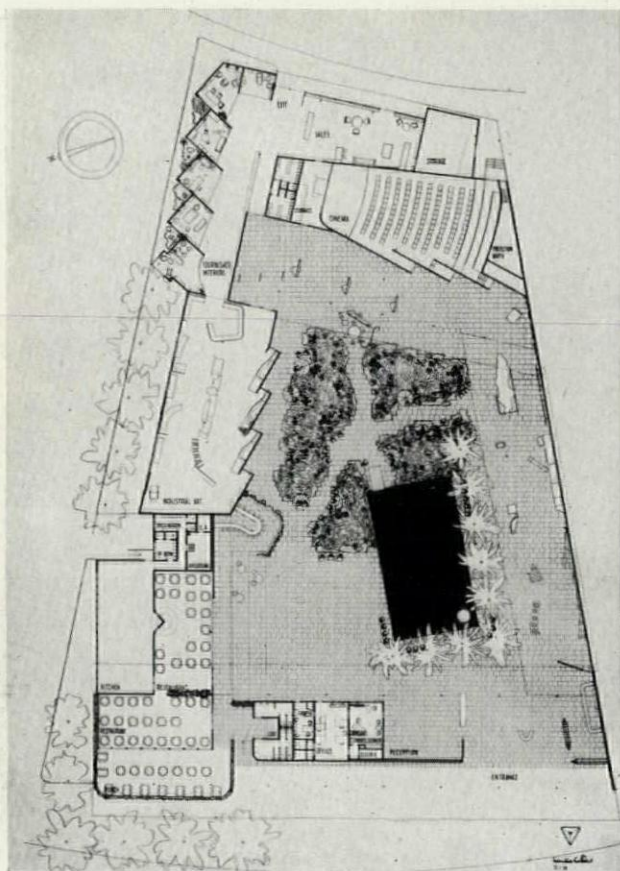
The first reason for its success lies in its basic grouping—the combination of all of the enclosed portions on two sides of the court, leaving the other two free for open porticoes. The second is to be found in the carefully planned position of the entrance, to allow a circulation either through the exhibit in a natural sequence or directly to the restaurant and bar. But the third and controlling reason is the complete æsthetic integration of all the details, and the ability to make every item, no matter how simple, a part of the combined effect. Thus, at the entrance one is welcomed by the coat-of-arms of Sweden, flanked by two gilded lions applied on a warm and velvety wood veneer background; at once the note of the whole, a sort of restrained yet rich elegance, is set. The roofs of the porticoes run at two different levels, interweaving interestingly, giving perspective lines that cross and re-cross, and thus adding to the sense of size a note almost of mystery. The portico roofs are held on the thinnest and most delicate of steel columns, strengthened by steel flanges cut to an interesting curve. The roofs themselves project broadly and sweep up at the edges in curves that recall those of an airplane wing. The slats of wood of which the ceilings are made are separated slightly where the curve occurs, so that the roof space is con-



Views of the restaurant of the Stockholm Building Society, with the plan below, show the wide, gracious stairs leading to a sitting room off the main dining room. The wood veneer ceiling mat is a unique feature



* EDITOR'S NOTE: Simon Breines & Ralph Pomerance were the New York Architects who were associated with Markelius in carrying out the design of the Swedish Pavilion.



A preliminary plan of the Swedish Pavilion, New York World's Fair, 1939, was only slightly changed when it was built. Outdoor exhibit areas border the court at the rear and on the right side. From the rear portico, one enters the chief exhibit halls. The restaurant and kitchen are at the left and front. The view, below, across the court toward the administration offices, shows the glass fountain, behind the figure, and the pleasing effect. Photographs of the Swedish Pavilion are by Nyholm



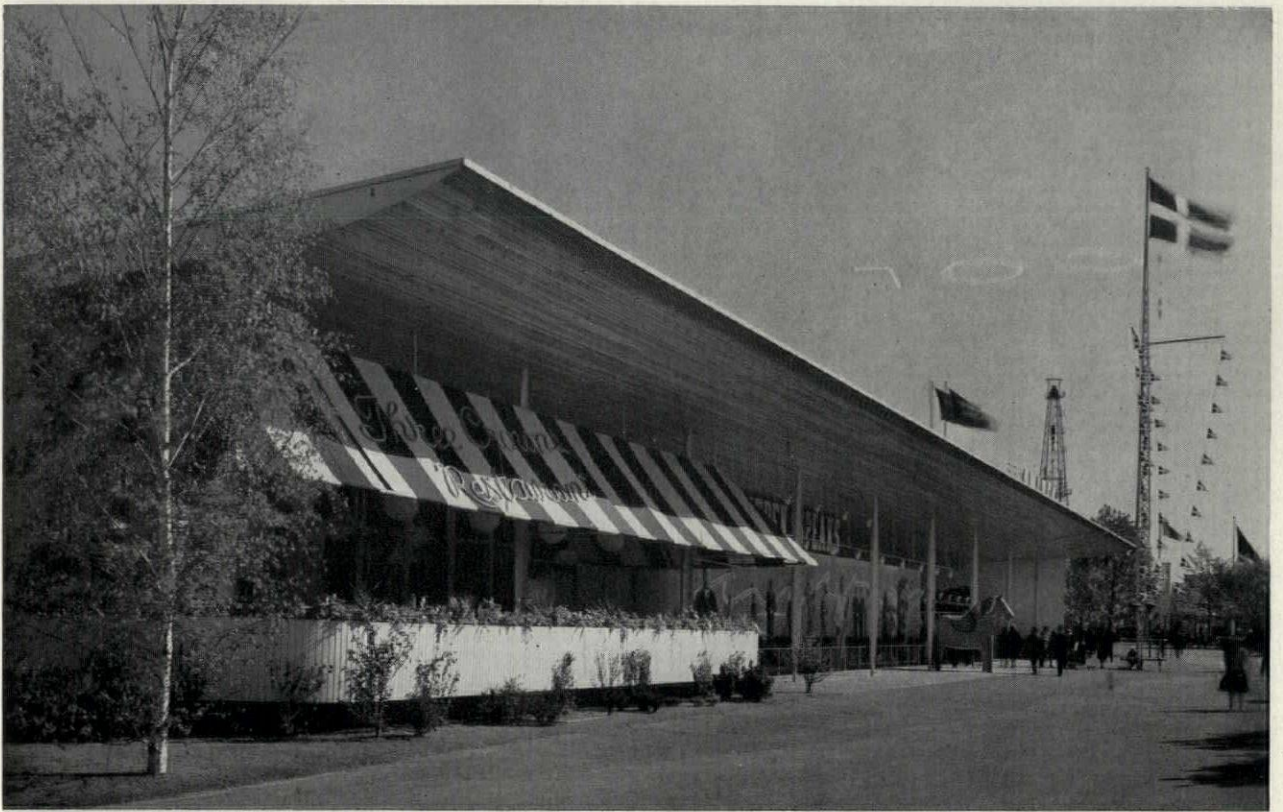
stantly ventilated to insulate the whole against the warmth of a summer sun. The perfection of the detail, so that nowhere does there appear a rough edge, an un-thought-out junction, an unstudied connection, is a lesson which many architects would do well to ponder.

This same quality of perfection in detail runs through the entire building. It is seen in the glass doors to the cinema, through which the hurrying spectator can catch a brief glimpse of the screen; it can be seen in the ribbed panel opposite these glass doors, so profiled and painted as to prevent light from the outside being reflected in on the screen and so dimming the picture; it can be seen in the angular, well-lighted alcoves for the displays of Swedish furniture and interior decoration and in the "Treasure House" with its suave curves and its dainty cabinets where Swedish silverware is shown; and it can be seen in the rotating smorgasbord table in the restaurant and the charming outdoor bar on a raised terrace in one corner of the court. And it is evident especially in the beautiful bright steel grille doors to the court, and the way the track in which they run is combined with the lighting trough.

But there is more in this pavilion than economy of means and elegance of detail; there is also surprising richness and variety of color. In this the exhibition of Swedish life, which rings the court under the portico, plays an important part, as do the broad striped awnings of blue and white and gold and white that shade the sunny end of the portico and the dining terrace. The court is brilliantly planted, too, and murals on the side of the exhibit building add to the sense of vibrant life. Wicker chairs and colored umbrellas are scattered over the stone pavement in inviting confusion; dominating them, a cast of one of the Milles equestrian statues adds another note of decorative richness.

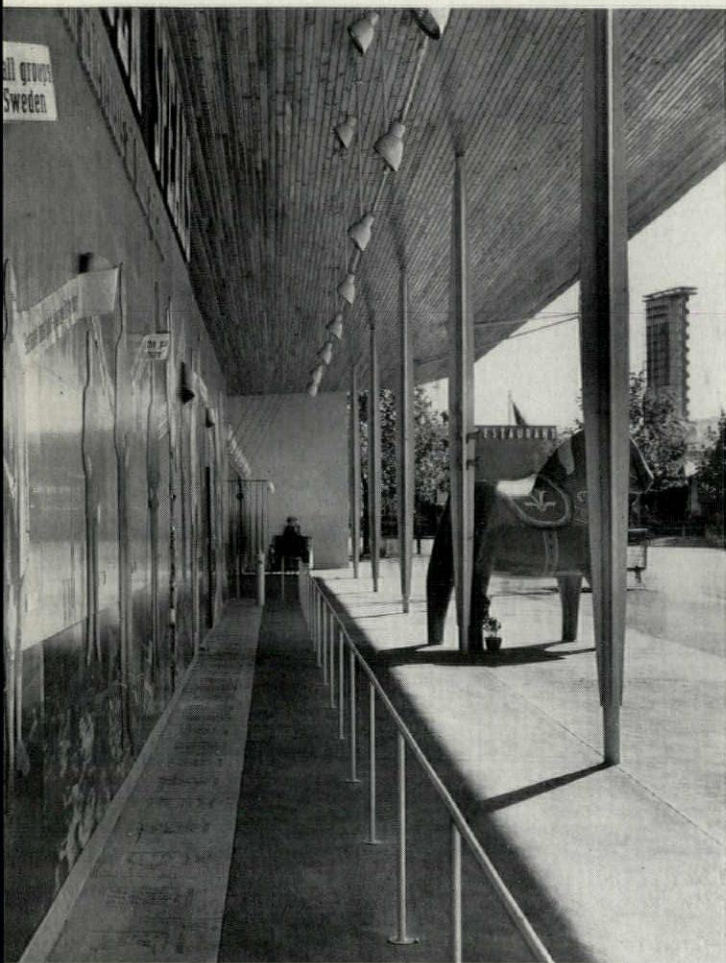
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If the Swedish pavilion is beautiful by day, it is even more entrancing by night. The warm glow of the varnished wood ceiling, lit by indirect lighting; the charming, if slightly mad, glass fountain; the beautiful balance of foliage and flower and pavement; the white trunks and lacy leafage of the birches; the crowds seated in the comfortable wicker chairs; and the occasional bright notes of the brilliant red and blue and white peasant costumes of waitresses or guides—all these make a picture which is unique in Flushing Meadows. One speaks quietly there, naturally; one strolls, and does not hustle; one draws long

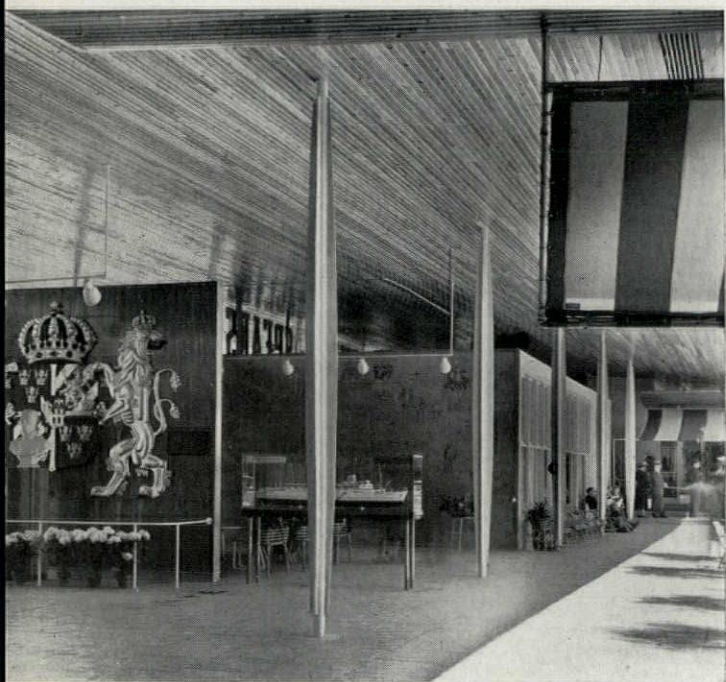


The view across the front shows the wide, inviting roof of the Swedish Pavilion, with its delicate supports and interesting photo-mural montage dramatizing the theme of the exhibition within. The court, with its brilliantly-designed planting, its restaurant and bar terrace, is below





Two views under the broad ceilings of warm-toned, varnished wood forming an entrance porch and bordering the courtyard on three sides show the slim steel pipe columns, stiffened by steel plate flanges welded to them



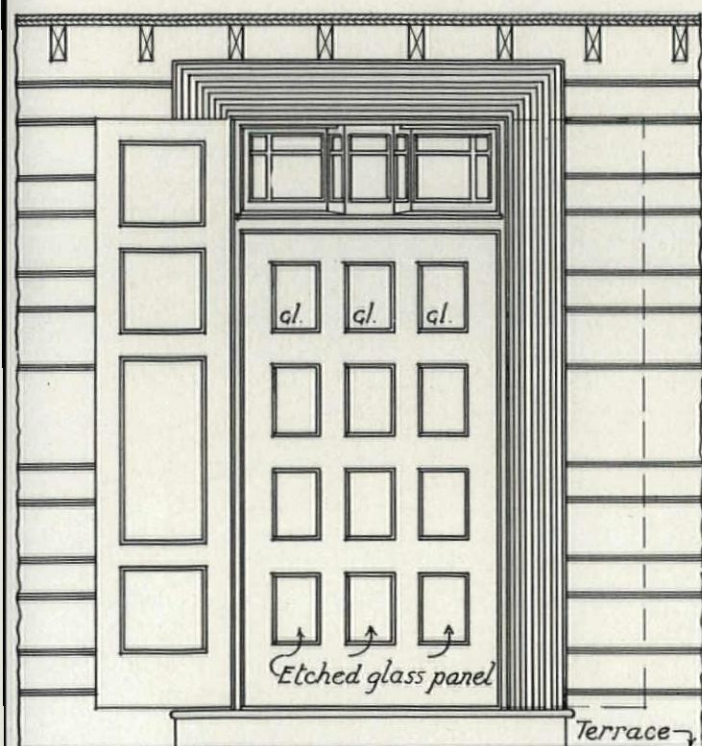
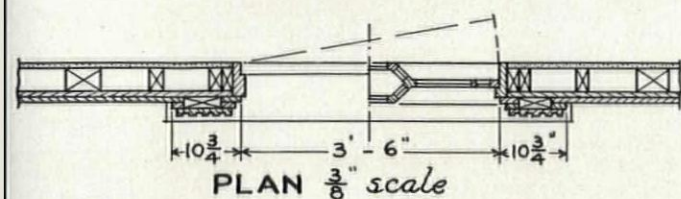
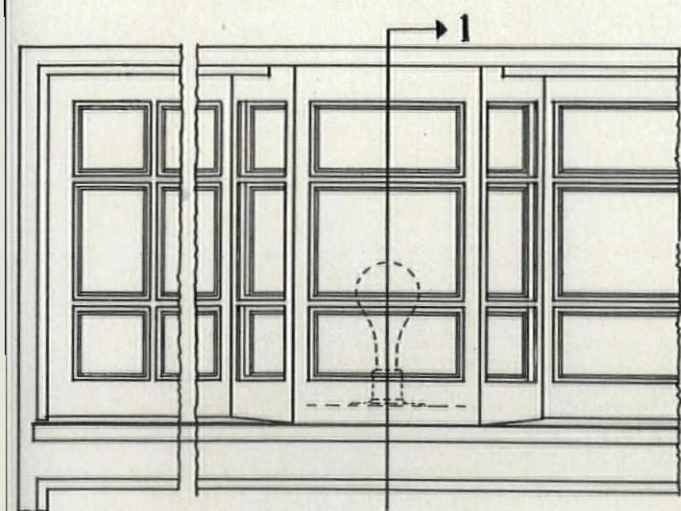
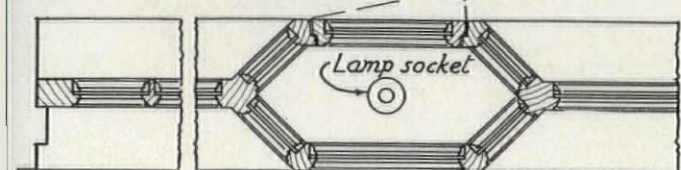
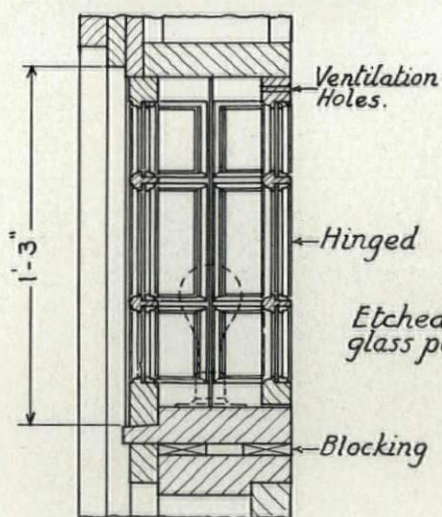
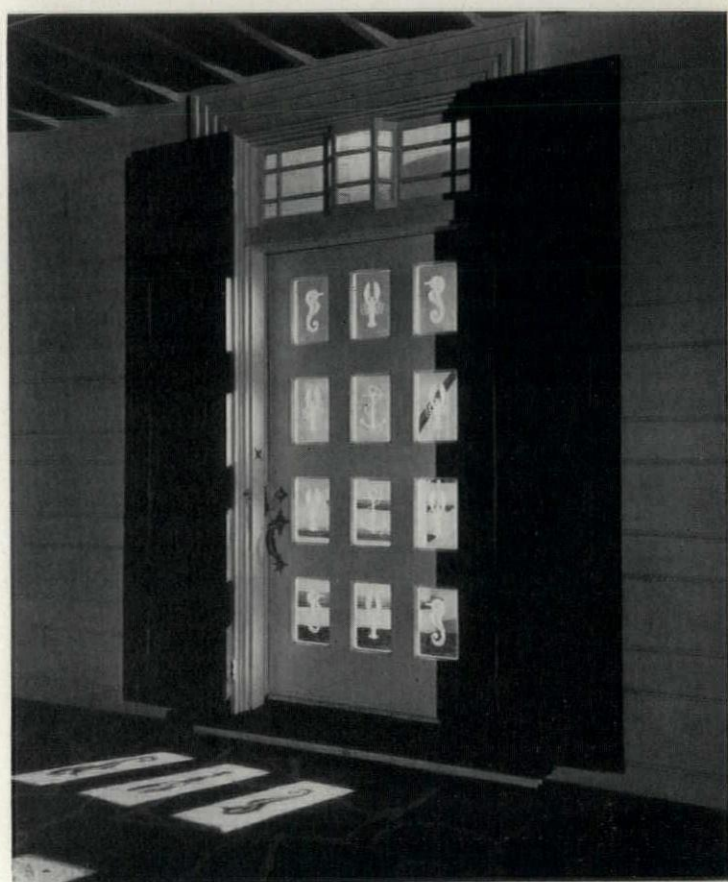
breaths of relaxation in that lovely court. One lives, for a moment, a different kind of life—more ordered, more quiet, more intelligent, less garish . . . Is that the authentic voice of Sweden itself? Or merely the genius of an architect with an imagination both poetic and practical? Or is it perhaps that the one so perfectly expresses the other?

It is said that no more money was available for this building than would have been spent in one of the small national pavilions in the Hall of Nations; yet the effect is never one of starved economy—quite the contrary, this beautiful court, with its exquisite colonnade, its pool, its white birches, its air of lavish comfort and cordial invitation, seems one of the most beautiful, one of the most expressive, of all the national buildings in the Fair, and when the memory of many larger and more ostentatious structures has vanished I am sure that the picture will remain in many minds of this gracious but vivid space which Markelius has so skilfully devised.

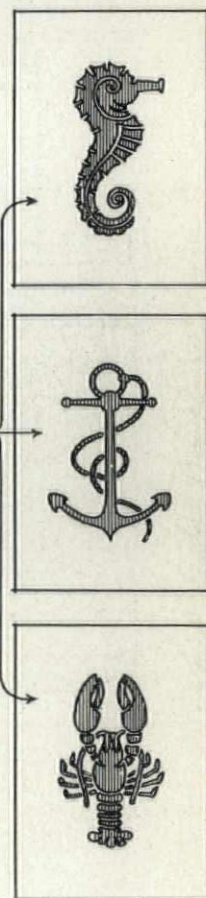
In this quality the Swedish pavilion is also expressive of the best of Swedish contemporary architecture. Completely "modern" and exquisitely detailed, distinguished by perfection of craftsmanship, simple in its basic lines, it preserves all of the creative trends of the "new" architecture; yet it has used them not as ends in themselves but merely as means to fuller and fresher beauty, it has combined them with that natural sense of materials and of humanity which we can only accept as essentially Swedish.

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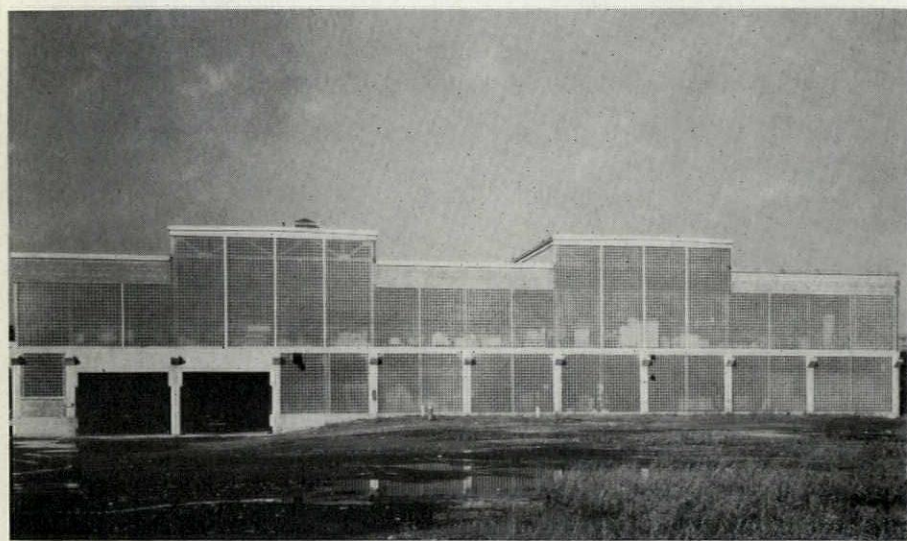
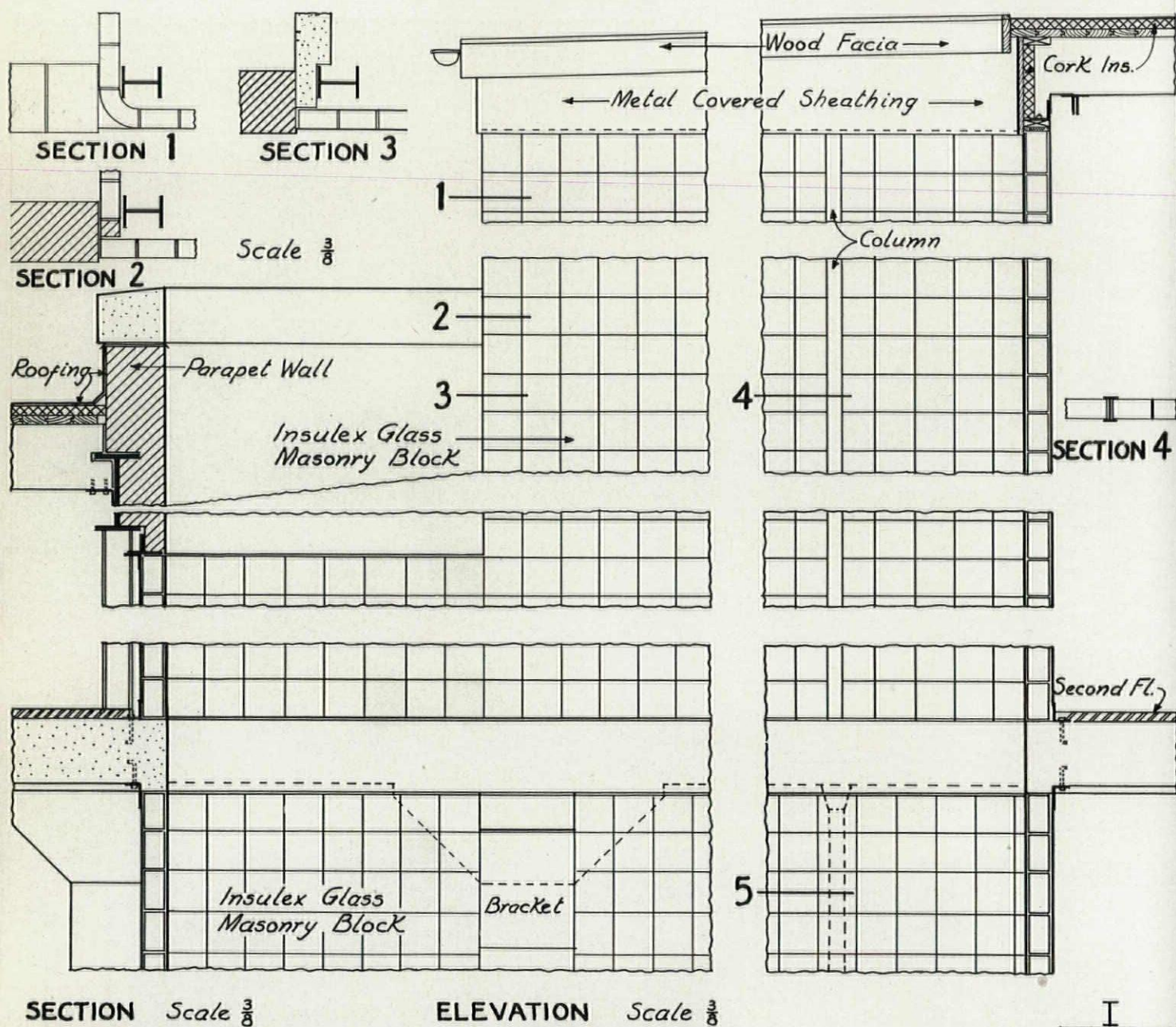
There may be many who regret the passing of the older, romantic style in Sweden, with its textured richness, its broken silhouettes, its picturesque details; but the creative elements in that romantic movement—its development of craftsmanship, its insistence on materials, their quality, and their sympathetic use, its love of concentrated decorative effect through textile hangings and the added works of the minor arts—all appear in this building to have been absorbed into the new movement and re-expressed in a new way, which seems the way of the 20th century. It is this synthesis of the lessons of the earlier style with the more logical qualities and the freer opportunities of the new which makes even the simplest of much modern Swedish architecture, like that done by the architectural office of the Swedish Cooperative Society, so outstanding amid the welter of contemporary work, so significant of what may eventually arise out of the present developments.

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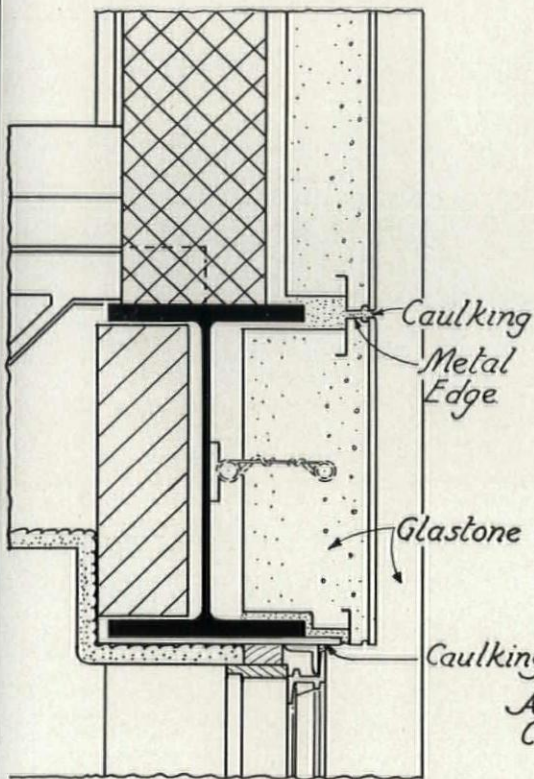
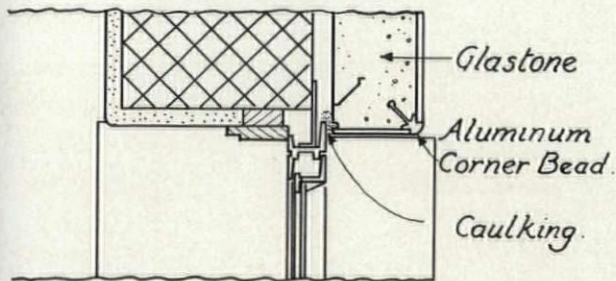
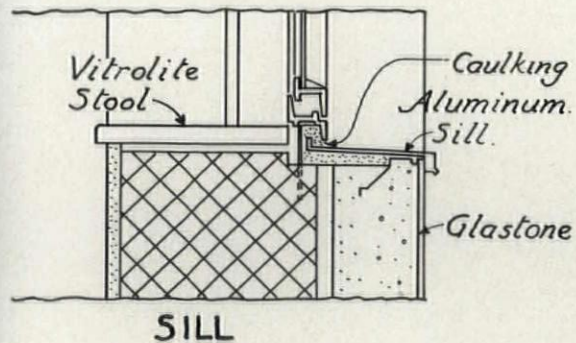
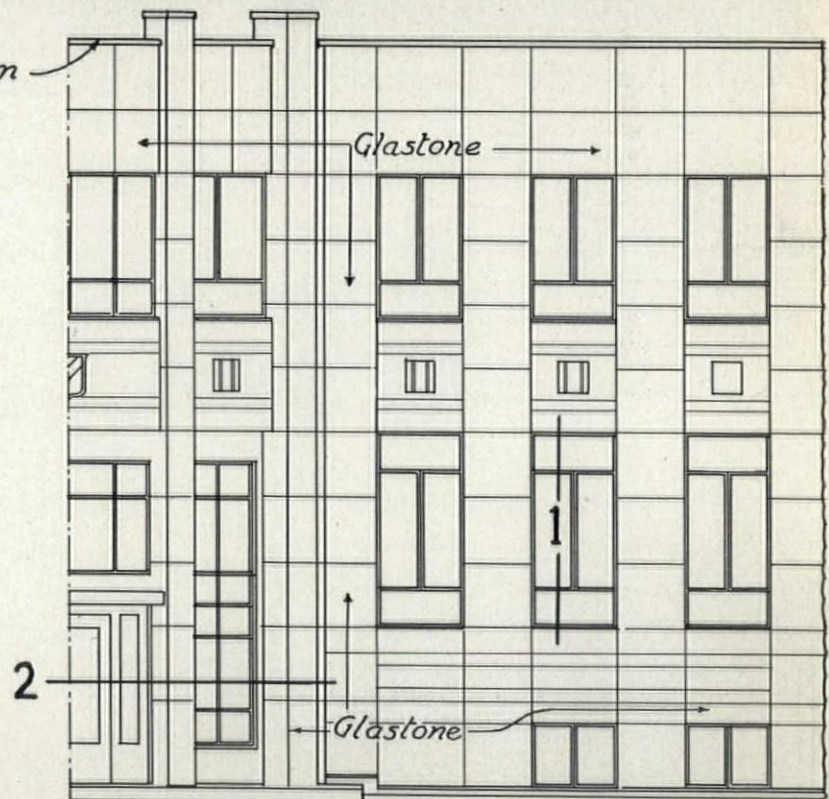
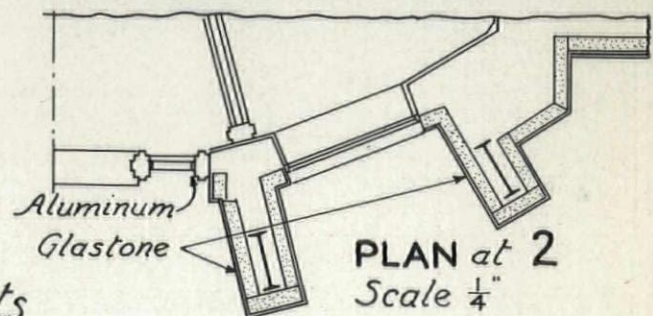
DAVID J. ABRAHAMS
Architect



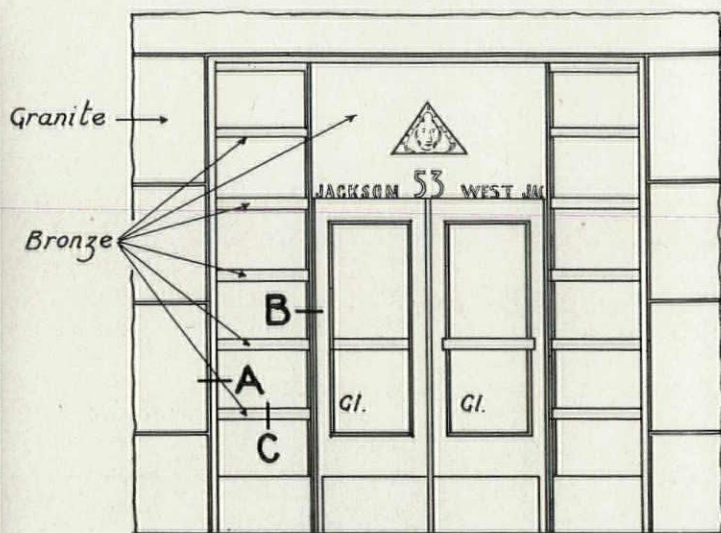
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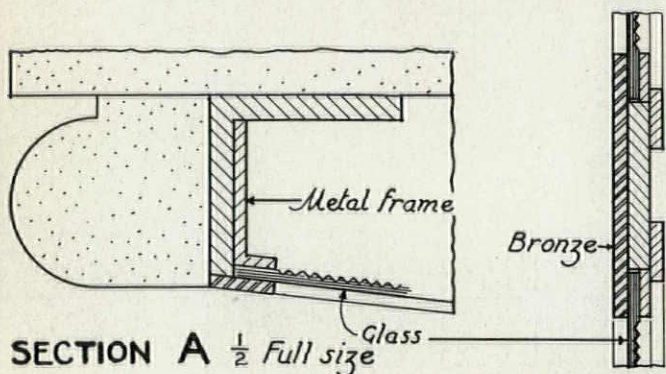
EDWIN J. KRAUS Architect

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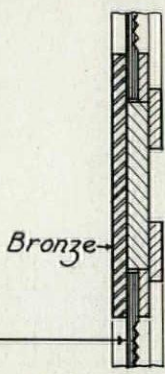
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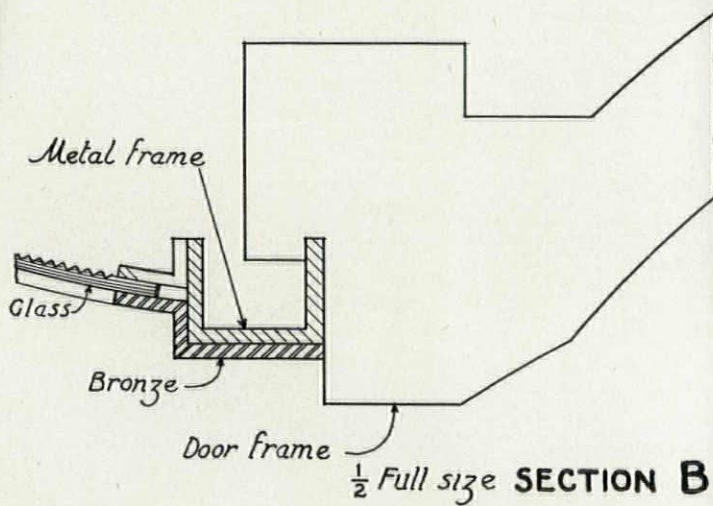
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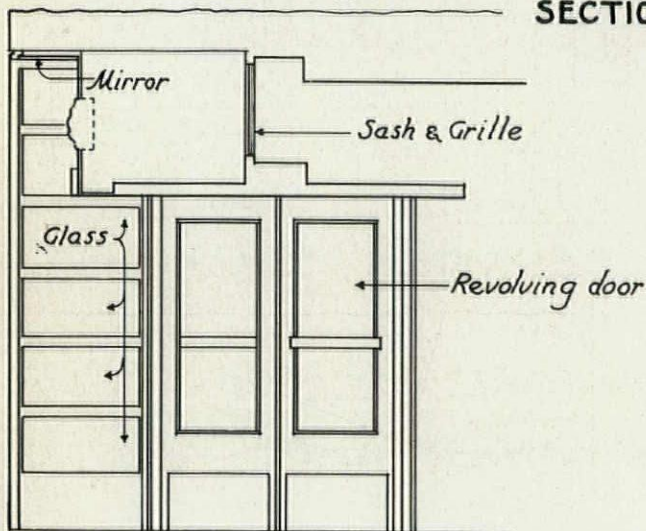
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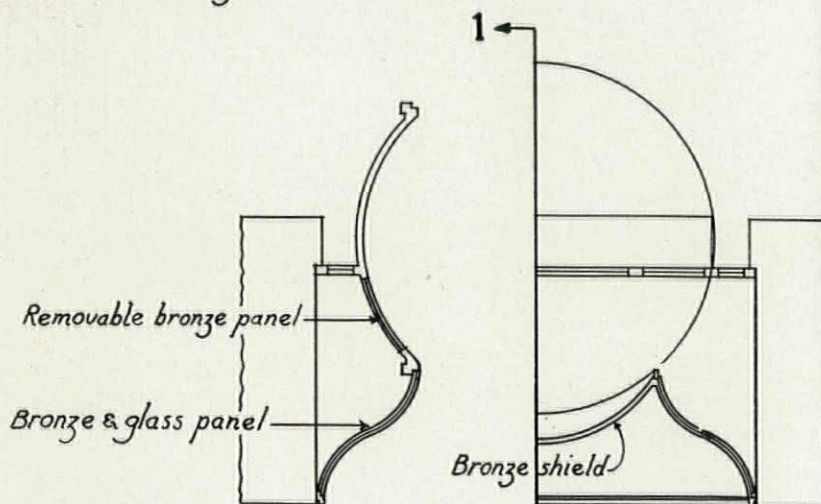


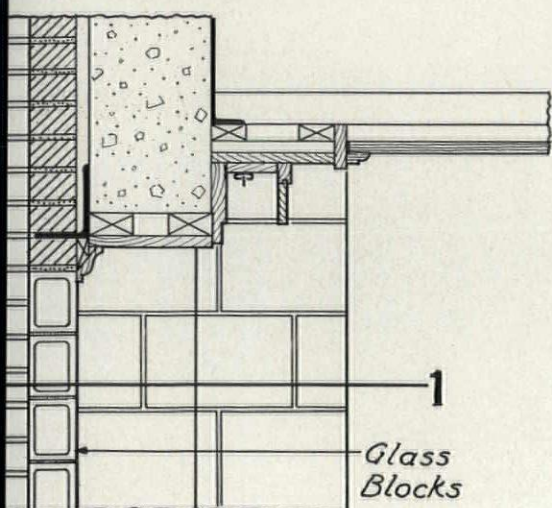
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SKIDMORE & OWINGS

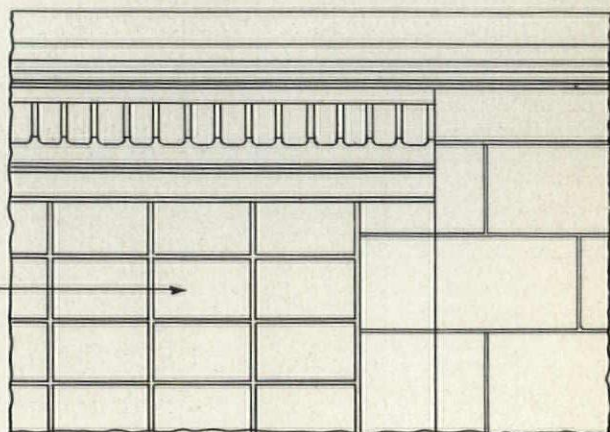
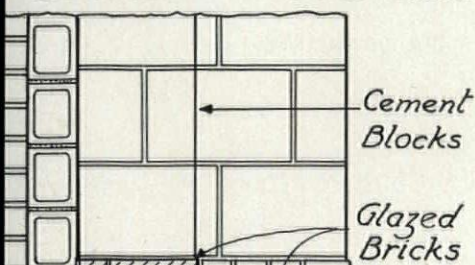
Architects

PLAN Scale $\frac{1}{4}"$



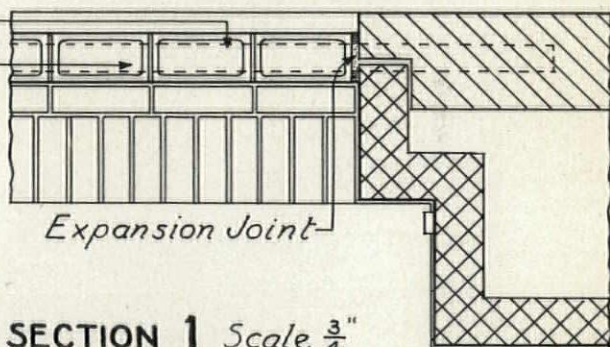
SECTION thru HEAD Scale $\frac{3}{4}$ "

Glass Blocks

ELEVATION Scale $\frac{3}{4}$ "SECTION thru SILL
Scale $\frac{3}{4}$ "

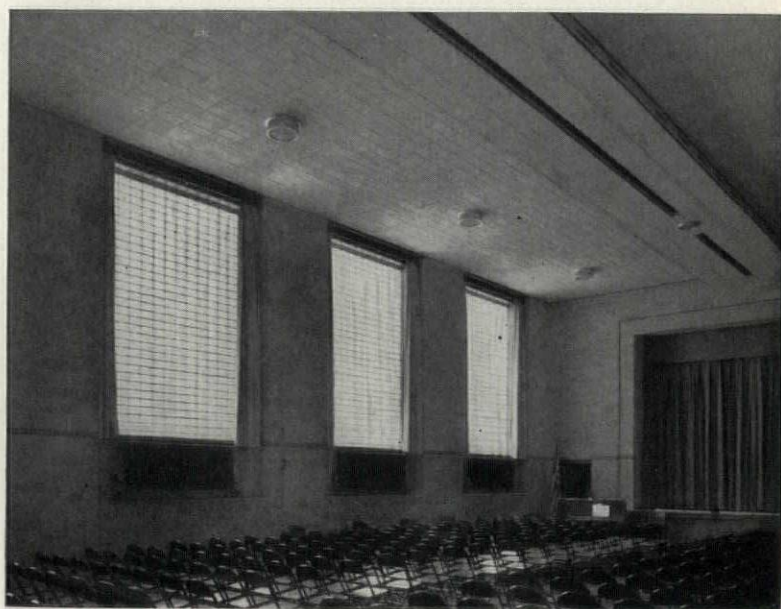
Metal Wall Ties

Glass Blocks

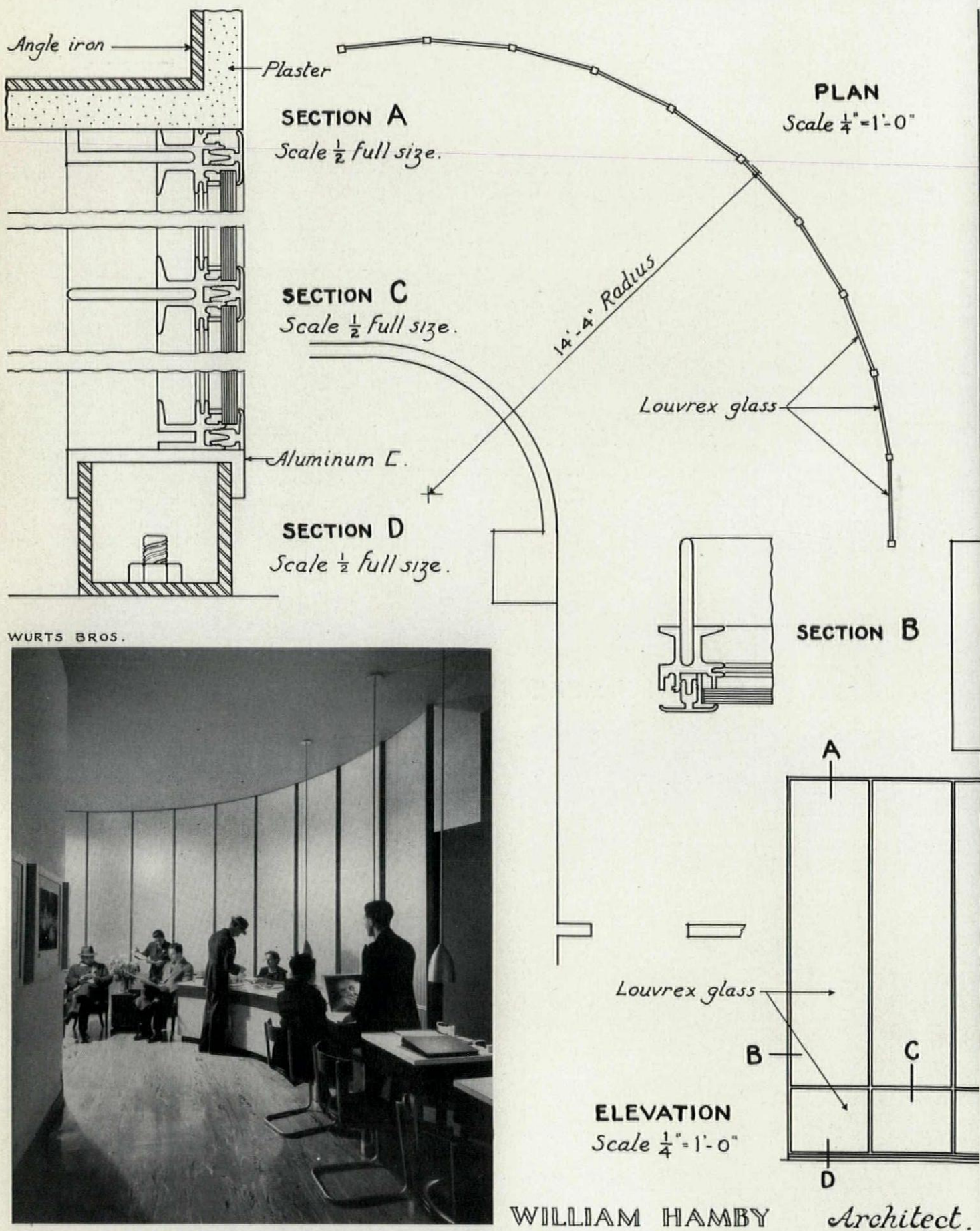
SECTION 1 Scale $\frac{3}{4}$ "

Radiator

Fin Floor



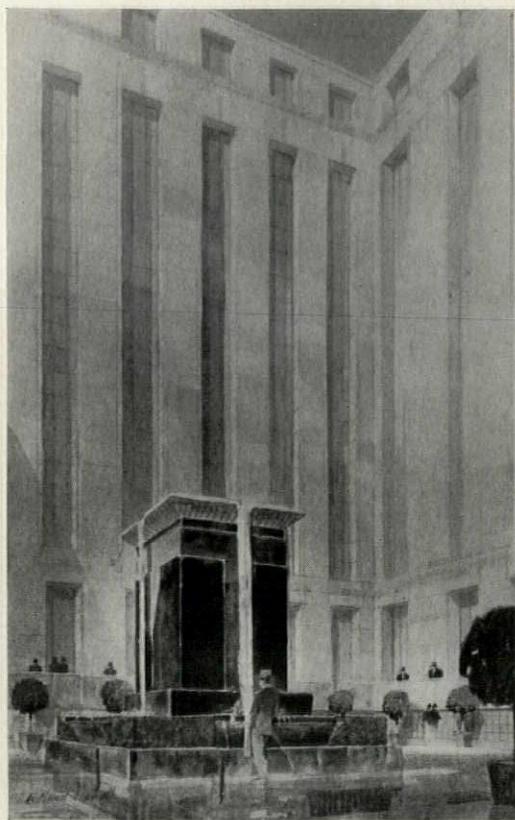
G.E.WILEY Architect.



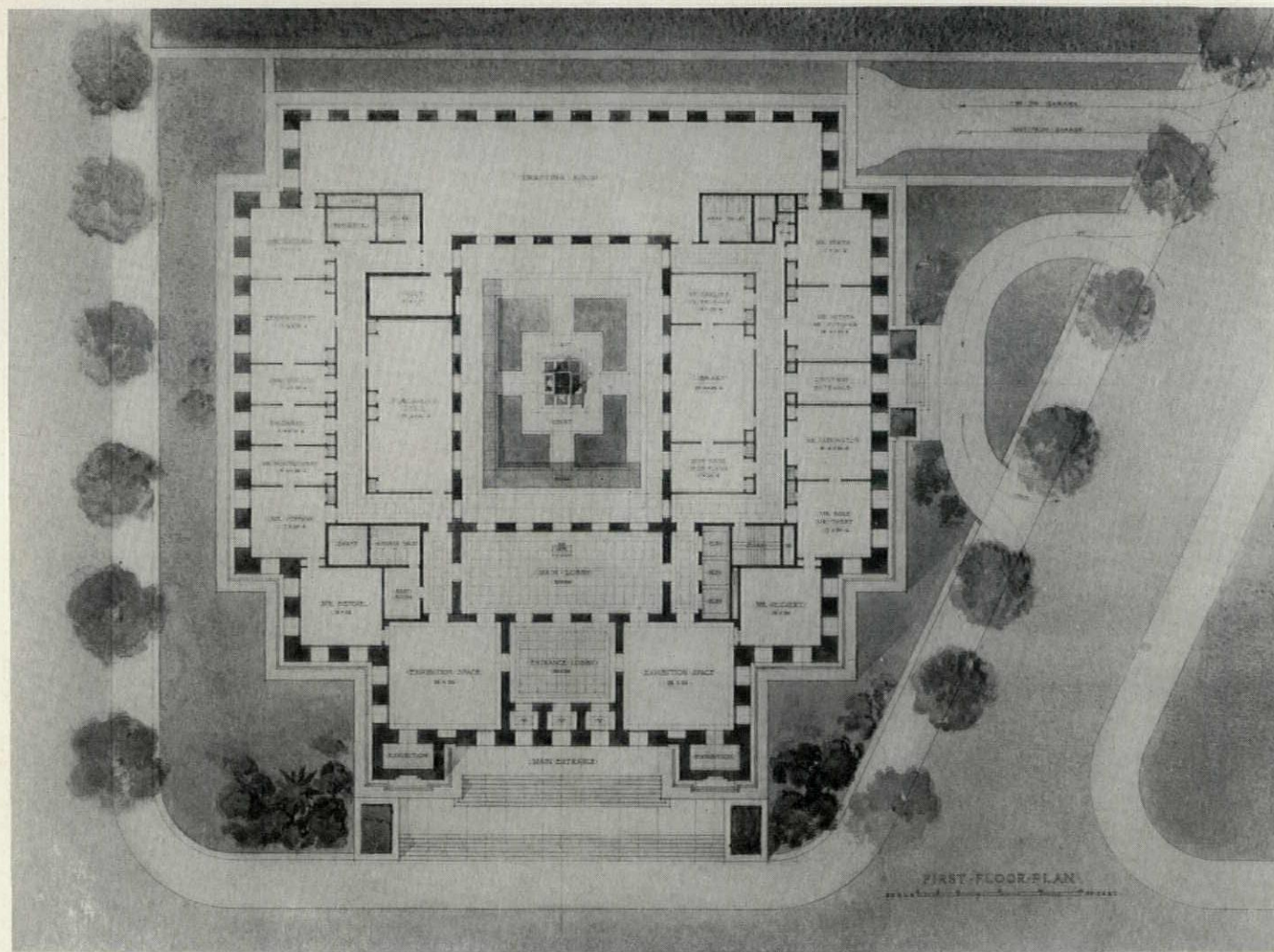


The proposed office building shown here and overpage was designed by Janssen & Cocken, Architects, of Pittsburgh, Pennsylvania. The walls are to be of limestone, with glass effectively used in simplified vertical openings. The main lobby, at right, is to have walls, ceiling, and floor of glass. The renderings are by J. Floyd Yewell, Delineator, of New York City





The courtyard of this office building designed by Janssen & Cocken, Architects, of Pittsburgh, Pennsylvania, is of unusual interest, as its walls, pavement, and central fountain all are of glass. The plan of the main floor, below, indicates the proportion of the window area to the bearing walls of the proposed structure



PENCIL POINTS DATA SHEETS

Prepared by DON GRAF, B.S., M.Arch.

THE DISREGARD OF THE OBVIOUS

When you buy an automobile, the manufacturer gives you an instruction book. It tells you how to repair the clutch, how the differential is made, the firing order of the cylinders and many pages of other technical but useless information. It doesn't tell you what to do when the car freezes up or how to put down the top, or how many gallons of gas the tank holds. As a matter of fact, the book isn't much good—but at least it is an instruction book.

The same goes for an outboard motor or a motorcycle or a camera and a lot of other things.

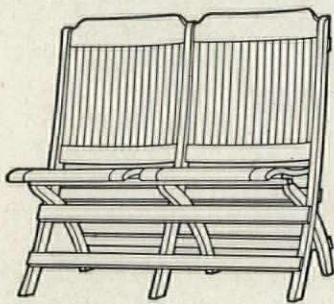
The trouble is that there are too many engineers in this world who are writing for publication. Most engineering schools offer a course in expository writing but from the extant examples, there are few, if any, who should have received a passing mark. Most engineers are introverts and they find it impossible to forget how smart they are technically. They cannot readily assume the point of view of the dumb-bell who is to use and operate the fruit of their genius.

The modern home has been described as a *machine for living*. When you stop to think of it, there is an amazing number of mechanical gadgets in a house, which require oiling or tightening or repairing during their useful life. There are built-in electrical devices of all sorts such as refrigerators, oil burner motors, fans, and

SEATING CAPACITY WITH PORTABLE CHAIRS

Index No.
D9q
PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



DOUBLE UNIT

Figuring 2'-6" back to back: 3'-6" cross aisle at rear and 4'-0" cross aisle at front.

| ROWS | DEPTH |
|------|--------|
| 10 | 32'-6" |
| 12 | 37'-6" |
| 16 | 47'-6" |
| 18 | 52'-6" |
| 20 | 57'-6" |
| 22 | 62'-6" |
| 24 | 67'-6" |
| 26 | 72'-6" |
| 28 | 77'-6" |
| 30 | 82'-6" |

Table A

Table B

| WIDTH | ARRANGEMENT | CHAIRS |
|--------|---|--------|
| 18'-4" | 2 3 Aisle 3 2 | 10 |
| 21'-4" | 3 3 Aisle 3 3 | 12 |
| 24'-4" | 4 3 Aisle 3 4 | 14 |
| 30'-4" | 4 Aisle 4 4 Aisle 4 | 16 |
| 33'-6" | 3 2 Aisle 4 4 Aisle 2 3 | 18 |
| 33'-4" | Aisle 4 4 Aisle 4 4 Aisle 3 0 | 16 |
| 36'-6" | 3 3 Aisle 4 4 Aisle 3 3 | 20 |
| 39'-7" | 3 3 Aisle 3 4 3 Aisle 3 3 | 22 |
| 39'-6" | Aisle 3 0 3 4 3 Aisle 3 0 3 4 3 Aisle 3 0 | 20 |
| 46'-0" | Aisle 3 0 4 4 4 Aisle 3 6 4 4 4 Aisle 3 0 | 24 |
| 56'-4" | 3 2 Aisle 3 3 4 Aisle 3 6 4 3 3 Aisle 3 6 2 3 | 30 |
| 65'-4" | 3 3 Aisle 3 6 4 4 4 Aisle 3 6 4 4 4 Aisle 3 3 | 36 |

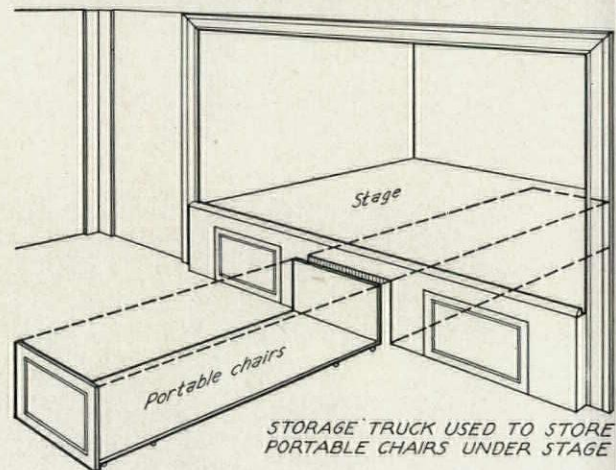
The tables above will help you to determine the seating capacity of your auditorium. They show the most popular grouping and spacing arrangement of the various widths of auditoriums. Table B shows the total number of chairs which can be placed across the width of the room, the grouping arrangement, and the size and location of the aisles. Table A shows the number of rows in the depth of the room. By multiplying the number of chairs in the width of the room by the number of rows in the depth of the room, the total seating capacity is obtained. These tables makes no allowance for posts, obstructions, etc.

Courtesy Heywood-Wakefield

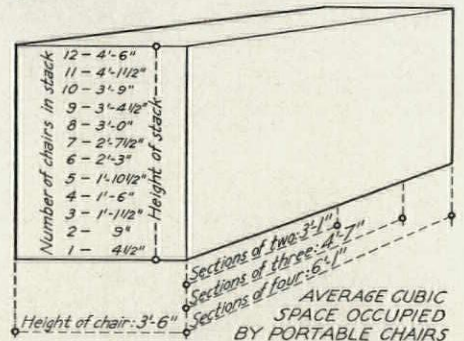
PORTABLE CHAIRS CLEARING AND STORAGE

Index No.
D9r
PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



STORAGE TRUCK USED TO STORE PORTABLE CHAIRS UNDER STAGE



AVERAGE CUBIC SPACE OCCUPIED BY PORTABLE CHAIRS

| No. | NUMBER OF MEN | | | | | | | | | |
|--------|---------------|----|----|----|----|----|----|----|----|----|
| CHAIRS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 100 | 12 | 6 | 4 | | | | | | | |
| 200 | 24 | 12 | 8 | 6 | | | | | | |
| 300 | 36 | 18 | 12 | 9 | 7 | | | | | |
| 400 | 48 | 24 | 16 | 12 | 10 | 8 | 7 | | | |
| 500 | 60 | 30 | 20 | 15 | 12 | 10 | 9 | | | |
| 600 | 72 | 36 | 24 | 18 | 14 | 12 | 10 | | | |
| 700 | 84 | 42 | 28 | 21 | 16 | 14 | 12 | 11 | | |
| 800 | 96 | 48 | 32 | 24 | 20 | 16 | 14 | 12 | | |
| 900 | 108 | 54 | 36 | 27 | 22 | 18 | 16 | 14 | 12 | |
| 1000 | 120 | 60 | 40 | 30 | 25 | 20 | 18 | 16 | 14 | 12 |

TIME REQUIRED TO CLEAR FLOOR OF PORTABLE CHAIRS.

This table, while purely theoretical, will prove of assistance in figuring the approximate time for clearing an auditorium of portable chairs. It is made up on the basis that one man can fold and move one section in 15 seconds or 8 chairs per minute.

dishwashers. There are hydro-thermal gadgets such as pressurestats, humidistats, valves, and fittings. There are shut-offs on the plumbing system and flushing devices for the toilet, and faucets. There may be an automatic stoker or oil burner or gas-firing mechanism. The floors and woodwork and walls require certain care and treatment.

Yet, we have known only one architect who supplied the new home owner with a book of instructions for operating his \$5,000 or \$10,000 living-machine.

Why don't all the manufacturers who make building products that may be broken or get out of repair or need attention, get together and decide on a standard format so that they may issue instruction sheets. The architect would collect these sheets for all the items used in a building that he designed, put them into a neat

leather-covered book and stamp the owner's name in gold lettering on the cover. It would be a source of pleasure to the owner for years to come and would be an example of architectural service impressive out of all proportion to its cost of assembling. It's a swell idea—but it probably wouldn't work for only one reason.

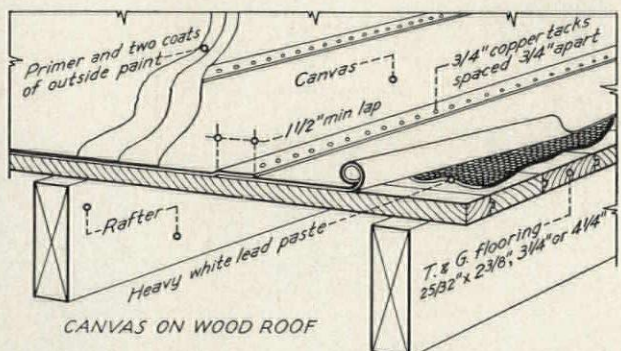
The manufacturers might get engineers to write the instruction sheets!

ACKNOWLEDGMENT — *Belated acknowledgment is hereby made to the American Funeral Director for information used in preparing Data Sheet D19a appearing in the April issue of PENCIL POINTS. This excellent funeral home was designed by Latenser, Bastow & Way, Architects, New York City, for Fairchild Sons, Inc., Garden City, L. I. We regret the credit was not given in the April issue.*

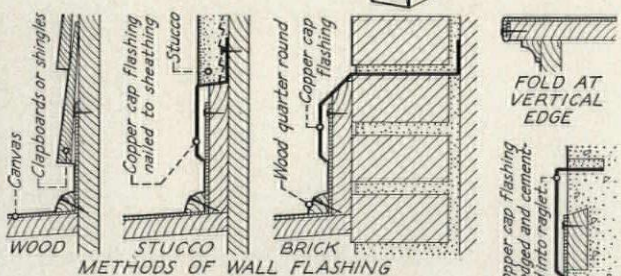
CANVAS ROOFING

Index No.
F 2 e
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



CANVAS ON WOOD ROOF



METHODS OF WALL FLASHING



CANVAS ON CONCRETE ROOF
SCALE 1 1/2" = 1'-0"

Canvas roofing has been used for years where a flat roof must be walked upon. It is light in weight, not readily broken under light traffic, easy to lay. If kept well painted, a canvas roof should last 25 or 30 years.

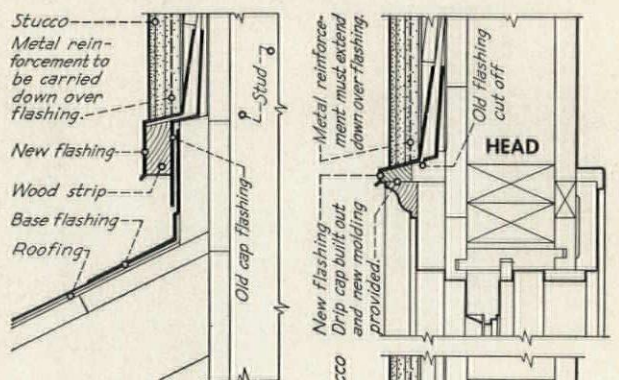
Wood sheathing should first be painted, using 100 lbs. white lead in oil heavy paste, 4 gals. raw linseed oil, 2 gals. turpentine, 1 pt. liquid drier. When this is thoroly dry, apply a heavy coat of the white lead heavy paste and press the canvas into the wet paste with rollers. Nail canvas with 3/4" copper tacks 3/4" o/c.

The canvas surface should receive 3 coats of paint. Mix priming coat 100 lbs. white lead in oil heavy paste, 3 gals. raw linseed oil, 2 gals. turpentine, 1 pt. liquid drier. Second and finishing coats may be any good paint designed for outside use.

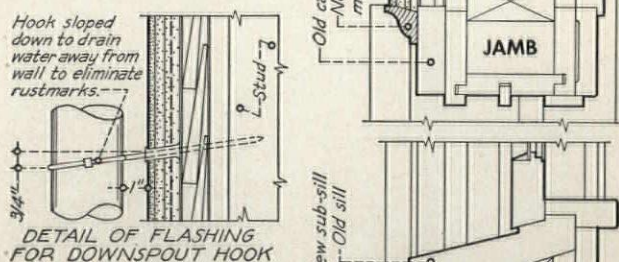
STUCCO OVER OLD CLAPBOARD WALLS

Index No.
F 11 b
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



DETAIL OF FLASHING AT PORCH ROOF



SCALE 1 1/2" = 1'-0"

Finish coat approximately 1/8" thick, thickness depends on texture.
Brown coat approximately 3/8" thick, finished with a wood float.
Scratch coat approximately 3/8" thick, deeply cross scratched.
Metal reinforcement furred out 3/8" with furring nails 8" on centers.
Minimum weight 1.8 lbs. per sq. yd.
Minimum opening 3/4" sq. Maximum 2" sq.
Waterproof building paper, weighing 15 lbs. or more per square applied over old siding.
Loose siding must be reroiled securely.

SECTION

PLASTICS FOR ARCHITECTURE

BY E. F. LOUGEE

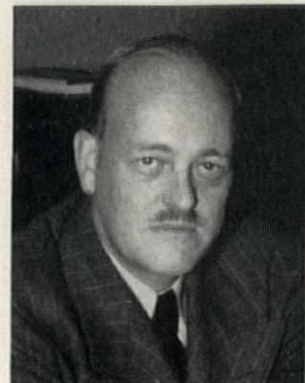
WHEN the new annex to the Library of Congress opened recently, with its twenty acres of floor space and fifty thousand shelves for housing ten million books, it revealed one of the largest installations of plastics in the building field. Every counter top, delivery table, baseboard, push and kick plate, and card drawer file is surfaced with laminated plastic. Telephone booths, corridors, interior doors and other building parts where maximum wear is to be encountered, also employ this material.

The SS Queen Elizabeth soon makes her first trip to America from the coast of Ireland where she is now being fitted out. She will exhibit an even greater quantity of fireproof plastic paneling and molded plastic equipment than the SS Queen Mary. Public and private rooms will be surfaced with the material. Table and bar tops will have the benefit of its protection. Baths will be finished with plastic tile because it is light in weight, attractive in appearance, durable, sanitary, and relatively low in cost.

At the New York World's Fair, the Government Exhibit includes twelve statues, each nine feet high and eight feet across the base, cast from transparent plastic, lighted from within. Such huge castings of plastic materials were never attempted anywhere in the world before.

These things of themselves may not be remarkable, but they so clearly represent a trend in architecture, design, and decoration that they demand attention. They indicate that plastics have become recognized as materials which have uniquely desirable properties, and that their use is definitely on the increase. Architectural designers are becoming more conscious that plastics may be capable of widening the scope of their work; that they provide in some instances a latitude of design not present in other materials; that they have proved their worth in many installations.

E. F. Lougee, Editor of Modern Plastics magazine, prepared this article specially for PENCIL POINTS, to describe one of the newest additions to the designer's palette



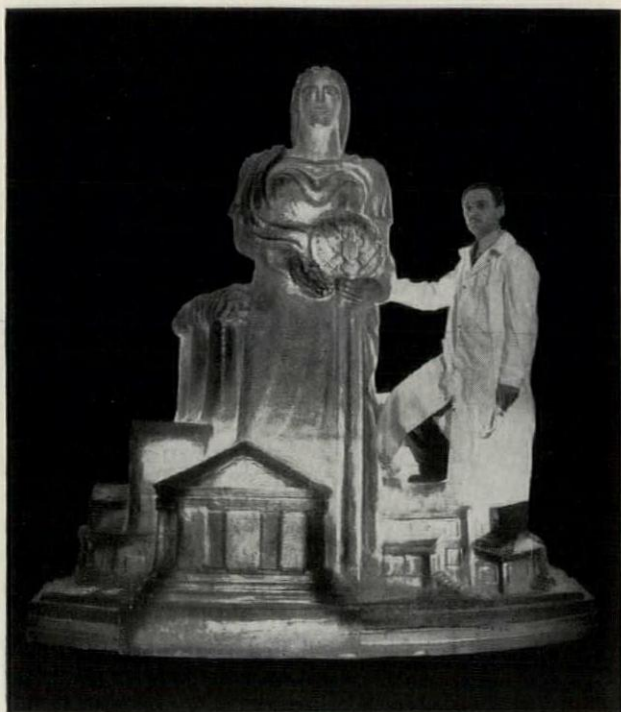
To take advantage of these plastics—there are many different kinds—one must know something of their chemical nature, their physical properties, how they are made and handled and in what forms they are available to those who use and specify them.

HISTORY OF PLASTICS

Celluloid was the first man-made plastic, designated in the trade as *thermoplastic* because it may be softened at any time by heat.

Some seventy-five years ago, John Wesley Hyatt, a printer in Rochester, N. Y., read an advertisement offering \$10,000 reward to any one who discovered a suitable material to replace tusk ivory in the manufacture of billiard balls. Tusk ivory was becoming scarce; the price was too high; a substitute was needed, and no doubt could be found.

Hyatt began to potter around with newspaper pulp and solvents of various kinds. Among them was nitric acid, from which gun cotton is made. Dangerous business fooling with such explosive materials, but \$10,000 seemed worth the attempt. What he needed most was a chemical that would solidify the plastic mass so it could be shaped into a ball. He tried many things but when he reached camphor his experiments showed promise of success. He found that by careful compounding and handling, the mass could be



One of the twelve statues cast in transparent plastic for the Federal Government Building at the New York World's Fair 1939 is inspected by Ralph Mancuso, who made the rubber and plastic molds for the figures

shaped in a press—thus Celluloid was born.

No one seems to know whether Hyatt won the award or not but it didn't matter much because through his discovery and patents from Celluloid, and his later patents on roller bearings, he became a wealthy man.

Although many plastics have been discovered since, Celluloid survives. In addition to becoming the first synthetic billiard ball, it was immediately popular, because of its color, as a new material for the manufacture of inexpensive jewelry, dresser ware and such. Celluloid was used for the first windshields for automobiles, about the turn of the century. When safety glass was discovered, it became the first interlayer which made such protection possible. It served as windows of sorts in automobile side curtains until the closed car displaced their use. Later, it was found more suitable than hard rubber for fountain pen barrels. It gave these pens their first splurge of color and enormously increased their sale. In thin sheets, Celluloid became the first photographic film. Today, this material is used in toothbrush handles, dental plates, combs, advertising novelties, and thousands of other things where an inexpensive, tough, and non-brittle thermoplastic is not likely to come in contact with heat or flame during its use.

The next important discovery in plastics

was made by Dr. Leo Baekeland, in his laboratory at Yonkers, N. Y., about thirty years ago. It was known that carbolic acid in proper proportions combined with formaldehyde and then cooked would produce a gooey mess which no one had been able to render usable. Dr. Baekeland set about finding a way to make the substance harden, because he thought it would make a good insulating material. By careful compounding of ingredients and the introduction of a catalyst, he was able to bake the mixture into a sheet of insoluble material which was named *Bakelite*. This revolutionized the electrical, radio, automotive and other industries. And it has given marine architects and ship builders a fireproof construction material with a pleasing and lasting surface that will neither rust nor corrode. Prolonged heating at high temperatures or continuous contact with flame will cause decomposition but this plastic will not support combustion.

TWO GENERAL GROUPS

From these beginnings, plastics have been created in an almost endless parade. Some are variations of the original materials. Others are entirely new. All of them, however, come within one of these two general classifications: Thermoplastic, which for clarity will be referred to as *heat softening*; and Thermosetting, which will be called *heat hardening*.

Heat softening plastics may at any time be reshaped by heat. Most can be extruded in rods or tubes. All of them can be molded into various shapes, either by compression molding or injection molding. Some of them can be cast or poured in their liquid stage into lead or glass molds. Rods or rough sheets can be pressed into blocks and later sliced into sheets of any required thickness. Some are capable of being made in thin continuous sheeting by a process not unlike papermaking, and are generally used for wrappings like Cellophane, Lumarith, Monsanto CA, and Sylphwrap. Safety glass interlayer is made this way by several concerns.

With the exception of the thin continuous sheeting, which is hardened by drying out its solvents with heat, all heat softening plastics are formed or shaped by first softening with heat, then cooling in the mold under pressure. Once cooled, they retain their shape unless subjected to temperatures which bring them again to their softening points. These will vary with the different materials from 130°F to 180°F, or even higher temperatures with some of the more recent materials.

In direct contrast, heat hardening plastics

are placed in the mold cold. Then both heat and pressure are applied which bring about a complete chemical change in the materials. They must be left under pressure for a sufficient length of time to complete this change and can then be removed from the mold while still hot. Once cooled, they become a homogeneous, insoluble mass incapable of being shaped again by heat. Like heat softening plastics, they can be machined, drilled, bored and threaded as required, but their surfaces are much harder, more resistant to abrasion, less easy to damage, more resistant to heat, and non-inflammable.

In pointing out the subdivisions of these two groups, some of the trade names with which you are familiar will be given and the most common forms in which you are likely to recognize them will be indicated.

HEAT SOFTENING PLASTICS

Cellulose nitrate (Celluloid) is the original plastic and has already been discussed. Others in this classification include: Monsanto CN, Nixonoid, and Pyralin. They are seldom used in architecture and building except in the form of lacquers and surface coatings.

Cellulose acetate, also a heat softening plastic, is less inflammable than cellulose nitrate. It will burn with the consistency of rolled up newspaper and is, therefore, more suitable to general use when fire hazards are considered. It is available in hundreds of colors from white, through pastels to black, as well as clear transparent. Because it is of chemical construction, either dyes or pigments can be added. Any color that is originally fast will remain fast in this material. Cellulose acetate plastic is capable of molding, laminating, and may be obtained in sheets, rods or tubes of varying sizes. Striations and mottles are easily obtained. It is suitable to almost any application where the product is not subject to contact with high heat in use.

Trade names given to this classification by different manufacturers include: Bakelite CA, Monsanto CA, Lumarith, Masuron, Nixonite, Plastacele, and Tenite.

Cellulose acetate, either molded or laminated, has a soft brilliant sheen and a surface that will withstand considerable wear. This is indicated by its use for steering wheels, colored telephones, door knobs, etc. Its color, being

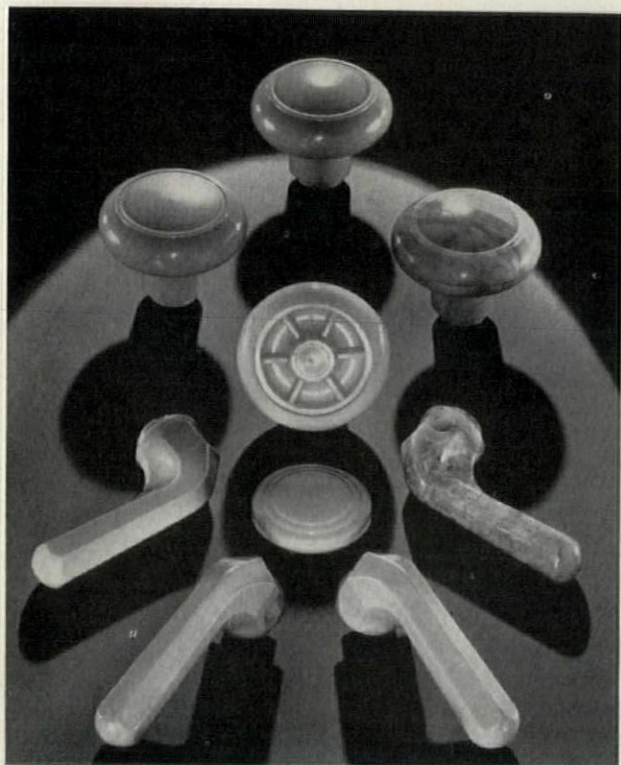
component and going all the way through, never wears off. Being a custom built material, matching colors can be obtained for architectural or decorative purposes within a surprisingly short period of time.

Acrylic resins, also in the heat softening group, are the most transparent of all plastics. They are so clear that they actually transmit more light than glass, weigh about one-half as much as glass, are non-shatterable, but cost considerably more. Originally made in Germany and used for cockpit housings and to give vision above and below in military bombers, these resins soon were in such great demand in this country that production began here. The aircraft industry is probably the largest user. They are made by two companies under the trade names of Plexiglas, Crystalite, and Lucite. They are available in sheets of varying thicknesses, and in rods and tubes up to about 48 inches long and not over 9 inches in diameter. Lucite and Crystalite are available as molding compounds and may be formed by either compression or injection molding.

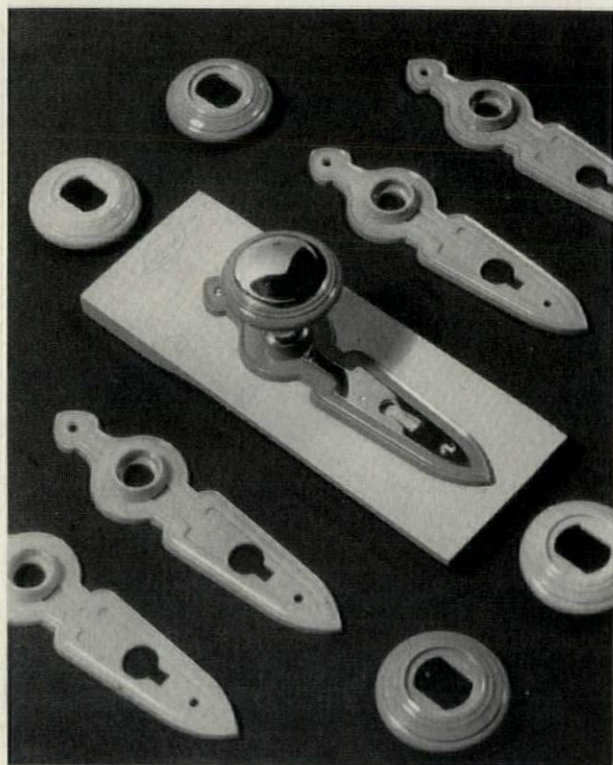
Excellent within their limitations for archi-



The Monophone shown here is molded of Tenite in a variety of colors, to harmonize with the interior decoration of rooms. The bell is housed in the phone base



Door knobs and French window handles molded in plastics over a metal core do not hold static electricity, and a shock from jumping sparks in cold weather is impossible. The hardware is practically unbreakable, with a smooth lustrous finish. Plain colors and a pleasing variety are available. The illustration below shows an interesting array of interchangeable knobs and escutcheons of plastic, available in a range of colors



texture and decoration, these materials possess peculiar edge lighting qualities not present in other materials. Letters and designs may be molded or engraved in the surface. When lighted from above or below, these designs appear to be lighted by themselves. A solid rod of acrylic plastic may be bent into any contour and when a small light is placed at one end the light rays will follow the curve of the rod, coming out the other end with little loss of power or brilliance. This physical characteristic was grasped quickly by the medical profession and many new instruments utilize this edge lighting property.

Like all plastics, the acrylic type can be sawed, drilled, turned and shaped on wood-working equipment. In thin sheets, it can be bent to any reasonable radius by immersing in hot water for a few minutes, then shaping by hand. When it returns to room temperature, it will hold its new shape.

The greatest handicap of this plastic is its soft surface, which will scratch unless every precaution is taken. It is not practical to use where constant abrasion is likely. Another drawback is its price, which probably will come down as increased demand steps up production so that it can be manufactured with greater economy. The ingredients—colorless liquids—are not essentially expensive. It can be colored with dyes but most of the applications to date have employed only the clear, transparent resin.

Suggested uses where acrylic would be well adapted include: indirect lighting panels, fan lights, permanent or portable screens, curved or odd-shaped mirrors. It can be silvered like any mirror and is being used in aircraft because of its light weight. Aircraft designers use a pinkish sheet for mirrors to create the impression of a rosy complexion which passengers, inclined to air-sickness, sometimes lack. This plastic is suitable for any spot where a patterned surface or delicate, transparent colors are desired.

Styrene, another transparent heat softening plastic, made its commercial appearance during the past two years. The least moisture-absorbent of all heat softening materials, styrene is used largely for insulation at the present time. It is one of the materials which has made television possible, by supplying an inexpensive insulative material that makes short waves behave and stay where they belong. It may be cast in rods, sheets, and tubes or is available as a molding compound. Bakelite Polystyrene is its trade name.

Vinyl, the newest decorative sheet plastic to reach the market, has greater moisture resistance than cellulose acetate and is available in a full line of delightful colors. Standard sheet sizes are 20" by 50", in thicknesses from 0.10" to 0.30". One of its first commercial uses is in men's and women's dressing rooms on the Yankee Clipper where it starts at the floor and goes up 40 inches to form a wainscot. The trade name of this material is Vinylite.

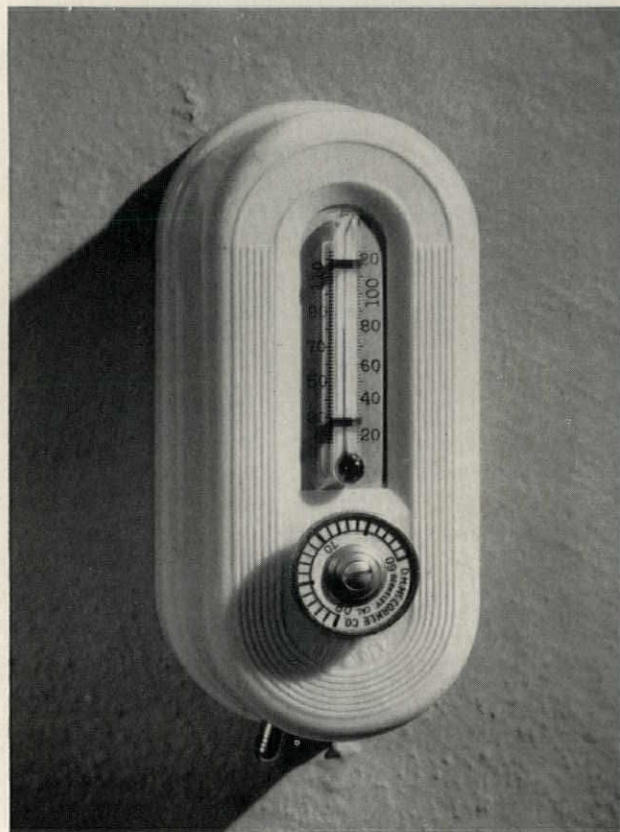
There are other heat softening plastics—many of them—but since they are either in the development stage or are employed chiefly in non-architectural and non-decorative applications, they will not be described here.

HEAT HARDENING PLASTICS

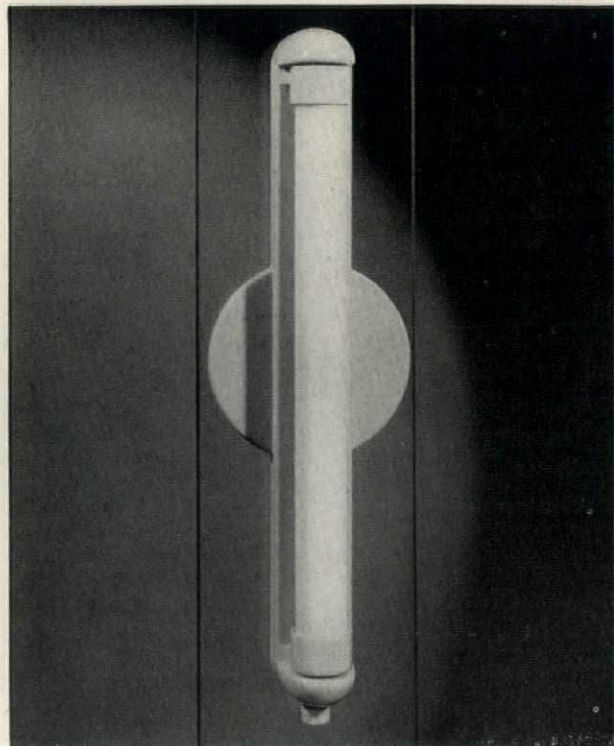
Phenolic is the term applied to the first of the two classifications into which heat hardening plastics may be subdivided. These plastics, made from phenol and formaldehyde, are usually black, brown, or the darker shades of red, blue, and green. The colors result from the fact that phenolic materials in their liquid stage are amber in color. Any pigments or dyes in light shades used to change this color are likely to darken with age.

Bakelite, of course, was the first heat hardening plastic of the phenolic group. Other plastics of similar chemical origin include such trade names as: Durez, Durite, Indur, Makalot, Resinox, and Textolite. All these are molding compounds. Most common uses include all sorts of industrial applications from automotive insulation, distributor heads, radio parts and cabinets, bathroom fixtures and accessories (dark colors), electrical fixtures and attachments, handles for all sorts of equipment where insulation and resistance to heat is required, door knobs, latches and hardware, kickplates, to anything that can be shaped in a mold of reasonable size. This mold size is usually governed by the quantities of pieces to be produced. Molds are expensive to make since they must be machined from hard steel and their cost must be amortized over the production run. There is also the limitation of press sizes to provide the required pressure, and the largest plastic piece to be molded in this country on a production basis is about 27 inches in diameter and about 15 inches deep.

Molding phenolics, like all other plastics, it should be remembered, are of chemical origin and their physical properties and characteristics can be varied at will. One manufacturer has more than 2000 formulæ available. This is mentioned only to show the importance of obtaining dependable advice before specifying



The ivory-colored Plaskon housing of this thermostat is relatively insensitive to temperature changes and does not affect the response of the instrument. The molded plastic bracket for a tubular light, below, is compact

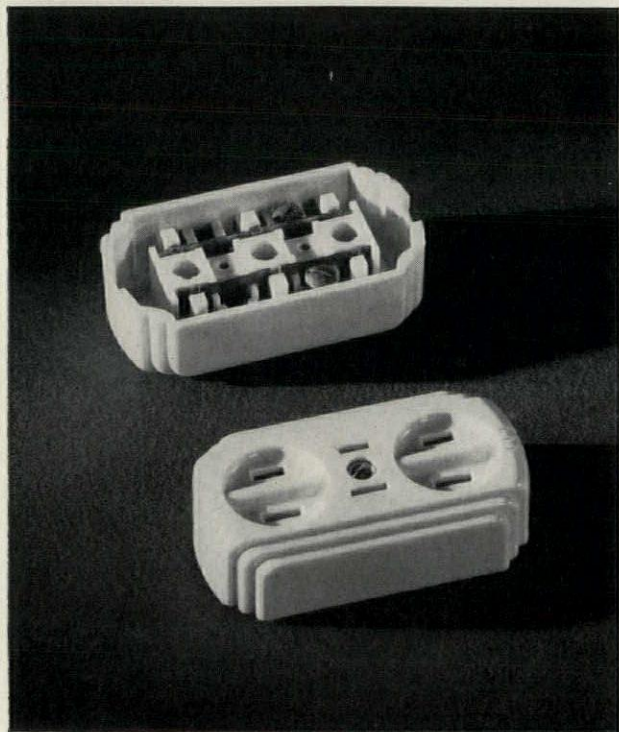


plastics for any purpose. Mistakes may be avoided, generally, if the advice of a material dealer is obtained before the plastic is chosen for any definite job. Confidence between the architectural designer and the material supplier is imperative if uniformly satisfactory results are to be obtained. This is equally true in choosing any other plastic material.

Phenolics are available also in cast forms such as sheets, rods, and tubes; which means that the resin in its liquid stage is poured into lead or glass molds which give it shape, then are baked (cured) at controlled temperature for a number of days. These resins are distinguished by brilliant translucent colors which may be plain or mottled as desired. When used in clear transparent form, a delicate blue or green dye is incorporated to prevent yellowing. The huge statues for the Government Exhibit at the New York World's Fair were made this way, except that rubber and plaster of Paris molds were employed. Many small items of merchandise such as brush backs and radio cabinets, and decorative objects such as bookends, are cast in lead molds. Trade names in this group include: Bakelite Resinoid, Catalin, Monsanto CP, Gemstone, and Marblette.

Most common uses of cast phenolics are jewelry, buttons, designer's models, pipe stems, cigaret holders, dice, chessmen, handles and ornaments, door handles (modern straight bar secured at either end in a metal bracket), cut out letters for signs, and translucent panels for radio and phonograph decoration.

As molding compounds, *urea plastics* are



commonly filled with alpha cellulose, a highly refined wood product, to give them strength and stability. Wall thicknesses can be controlled to provide translucency or opacity as desired. Pigments and dyes are added to give these materials their wide range of attractive colors. They are resistant to moisture but not immune to it. They find wide usage in the building trades. Their surface when molded is hard and lustrous, unaffected by alcohol, weak acids or alkalies, and will stand a lot of abuse. Like all plastics, their surface will neither rust nor corrode.

Available under such trade names as: Bakelite Urea, Beetle, and Plaskon, their most common uses include reflectors and bowls for lighting fixtures, radio cabinets, all sorts of electrical equipment and attachments where light colors are desired, lighting fixtures and brackets, door knobs, push plates, switch plates, light weight tableware for aircraft, trailers and picnics, jewelry, cosmetic containers, boxes, and housings for electric razors, weighing scales, etc.

LAMINATED PLASTICS

Both heat softening and heat hardening plastics are capable of lamination although the process for each is somewhat different. Parkwood, for example, is made by first arranging thin strips of rare wood veneers into the desired pattern. The resulting sheet is placed between two thin sheets of cellulose acetate (heat softening), and squeezed in a hot press which forces the plastic sheet into all the pores of the wood. When cooled, the completed sheet is integral and impossible of separation. The sheets can be made about four by eight feet, and may be bent to any reasonable radius. Parkwood has been used to surface columns, bar fronts, stateroom interiors, and where furniture calls for curved fronts or ends. It is also used in the manufacture of vanity cases, hand bags, even hats for women, which indicates its flexibility and endurance.

Heat hardening plastics, either phenolic or urea, are laminated by impregnation. That is, the resins are combined with fibrous sheets such as paper and consolidated into usable forms by the application of heat and pressure. Variations exist, of course, and canvas, thin metal and real wood are often incorporated in the process. The resin comes to the manufac-

Plastics are dielectric by nature and are widely used for switch plates, outlet box plates, and the unseen cores of electric mechanism and connection blocks. Covers are often colored to match the room decorative scheme

turer in the form of varnish, or a solution of the resinous material in solvents such as alcohol or water. If paper is dipped in these varnishes and then heated in a dryer, the solvents pass off as vapor, leaving the paper impregnated with essentially dry resin. Color is often ground into the varnish before the paper is dipped and fiber is introduced into the mixture to prevent crazing in the final product.

Inlays are accomplished by placing metal strips or contrasting strips of colored paper (impregnated with resin) on the surface to form a pattern and then are actually pressed down into the sheet to a point where they are level with the surface.

These are preliminary steps to the actual laminating operation. Each careful step is carried on in different sections of the plant, then they are finally brought to the assembly room for collating before pressing. The surface of the finished sheet is determined by a steel plate which, for a glossy surface, has a mirror surface. For a satin finish, a satin-finished plate is used. Likewise, Morocco and other leather finishes are obtained from steel plates in which this finish has been carefully engraved.

In building up the laminated sheet, a translucent urea sheet is placed against the finish plate, followed by the printed or inlaid sheet which has its decoration on the front. Next comes the color background sheet, blister-proof sheet (if one is being used), filler stock and backing sheet. If a plain colored sheet is desired, the printed or inlaid sheet is omitted. If real wood is being laminated, the impregnated veneer takes the place of both the printed and color background sheets.

When all this is pressed together, it makes a sheet 3 feet by 8 feet and about 1/16 inch thick. Six sheets are normally built up in one pack and seven packs are cured in the press at one time. All material has to cool in the press with cold water circulating through the platens to prevent blistering of the sheets.

Table tops, bar tops, doors, are made to order over a wood core. The laminated material is cut to size, the edge being glued in place first, then the top and bottom are glued in place. By this method, the top and bottom extend over the edge, protecting it from damage from subsequent operations and in use. The glue dries in about four hours while the entire piece is held firmly together in a hand press.

Laminated material for architecture derives

its importance from the fact that it is a homogeneous material from top to bottom. The resinous material is continuous throughout the fiber content. There is no layer in the sheet where you step from one kind of material to another having different characteristics where destructive stresses can develop from movements due to atmospheric conditions.

It is customary to glue a veneer sheet of laminated to a plywood core for the construction of book cases, telephone booths and cabinets. Heavy sheets of the material can be built, but their cost for decorative purposes becomes too high. Molded shapes such as base board, drawer fronts, cornices, etc., are available but the material cannot be successfully laminated in shapes that require three dimensions with a deep draw.

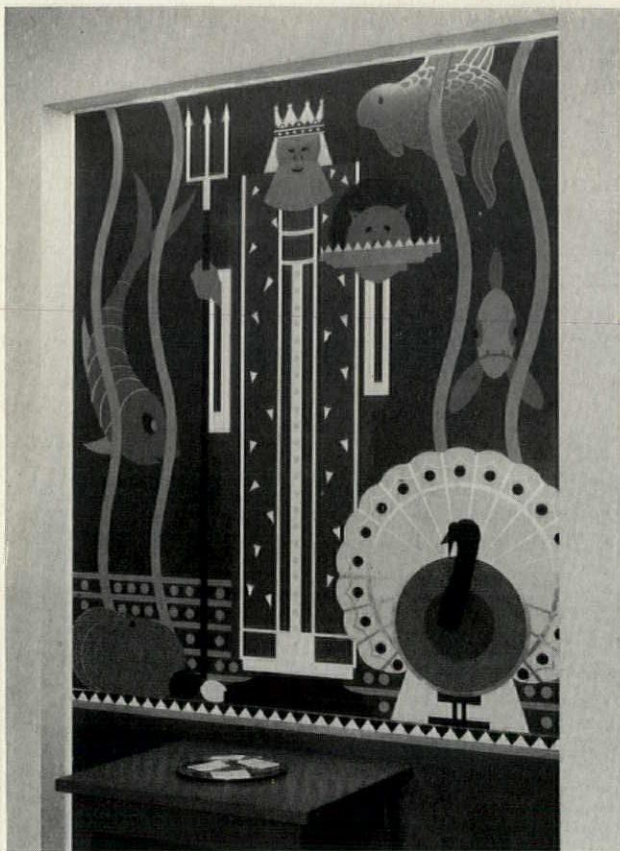
The product can be handled with wood-working tools and since all exposed surfaces are resinous, the finished product is essentially a laminated piece. In turn, the wood core is almost completely encased in impervious sheet.

TRANSLUCENT LAMINATES

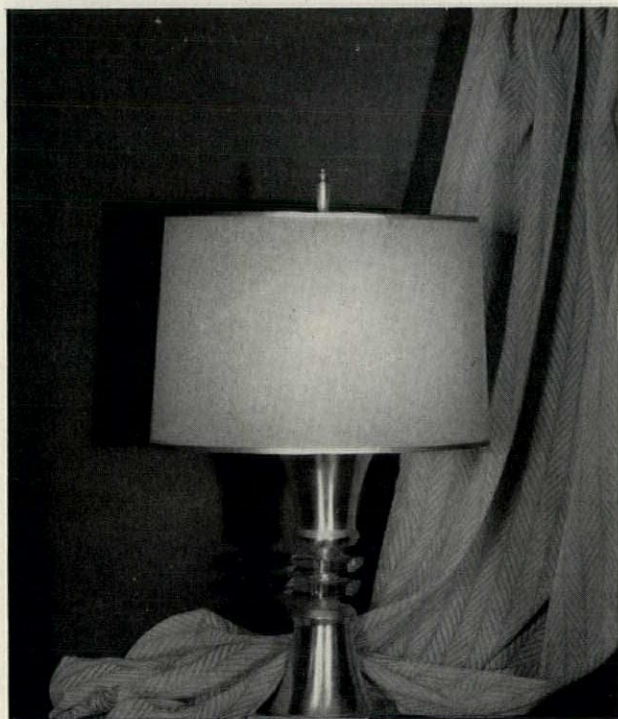
Translucent laminated sheets have made their appearance during the last year in thicknesses from .010 inch to 1/2 inch. And in sizes 3'0" x 3'6", to 4'1" x 4'11". Ivory, white, and colors may be obtained for lighting fixtures of the new panel type, also window type translucent partitions, desk and table tops, push and kick plates for doors, name plates, door sign inlays,



Venetian blinds made of translucent, laminated strips of plastic have recently made their appearance. They admit softened light, even when closed, but exclude harsh glare



Inlaid metals and bright-hued plastic compose this unusual mural of Father Neptune. The Lumarith shade below is typical of the cellulose acetate lamp shades, which diffuse light as a pleasing glow. They are delicately colored and may be washed frequently without damage



window ventilators, and Venetian blinds.

Venetian blinds, when made of translucent laminated strips, have the advantage of admitting soft light into the room while preventing glare. Their surface is permanent and may be cleaned easily without damage.

Photo enlargements, maps or murals may be inserted beneath the transparent top sheet and preserved in the laminated sheet.

Laminated plastics may be found under such trade names as: Aqualite, Celeron, Dilecto, Dilophane, Duraloy, Fibroc, Formica, Insurok, Lamicaid, Micarta, Ohmold, Panelyte, Phenolite, Spauldite, Synthane, Taylor, Textolite, Ucinite.

Those in which urea formaldehyde is the principal ingredient may be found under the names Beetle, Formica, Insurok and Micarta.

In résumé, then, we have a variety of plastics in a number of different forms: *laminated and homogeneous sheets* in transparent, translucent and opaque types. Some of these sheets are available in standard dimensions and finishes while special effects may be obtained by custom manufacture. *Rods and tubes* are available and the easy working of these standard shapes will suggest many decorative uses to the designer. A third classification would be *castings* of plastic, which fall under the heading of special manufacturing procedure and are, consequently, beyond the range of economic feasibility for most work unless repetition cuts the cost. A fourth classification would be the *fabricated products* such as lighting fixtures, hardware and switch plates which make use of plastics in standard designs obtainable from an increasing number of manufacturers. It should be emphasized that experiment on the part of the designer in creating special designs with plastics will result in unique and interesting effects and will broaden the field of available architectural elements by indicating an interest in plastics as a design material.

WHAT NEXT?

To look into the future and picture coming uses of plastics in architecture and decoration with any degree of certainty is quite impossible to do. Architects and designers must become better acquainted with the materials. They must come to recognize their advantages and their limitations. They must experiment with the materials as others have done, before the use of plastics will become general. It is safe to predict, however, that the use of plastics will increase more rapidly than in the past. The current interest, the new applications, the freedom of modern design, all indicate this.

DIRECTORY OF TRADE NAMES AND MANUFACTURERS OF PLASTICS

PHENOL-FORMALDEHYDE MOLDING COMPOUNDS

Bakelite—Bakelite Corp., 247 Park Ave., New York
Catalin—Catalin Corp., 1 Park Ave., New York
Celeron—Continental Diamond Fibre Co., Newark, Del.; New York office: 230 Park Ave.
Durez—General Plastics Inc., 710 E. Walck Rd., N. Tonawanda, N. Y.; New York office: 250 Park Ave.
Durite—Durite Plastics, 5010 Summerdale Ave. (near Roosevelt Blvd.), Philadelphia
Heresite—Heresite and Chemical Co., 822 S. 14th St., Manitowoc, Wis.
Indur—Reilly Tar & Chemical Corp., 500 Fifth Ave., New York
Insurok—Richardson Co., 2707 Lake St., Melrose Park (Chicago); New York office: 75 West St.
Makalot—Makalot Corp., 262 Washington St., Boston
Resinox—Resinox Division of Monsanto Chemical Co., Springfield, Mass.; New York office: 30 Rockefeller Plaza.
Textolite—General Electric Co., Plastics Dept., 1 Plastics Ave., Pittsfield, Mass.
Uniplast—Universal Plastics Co., 235 Jersey Ave., New Brunswick, N. J.

PHENOL-FORMALDEHYDE LAMINATED PRODUCTS

Aqualite—National Vulcanized Fibre Co., Wilmington, Del.
Celeron } Continental Diamond Fibre Co., Newark, Del.; New York office: 230 Park Ave.
Dilecto }
Dilophane }
Duraloy—Detroit Paper Products Corp., 5800 Domine St., Detroit
Fibroc—Continental Diamond Fibre Co., Newark, Del.
Formica—Formica Insulation Co., 4672 Spring Grove Ave., Cincinnati; New York office: 101 Park Ave.
Insurok—Richardson Co., 2707 Lake St., Melrose Park (Chicago); New York office: 75 West St.
Lamicaid—Mica Insulator Co., 200 Varick St., New York
Micarta—Westinghouse Electric & Mfg. Co., Micarta Div., Trafford, Pa.
Obmold—Wilmington Fibre Specialty Co., East Wilmington, Del.
Panelyte—Panelyte Corp., 230 Park Ave., New York
Phenolite—National Vulcanized Fibre Co., Wilmington, Del.
Spauldite—Spaulding Fibre Co., 313 Wheeler St., Tonawanda, N. Y.; New York office: 484 Broome St.
Synthane—Synthane Corp., Oaks, Pa.
Taylor—Taylor Fibre Co., Norristown, Pa.; New York office: 90 West St.
Textolite—General Electric Co., Plastics Dept., 1 Plastics Ave., Pittsfield, Mass.
Ucinite—United-Carr Fastener Corp., 31 Ames St., Cambridge, Mass.

PHENOL-FORMALDEHYDE CAST RESINS

Bakelite—Bakelite Corp., 247 Park Ave., New York
Catalin—Catalin Corp., 1 Park Ave., New York
Monsanto CP—Plastics Div., Monsanto Chemical Co., Springfield, Mass.; New York office: 30 Rockefeller Plaza.
Gemstone—The Knodler Co., Lancaster, Pa.
Marblette—Marblette Corp., 37-21 30th St., Long Island City, N. Y.

PHENOL-FURFURAL RESINS

Durite—Durite Plastics, 5010 Summerdale Ave. (near Roosevelt Blvd.), Philadelphia

UREA-FORMALDEHYDE MOLDING COMPOUNDS

Bakelite—Bakelite Corp., 247 Park Ave., New York
Beetle—Beetle Products Div., American Cyanamid Co., 30 Rockefeller Pl., New York
Plaskon } Plaskon Co., Inc., 2112 Sylvan Ave., Toledo, Ohio; New York office: 41 E. 42nd St.
Unyte }

UREA-FORMALDEHYDE LAMINATED PRODUCTS

Beetle—Beetle Products Div., American Cyanamid Co., 30 Rockefeller Pl., New York
Formica—Formica Insulation Co., 4671 Spring Grove Ave., Cincinnati, Ohio
Lamicaid—Mica Insulator Co., 200 Varick St., New York
Insurok—Richardson Co., 2707 Lake St., Melrose Park (Chicago), Ill.
Micarta—Westinghouse Electric & Mfg. Co., Micarta Div., Trafford, Pa.

VINYL RESINS

Alvar }
Butvar } Shawinigan Resins Corp., jointly owned by Monsanto Chemical Co., Plastics Division, Springfield, Mass., and Shawinigan Chemicals, Ltd., of Canada.
Formvar }
Gelva }
Solvay }
Vinylite—Carbide & Carbon Chemicals, 30 E. 42nd St., New York.
Butacite—E. I. du Pont de Nemours & Co., Inc., 10th and Market Sts., Wilmington, Del.

ACRYLATE AND METHACRYLATE RESINS

Crystalite—(Molding compound) Röhm & Haas Co., Inc., 222 W. Washington Square, Philadelphia
Lucite—(Molding compound & cast resin) E. I. du Pont de Nemours & Co., Inc., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.; New York office: 350 Fifth Ave.
Plexiglas—(Cast resin) Röhm & Haas Co., Inc., 222 W. Washington Square, Philadelphia

STYRENE RESINS

Bakelite Polystyrene—Bakelite Corp., 247 Park Ave., New York.
Styron—Dow Chemical Co., Midland, Mich.

CELLULOSE ACETATE

Bakelite—Bakelite Corp., 247 Park Ave., New York
Monsanto CA—Plastics Div., Monsanto Chemical Co., Springfield, Mass.; New York office: 30 Rockefeller Plaza.
Lumarith—Celluloid Corp., 10 E. 40th St., New York
Masuron—John W. Masury & Son, 50 Jay St., Brooklyn, N. Y.
Nixonite—Nixon Nitration Works, Nixon, N. J.
Plastacel—E. I. du Pont de Nemours & Co., Inc., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.; New York office: 350 Fifth Ave.
Tenite { Tennessee Eastman Corp., Kingsport, Tenn.; New York office: Room 4105, 10 E. 40th St.
Hercules Powder Co., 999 Market St., Wilmington, Del.

CELLULOSE NITRATE (PYROXYLIN)

Celluloid—Celluloid Corp., 10 E. 40th St., New York
Monsanto CN—Plastics Div., Monsanto Chemical Co., Springfield, Mass.; New York office: 30 Rockefeller Plaza.
Nixonoid—Nixon Nitration Works, Nixon, N. J.
Pyralin—E. I. du Pont de Nemours & Co., Inc., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.; New York office: 350 Fifth Ave.

COUMARONE-INDENE RESINS

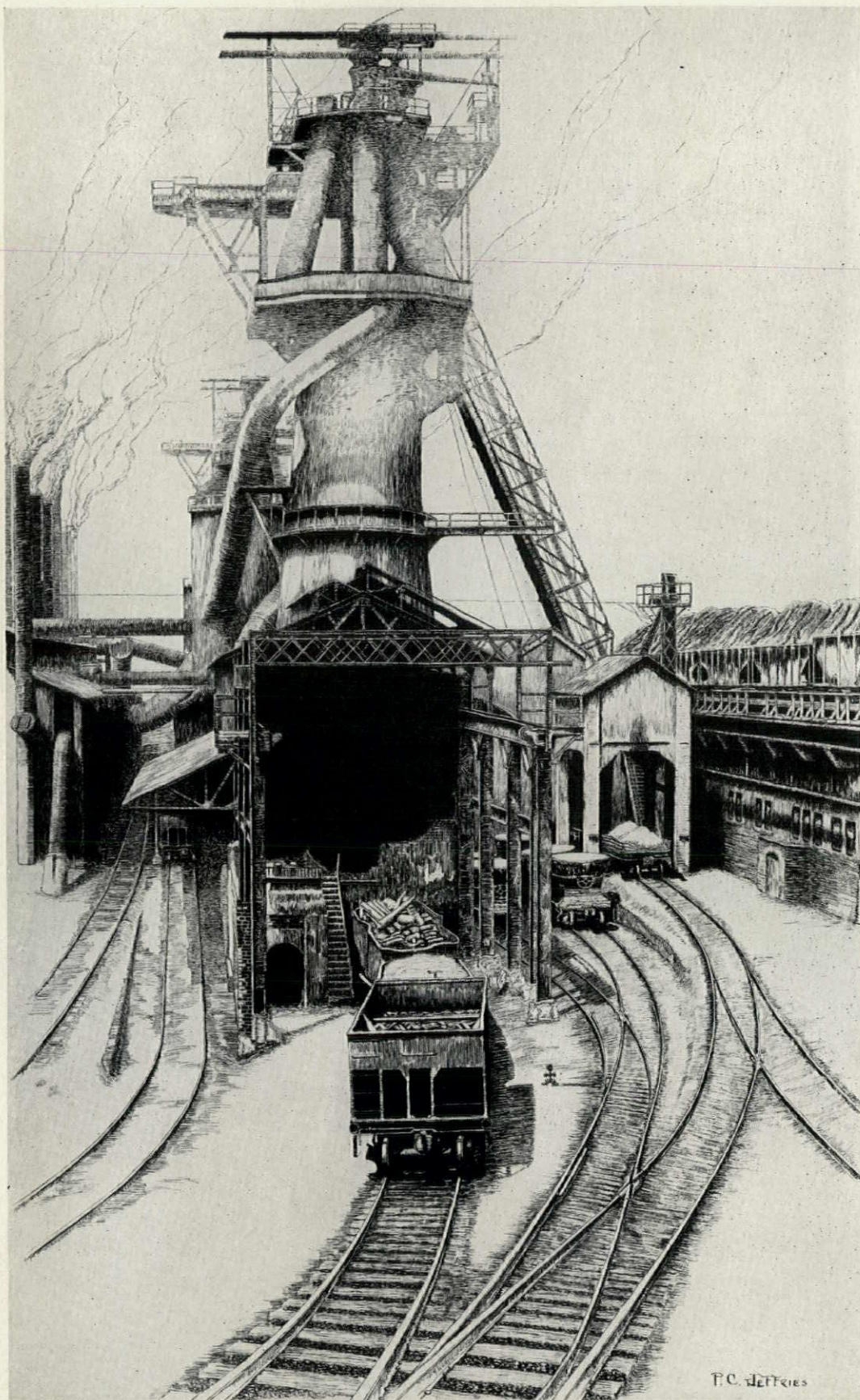
Cumar—Barrett Co., 40 Rector St., New York
Neville Resin } Neville Co., Neville Island Post Office, Pittsburgh
Nevindene }

LIGNIN PLASTICS

Benaloid—Uncured lignin sheets } Masonite Corp., Laurel, Miss.
Benalite—Cured lignin sheets }

MISCELLANEOUS PLASTICS

Beetleware—Urea moldings: Beetle Products Div., American Cyanamid Co., 30 Rockefeller Pl., New York
Bonnyware—Urea moldings: Reynolds Molded Plastics, Div., Reynolds Spring Co., Jackson, Mich.
Charmour—Cellulose acetate: Celluloid Corp., 10 E. 40th St., New York
Clair de Lune—Cellulose acetate: Celluloid Corp., 10 E. 40th St., New York
Gemloid—Pyroxylin and cellulose acetate: Gemloid Corp., 425 Fourth Ave., New York
Haskelite—Plywood bonded with phenolic resin: Haskelite Mfg. Co., 208 W. Washington St., Chicago
Hemcoware—Urea moldings: Bryant Electric Co., 1934 Weaver Ave., Bridgeport, Conn.
Lumarith Protectoil—Cellulose acetate packaging material: Celluloid Corp., 10 E. 40th St., New York
Revolite—Cloth impregnated with phenolic resin: Zapon Div., Atlas Powder Co., Stamford, Conn.
Sundora—Cellulose acetate: E. I. du Pont de Nemours & Co. Inc., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
Tego, **Uformite**—Phenolic resins for plywood: Resinous Products & Chemical Co., 222 W. Washington Square, Philadelphia.
Vue-Pak—Cellulose acetate packaging material: Plastics Division, Monsanto Chemical Co., Springfield, Mass.; New York office: 30 Rockefeller Plaza.

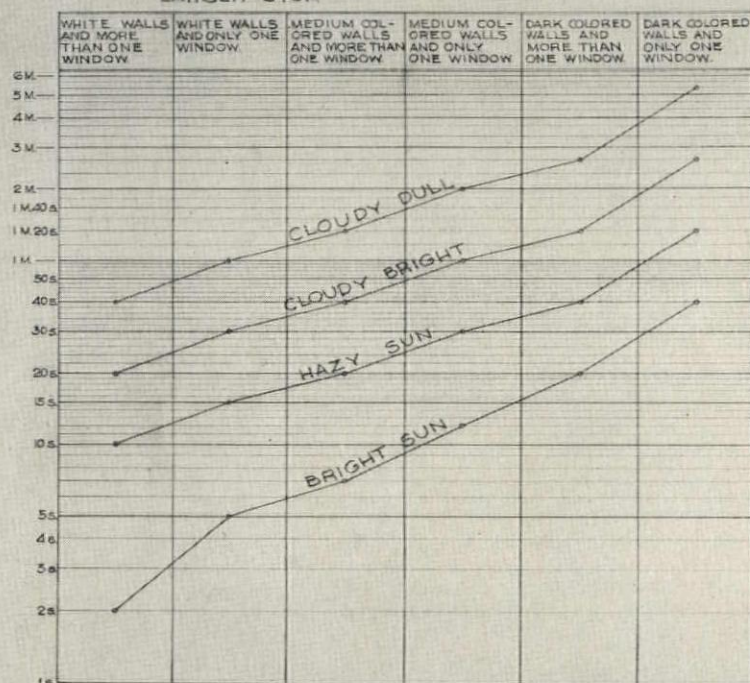


The ordered industry of one of the vast mills of the Republic Steel Company, dominating the Youngstown, Ohio, valley, is interpreted here with pen and ink by P. C. Jeffries, Lancaster, Ohio, illustrator. As the "No Visitors" sign was up at the mill, Jeffries first recorded the subject with his camera, from a street over-pass above the plant which afforded this view

Drawn on Pencil Tracing Cloth with TYPHONITE ELDORADO 2H pencil.

DAYLIGHT EXPOSURE CHART FOR INTERIORS

NOTE * THIS CHART IS DESIGNED FOR STOP F.16. DOUBLE THE EXPOSURES FOR EACH SMALLER STOP, AND HALVE THE EXPOSURES (WITH SOME EXCEPTIONS) WITH EACH LARGER STOP.



* THESE EXPOSURES ARE FOR ROOMS WHERE WINDOWS GET THE DIRECT LIGHT FROM THE SKY AND FOR HOURS FROM THREE HOURS AFTER SUNRISE UNTIL THREE HOURS BEFORE SUNSET. IF EARLIER OR LATER THE EXPOSURES MUST BE LONGER.

**DAYLIGHT
!
CAMERA
!**

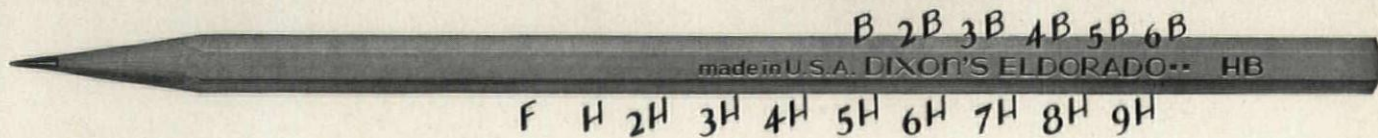
SKILL in handling a camera is a valuable asset to an architect. And so to take some of the guesswork out of exposures, *Typhonite Eldorado presents this month a Daylight Exposure Chart for Interiors. Daylight photos are the safest method for the average amateur—and the cheapest.

Incidentally, no type of drawing demands more of a pencil than a graphic chart like the one reproduced here. Uniform, coordinate lines require a point of uniform composition that will make a consistently black line for good prints. Naturally, a Typhonite Eldorado was selected, in this case—a 2H. The drawing was made on Keuffel & Esser's new No. 166 white pencil tracing cloth.

If you'd like an actual size blue print of this chart, free, just write to Pencil Sales Department, 167-J6, JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.



SOUND travels through average atmosphere at 750 miles per hour. But nearly 3 times as fast (2,180 miles per hour to be exact) is the whirling, smashing velocity of the typhoon of dry steam used to pound graphite into the minute particles known as Typhonite. Typhonite is used exclusively by Dixon in making Eldorado. The Master Drawing Pencil. It gives you longer lasting points that produce opaque lines and figures easily and fast.



S E R V I C E D E P A R T M E N T S

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. Only those items will be listed for sale which we can no longer supply from our own stock. 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 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.

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.

Notices submitted for publication in these Service Departments must reach us before the twelfth of each month if they are to be inserted in the next issue. Address all communications to 330 West 42nd Street, New York, N. Y.

THE MART

WANTED: Copy of *Modern Perspective*, Wm. Robert Ware, MacMillan Company, N. Y., 1900. State price and condition. Communicate Miss Flagg, PENCIL POINTS.

WANTED: Copy of *Architec-tonics, The Tales of Tom Thumtack*, Architect, published by Wm. T. Comstock Company, 1914. State price and condition of book.

Eugene A. Stopper, 1805 Liberty Trust Building, Philadelphia, Pa., wishes to purchase copies of *Hospitals* beginning with the January, 1936, issue through March, 1939.

James Wynborough, 101 Park Avenue, New York, N. Y., will sell complete collection of PENCIL POINTS, including *Monographs*, etc. Will not break the lot. Will include miscellaneous architectural magazines and plates. Please make offer.

M. T. Meadowcroft, 2725 Boston Blvd., Detroit, Mich., has the following books for sale: *Picturesque America*, Vol. I, D. Appleton & Co., 1874 and Vol. II; *Dante's Inferno*, illustrated by Gustave Doré, translated by Rev. Henry Francis Cary, M.A., published by Peter Fenelon Collier, about 1860; New Gallery of British Art, Vol. I and Vol. II, D. Appleton & Co., N. Y., contains steel engravings from the works of distinguished British painters.

PERSONALS

FURBRINGER & EHRMAN, Architects, have moved their offices from the Porter Building to 1004 Union Planters National Bank Building, Memphis, Tennessee.

THOMAS W. COTHRAN, Architect, has opened an architectural office in the Central Union Building, (P. O. Box 461), Greenwood, S. C.

GRANT & GEORGE, Architects, have dissolved partnership. Alfred Watts Grant has opened an office for the practice of architecture at 1340 Post Road, Fairfield, Conn. L. Livingston George will continue to practice architecture at the firm's old address, 44 East State St., Westport, Conn.

LEO E. DIXON, Architect, has established an office for the general practice of architecture at 119½ Spring Street, Johnson City, Tenn.

PAUL CERRINA, Architect, has re-opened his office at 280 Huguenot Street, New Rochelle, N. Y.

FREE EMPLOYMENT SERVICE

POSITIONS OPEN

DESIGNER and draftsman wanted, small residences, exceptionally clever on sketches, permanent position, good future, must have five to ten years' experience, be rapid and neat. 805 East Mountain, Glendale, California.

POSITIONS WANTED

ARCHITECTURAL draftsman, 26, desires position in architect's or builder's office. Four years' experience with the city's building expert. Familiar with all types of buildings. Capable of estimating and personal supervision of small houses and stores. Graduate of Mechanics Inst. of N. Y. Moderate salary. Ellery Wankel, 1272 Albany Ave., Brooklyn, N. Y.

ARCHITECTURAL draftsman, 26, desires position in architect's office or construction work. Bachelor of Arch. Engineering degree. Available June 1st. Arne J. Kontturi, 3106 Peery Avenue, Kansas City, Mo.

DRAFTSMAN, 30, married, 9 years' engineering experience, I.C.S. architectural graduate. Work for architect or engineer. Go anywhere. James Struble, Box 163, Angelica, N. Y.

YOUNG man, 21, graduate of architectural construction course. No office experience but willing worker. Location no hindrance to desirable opportunity. Gerard A. Bures, 2938 E. Monument Street, Baltimore, Md.

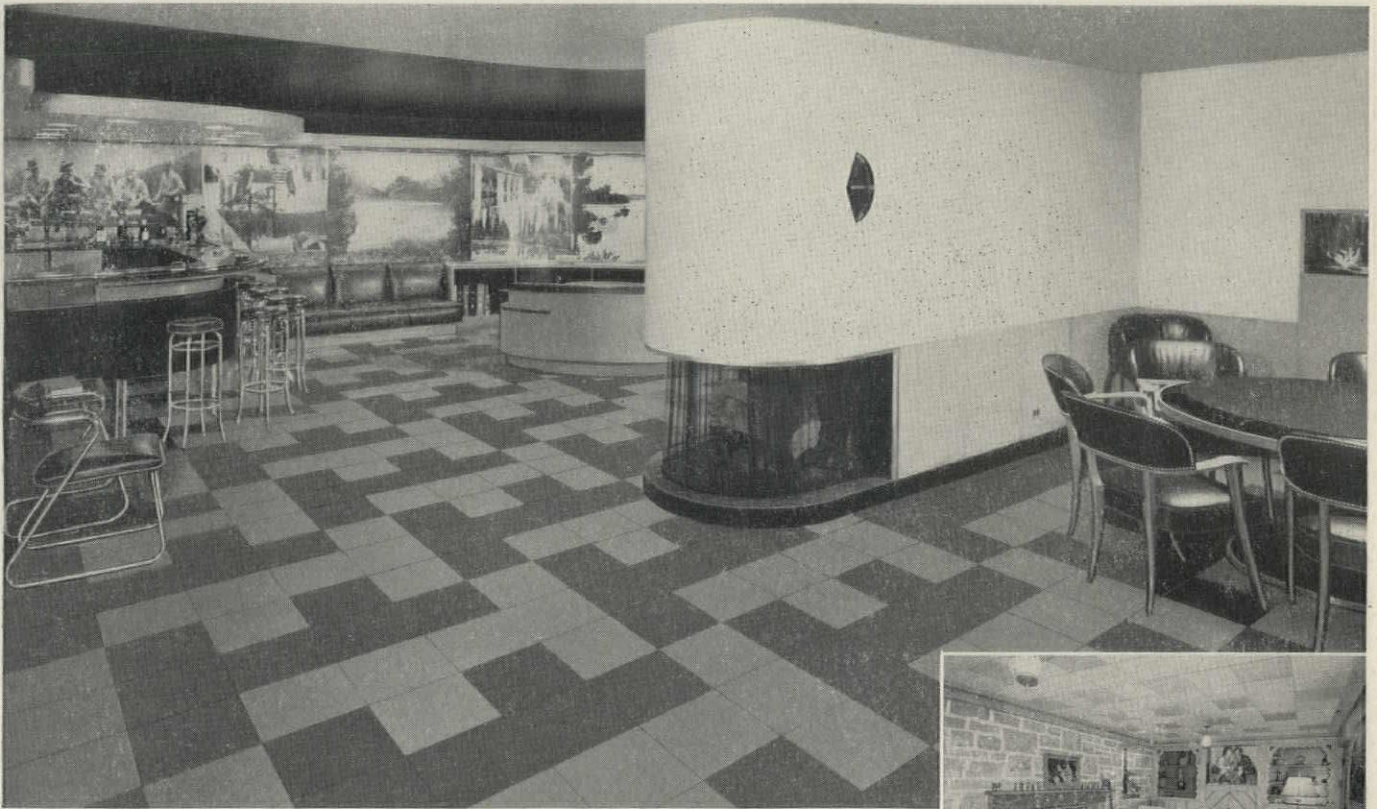
HIGH SCHOOL graduate with some drafting experience desires position with architect or builder in Philadelphia vicinity. Salary no object. Donald Shelton, 209 Broadway, Brooklawn, N. J.

BUILDING construction is what I am interested in. 18 years of age, and have drafting experience. Edward Huton, 238 Thatford Ave., Brooklyn, N. Y.

(Continued on page 44, Advertising Section)

BEAUTY AND THE BASEMENT

Three home recreation rooms get beautiful, long-wearing floors of Armstrong's Asphalt Tile



Modern to the Nth degree, but in excellent taste, is this basement recreation room with its attractive floor of Armstrong's Steel Gray and Lead Gray Asphalt Tile.

ARCHITECTS can no longer ignore basements, because the client of today knows and wants a basement recreation room. And to make your task easier—to keep costs down—Armstrong offers you a truly economical asphalt tile flooring that lends itself to the creation of beautiful basement floors.

Armstrong's Asphalt Tile dispels many important basement problems. It is the only type of resilient floor that can be used over concrete in direct contact with the ground. Maintenance is inexpensive and easy. Daily dusting and occasional washing and waxing keep it fresh and new-looking for years.

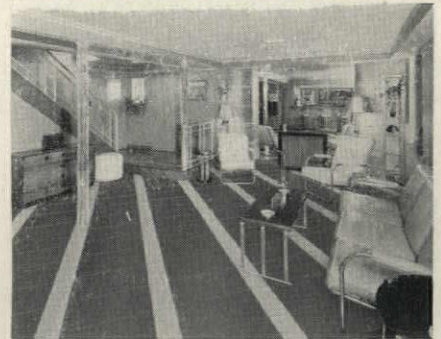
This asphalt tile provides a scuff-proof play floor with colors that can't wear off because they run right through the material. It is fire-resistant, and cigarette burns can be easily removed by rubbing lightly with fine steel wool. Waxed, Armstrong's Asphalt Tile makes a fine game board or dance floor.

The color schemes you can create in asphalt tile are practically unlimited. In addition to a wide range of plain and marble colors, you can have insets cut to almost any shape you wish. Get all the facts. See *Sweet's* or let us send you a copy of "Gay Floors for Basement Playrooms." Armstrong Cork Company, 1206 State Street, Lancaster, Pa.

Armstrong manufactures the only complete line of resilient floors—Asphalt Tile, Linoleum, Linotile (Oil-Bonded), Cork Tile, and Reinforced Rubber Tile. Therefore our Architectural Service can offer you unbiased suggestions.



"Relax," says this ingenious rustically-styled basement recreation room. The architect has used Spanish red asphalt tile with a feature strip of white, creating a floor that is beautiful as well as comfortable and quiet.



Note the entirely different effect obtained with Spanish red and white asphalt tile in this modern room. Diagonal strips seem to add yards of space to the room. The ceiling is Armstrong's Temlok De Luxe.

RUBBER TILE • LINOTILE (OIL-BONDED) • ASPHALT TILE

Armstrong's **LINOLEUM**
and **RESILIENT, NON-CERAMIC TILES**

CORK TILE • LINOWALL • ACOUSTICAL CEILINGS



Gunnison House, entirely of Tego-Bonded Panels, at Louisville, Ky.

TEGO-BONDED FOR SUPER-PLYWOOD

Vast developments in the past ten years have made plywood the extremely durable, economical, and beautiful material that is needed in building. The culmination of the development was Tego-bonded plywood—fused together with indestructible Tego Resin Film.

Tego-bonded plywood now looks back over four years of successful volume use, under the most exacting and diversified conditions. Its name is synonymous with extreme plywood quality and durability.

See Sweets 8, 20; Time Saver Standards K4.3.1; and Architects Sample Bureau, New York. List of panel suppliers furnished on request.

Tego Resin Film for this unique material is made by The Resinous Products & Chemical Co., Inc., 222 W. Washington Square, Philadelphia, Pa.

RESINOUS  PRODUCTS

PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

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.

SHEPARD AUTOMATIC ELEVATORS FOR HOMES AND APARTMENTS.—A.I.A. File No. 33. Brochure with useful reference data covering a line of automatic elevators adapted to residences and small apartment buildings. Specifications, installation details, photographs, etc. 12 pp. 8½ x 11. The Shepard Elevator Co., Cincinnati, Ohio.

PERMA-GLOSS PORCELAIN LAUNDRY TRAY.—Folder with roughing-in measurements and descriptive data covering a newly-designed laundry tray. General Ceramics Co., 30 Rockefeller Plaza, New York, N. Y.

REVERE COPPER ROOFING AND FLASHINGS.—A.I.A. File No. 12-c. Valuable reference manual dealing with the subject of sheet copper and Leadtex for roofing, gutters, conductor pipes, flashings, skylights, spandrels, decorative applications and termite proofing, also Cheney and Revere Thru-Wall flashing. Included are specifications, detail drawings, tabular matter, etc. 44 pp. 8½ x 11. Revere Copper and Brass Incorporated, 230 Park Ave., New York, N. Y.

GENERAL ELECTRIC KITCHENS DESIGNED FOR BETTER LIVING.—A.I.A. File No. 35-c-1. Brochure presenting useful information on the subject of kitchen design and describing a complete new line of kitchen cabinets and accessories, also major electrical kitchen equipment. Layouts, dimension drawings, specifications, tabular matter, etc. 28 pp. 8½ x 11. General Electric Co., Specialty Appliance Division, Nela Park, Cleveland, Ohio.

THE QUIET FORUM.—No. 2, Vol. 6, of series of house publications, describes and illustrates the installation of Celotex acoustical products in various types of buildings. 12 pp. 8½ x 11. Jacobson & Company, Inc., 335 E. 45th St., New York, N. Y.

LUSTRAGLASS.—Folder describing the advantages of the new improved Lustraglass, a window glass which transmits ultra violet rays and looks like plate glass. 8 pp. 8½ x 11. American Window Glass Co., Pittsburgh, Pa.

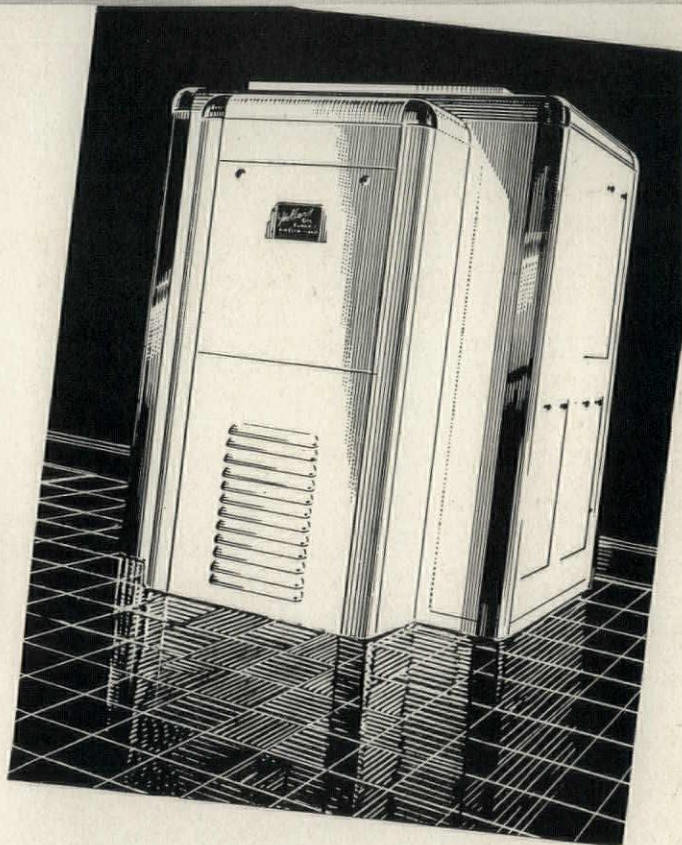
DRI-BILT WITH PLYWOOD.—New manual dealing with the subject of Dri-Bilt with plywood construction adapted to any house or any plan from cottage to mansion. Construction details, suggested time-savers for architects and builders. 8 pp. 8½ x 11. Douglas Fir Plywood Assn., Tacoma Bldg., Tacoma, Wash.

TRANE AIR CONDITIONING FOR COMFORT.—Bulletin S-400 illustrates a variety of applications of air conditioning in many kinds of buildings and for many purposes. Various types of Trane air conditioning equipment are illustrated and briefly described. 28 pp. 8½ x 11. The Trane Co., La Crosse, Wis.

(Continued on page 38, Advertising Section)



*Just Snap this
Switch Twice a Year*
FOR WINTER... FOR SUMMER



HOLLAND

Automatic Furnace

AIR CONDITIONER

FOR OIL OR GAS

ENDS FURNACE TENDING . . . YET ACTUALLY COSTS LESS!

YOU are indeed providing a luxury when you specify the above smartly styled unit for any home. It is, however, certainly not an extravagance to enjoy the clean, healthful, labor-free comfort of a Holland Automatic Furnace Air Conditioner. Matched part for part and size for size, it is lower in price than any other of comparable efficiency. Furthermore, thousands of installations throughout the country have shown remarkable savings in operating costs in comparison with heating systems they replaced.

No less welcome to owners than economy, is their greatly increased comfort and convenience. On the first cold day, one flick of a switch does all

their furnace tending for the rest of the winter. From then on, the Holland tends itself—insures proper warmth in every room, thoroughly humidifies, filters and circulates the air, in short, supplies complete automatic winter air conditioning. Then when summer comes that same switch is snapped again. Thereafter, filtered air is automatically circulated throughout the home with decided cooling effect.

To be sure many different kinds of equipment are available to supply these same services. If, however, you will study Holland specifications, we are sure you will agree that none equal it in efficiency and economy. A complete description is yours for mailing the coupon below.

HOLLAND FURNACE COMPANY

HOLLAND, MICHIGAN

*World's Largest Installers of Home Heating
and Air Conditioning Systems*

HOLLAND FURNACE COMPANY, Dept. PP-6 Holland, Mich.
Please mail information on subjects checked below:

- | | |
|--|--|
| <input type="checkbox"/> Automatic Furnace Air Conditioner for Oil or Gas | <input type="checkbox"/> Automatic Oil Burners |
| <input type="checkbox"/> Coal Burning Heating and Air Conditioning Systems | <input type="checkbox"/> Have Engineer Call |
| <input type="checkbox"/> Automatic Coal Burners | |
| <input type="checkbox"/> FREE DATA SHEETS | |

Name.....

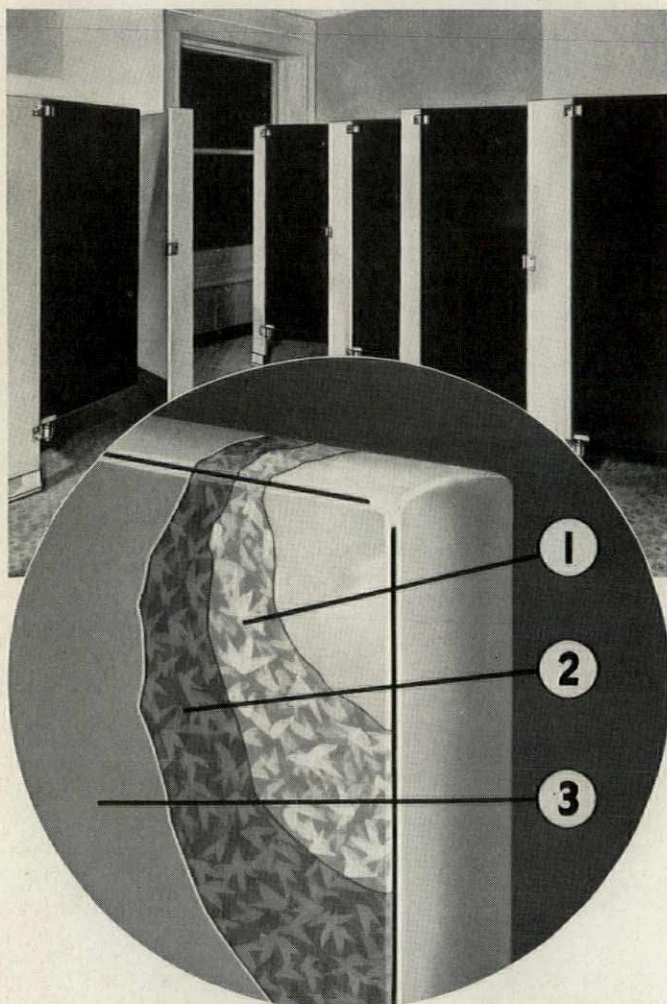
Address.....

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

WEISART

FLUSH COMPARTMENTS OFFER

3 Times the Life!



● The smooth finished steel of Weisart compartments is now sealed inside three protective coatings:

1. Galvanized: affording the best known resistance to corrosion.

2. Bonderized: additional corrosion resistance; assurance of positive adhesion of enamel to metal.

3. Baked Synthetic Enamel: combines a highly protective surface with lustrous beauty in a wide range of colors.

This triple protective coating for all steel parts increases Weisart's life expectancy at least three times!

MAIL COUPON NOW for complete information.



HENRY WEIS MFG. CO., Inc. (Est. 1876) 621 Oak St., Elkhart, Indiana.

Gentlemen: Please send the following on Weisart compartments:

Complete details of construction ☐ Specifications for architect's use ☐
Present sample for inspection ☐

Firm Name _____

Individual Name _____

Address _____

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 36, Advertising Section)

MESKER METAL WINDOWS.—New catalog contains features, specifications, standard sizes, installation details, application and sectional drawings on Mesker residential casements, basement, utility security and pivoted and projected sash. It also contains similar information on architectural projected and continuous top hung sash, mechanical operators and industrial tubular doors. Mesker Bros., 424 S. 7th St., St. Louis, Mo.

NEW DOR-WAY HARDWARE.—Bulletin describing the outstanding features of R-W No. 1399 Dor-Way hardware. 4 pp. 8½ x 11. Richards-Wilcox Mfg. Co., Aurora, Ill.

Published by the same firm, "R-W Sliding Door Hardware." A.I.A. File No. 27-a-3. Folder with floor plans and brief descriptive data covering a line of sliding or vanishing house door hardware.

SPENCER COMMERCIAL VACUUM CLEANING.

—Bulletin No. 121 PP discusses in detail the advantages of Spencer commercial vacuum cleaning systems in department stores, hotels, office buildings, schools, theatres, hospitals, churches, clubs, libraries, apartments and homes. 20 pp. 8½ x 11. The Spencer Turbine Co., Hartford, Conn.

NEW QUIET MAY DUAL UTILITY OIL HEATING UNIT.—Booklet No. C-127 announces and fully describes the new Quiet May cast iron dual utility oil heating unit for steam or hot water systems in homes. 8 pp. May Oil Burner Corp., Baltimore, Md.

HOMCO.—Descriptive folder covering a new type of insulating and building board suitable for walls and ceilings of homes. Homasote Co., Trenton, N. J.

Published by the same firm, "Pyrosote." Bulletin describing Pyrosote, an asbestos-cement board for use wherever fireproof walls, ceilings or partitions are needed.

HANDIDECK SINK.—Folder explaining the advantages of a new type of sink which is equipped with two compartments for the popular new method of dish washing. 4 pp. 8½ x 11. The Kitchen Maid Corp., Andrews, Ind.


THE WALL - WEIGHT BUILT - IN BATHROOM SCALE.—Bulletin with descriptive data and installation details covering a type of built-in bathroom scale which folds flush into wall when not in use. National Metal-Art Mfg. Co., 420 Twelfth St., Brooklyn, N. Y.

SARGENT GOES TO THE NEW YORK WORLD'S FAIR.—Folder illustrating several of the model homes and outstanding buildings at the New York World's Fair which are equipped with Sargent builders hardware. 8 pp. 8½ x 11. Sargent & Co., New Haven, Conn.

WASHROOM LAYOUT BOOK.—Booklet containing ten representative washroom layouts together with helpful facts pertaining to fixture capacities and clearances. Bradley Washfountain Co., W. Michigan St., Milwaukee, Wis.

STANDARD ROOM THERMOSTATS.—Bulletin TT describes and illustrates a complete new range of line or low voltage room thermostats for the control of automatic heating or cooling equipment. 4 pp. 8½ x 11. Friez Division of Bendix Aviation Corp., Baltimore, Md.

(Continued on page 40, Advertising Section)



It's always **FAIR** weather

FOR

Carey BUILT-UP ROOFS

In the salt air and under the hot sun of Florida and the Gulf Coast—in the far North, with its sleet, snow and sub-zero cold—in the great industrial centers—wherever the location and whatever the climatic conditions . . . there you will find Carey Bonded Roofs giving trouble-free and economical protection.

The reason for this uniformly dependable performance lies in the fact that all Carey Bonded Roofs are engineered to the conditions prevailing in the locality and in the building itself. Carey engineers study every roof problem individually—then build the roof to meet the requirements. This is why Carey Roofs last years longer—cost less per year.

BONDED FOR 10, 15, 20 YEARS

Carey Bonded Roofs are guaranteed to deliver 10, 15, or 20 years of repair-free service. It is a matter of record that most Carey Roofs far outlive the time-period covered by their guarantee.

You can assure your clients of maximum roof service at minimum cost by specifying Carey Bonded Built-Up Roofs. See Catalog in Sweet's, or write today for Carey Bonded Built-Up Roof Specifications—address Dept. 54.



(Top)
Bickelhaupt Apartments
Ft. Lauderdale, Fla.
Robert G. Jahelka, Architect
15 year Carey bonded roof
Photo Zimmerman
Camera Studio

(Center)
The Tides Hotel
Miami Beach, Fla.
L. Murray Dixon, Architect
Carey Bonded 5-ply
Built-Up Roof
Photo S. H. Gottscho

(Bottom)
The Goldwasser Shop
Miami Beach, Fla.
L. Murray Dixon, Architect
Carey 10 year bonded felt
and gravel roof
Photo S. H. Gottscho

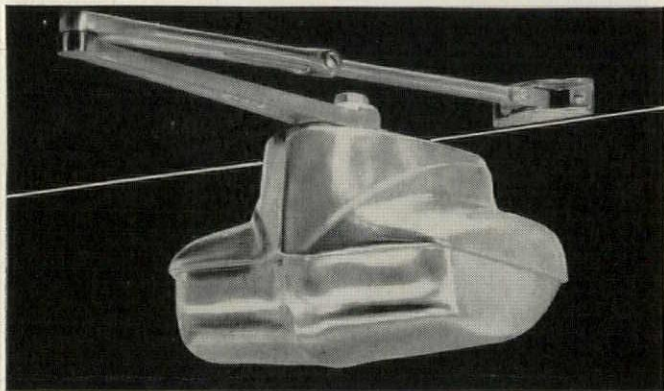


THE PHILIP CAREY COMPANY • LOCKLAND • CINCINNATI, OHIO

Elsie N.

SAYS:

IF YOU CAN'T
CONCEAL THE
CLOSERS, USE OUR
GOOD-LOOKING "MIRACLE"

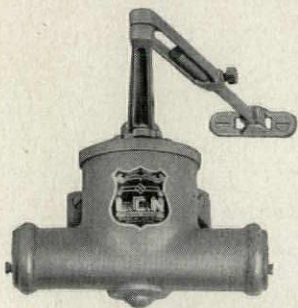


The LCN "Miracle"

TRADE MARK

STREAMLINED DOOR CLOSER

Where it is impractical to conceal the door closers (above, in, or below the doors) the next best idea is to use this good-looking, new streamlined closer, now available in the two sizes most needed—C and D. Three big advantages: (1) trim, modern appearance, (2) a surface easy to clean, (3) the option of making the closer inconspicuous by finishing WITH the door and wall, or giving it almost ANY finish, for decorative effect, at low cost.

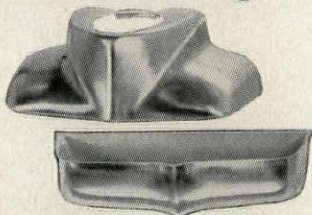


It's the Standard LCN Closer . . .

Inside is the standard LCN Surface Type Door Closer—proved superior in its many years service on hundreds of thousands of doors. Mechanically this closer is unchanged, but its outward appearance is completely transformed by its being covered

. . . with a "Miracle" Housing

The housing, in two sections, is easily and quickly applied, or removed. It makes no change whatever in the closer's operation, but gives it a pleasing, harmonious form and a smooth surface which can easily be given a bright or dull metal, or almost any other, finish at small cost.



Present LCN Closers Convertible

Any LCN standard surface type closer (Size C or D) can be converted, in a few minutes, to "Miracle" form by applying the housing and changing the arm. Think what this means in your modernization work! For full details of this and other LCN Door Closers address Norton Lasier Co., 466 W. Superior Street, Chicago, Ill.

LCN

**Concealed and Surface
Door Closers • 86 Types & Sizes**

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 38, Advertising Section)

WEBSTER SYSTEM RADIATION.—Valuable reference manual dealing with the subject of Webster system radiation for convection heating. Included is data covering advantages of this system, harmony with interior decoration, features of mechanical construction, types of enclosures, typical installations, specifications, installation suggestions, rated capacities, etc. 24 pp. 8½ x 11. Warren Webster & Co., Camden, N. J.

PARSONS PUREAIR KITCHEN.—A.I.A. File No. 35-c-12. Folder No. 29 describes and illustrates a complete all-steel single unit kitchen that occupies less than 8 sq. ft., and cooks without allowing heat or odors to escape into the room. General specifications. 4 pp. 8½ x 11. The Parsons Co., 15000 Oakland Ave., Detroit, Mich.

ECONOMY PUMPS.—Engineering Data and Prices.—New pump engineering handbook covering a wide field of pumping applications. It is divided into two sections: the first half covers pump prices, applications and installation data; the second half is devoted to engineering data. 234 pp. Economy Pumps, Inc., 1000 Weller Ave., Hamilton, Ohio.

HEIL ACTIV-AIR CONDITIONING UNIT.—Bulletin No. 275A with descriptive information, ratings, and specifications covering a complete winter air conditioning, oil-fired furnace-burner unit for moderately priced homes. 4 pp. 8½ x 11. The Heil Co., Milwaukee, Wis.

Published by the same firm, "Heil Milwaukee Water Systems." Bulletin No. WS-121-A describes the construction features of several types of Heil Milwaukee individual water systems. 8 pp. 8½ x 11.

FOSTER U-TYPE PRESSURE REDUCING REGULATORS.—Bulletin No. 5, just issued, covering a line of pressure reducing air and water regulators adaptable for buildings, residences, power plants, etc. The operation of each of five types is described in detail and complete instructions are given for dismantling and reassembling. Dimensions, drawings, etc. 12 pp. 8½ x 11. Foster Engineering Co., 109 Monroe St., Newark, N. J.

NORTON FLOORS.—Issue No. 3, Volume XII, of a series of publications on Norton floors illustrates and briefly describes the use of Alundum aggregate in terrazzo floors in hotels and industrial floors. 4 pp. 8½ x 11. Norton Co., Worcester, Mass.

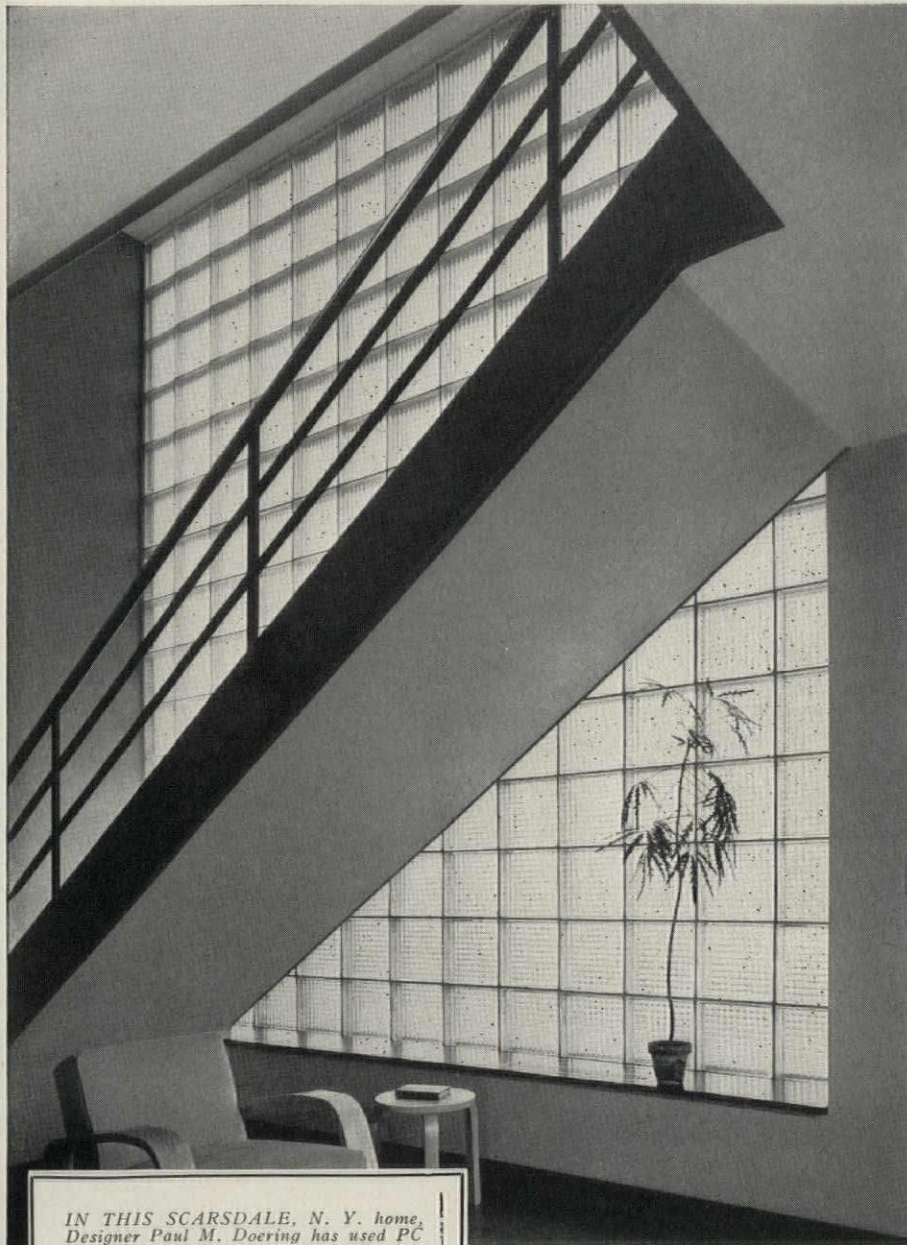
THE NEW COOLVENT SYSTEM OF ATTIC VENTILATION.—A.I.A. File No. 30-d-1. Bulletin No. 39 presenting construction details, descriptive and installation data covering a new, redesigned type of attic fan for summer ventilating systems. 4 pp. 8½ x 11. Autovent Fan & Blower Co., 1805 N. Kostner Ave., Chicago, Ill.

UNISTEEL STAIRS.—Bulletin with detail drawings and descriptive matter covering a line of prefabricated stairs for modern homes. 8 pp. 8½ x 11. Central Ornamental Iron Works, 220 Wendell St., Chicago, Ill.

CYCLOTHERM HEATING UNITS.—Folder announcing and describing a new line of heating boilers suitable for either gas or oil burning. Dimension data. 4 pp. 8½ x 11. General Furnaces Corp., 17 State St., New York, N. Y.

(Continued on page 42, Advertising Section)

Here's why **PC** GLASS BLOCKS help you create fine homes



IN THIS SCARSDALE, N. Y. home, Designer Paul M. Doering has used PC Glass Blocks with exceptional effectiveness in the stairwell wall. There are scores of other places in the home where these blocks can increase both beauty and practical usefulness.

PC GLASS BLOCKS transmit daylight generously. At the same time, they are non-transparent, preserving privacy. They have high heat-insulating value, because of the sealed-in, dead-air space they contain. They effectively insulate against outside noise, making for quieter, more livable homes. They are easy to clean. Their attractive appearance, in various patterns and sizes, is extremely helpful in achieving home beauty. And their adaptability to either modern or traditional styles of architecture helps to make them a tool which the architect finds unusually versatile.

PC Glass Blocks are distinguished by four advantages which no other glass block can offer. The clear, colorless glass of which they are made. Their all-glass mortar edges, with special plastic coating which forms a permanent bond between glass and mortar. Their all-glass construction, with tight, fused seals which protect the dead-air space within the blocks. And the "key-lock" mortar joint, formed by their special edge construction, which provides a full bed of mortar, makes them easy to handle in laying, yet permits a visible joint of only about $\frac{1}{4}$ ".

Investigate PC Glass Blocks. Send the coupon for our free booklet of information.

At the New York World's Fair, be sure to see the exhibits of Pittsburgh Glass in the Glass Center Building, the Forward March of America Building and the All-Glass House; and at the Golden Gate International Exposition, see them in the Homes and Gardens Building.

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller and Co. on the Pacific Coast

Pittsburgh Corning Corporation, 2169-9 Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your new book of facts about PC Glass Blocks entitled "The Glass Age Arrives."

Name.....Street.....

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





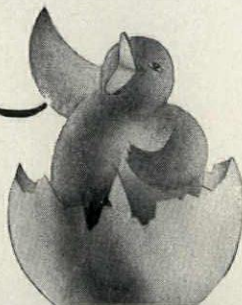
*Addressing a large congregation,
A draftsman in his dissertation
Said: "Nerve-strain will go
When 'Castell' says 'hello'—
It's gritless, prevents irritation!"*

BOILERMAKERS seldom have nerves—pencil craftsmen very often do. Why add to an over-taxed brain by working with a gritty pencil that makes your teeth grate—or a pencil so temperamental that the point keeps breaking—or a pencil no more uniform in scale than Coxey's Army?

"CASTELL" Drawing Pencil gives peace to jangled nerves. It does not scratch, flake or smudge. Its tone is as uniform as a squad of West Pointers. And like a well-constructed bridge, "Castell" graphite is built to withstand many times the strain or load you will ever require. Yes, like all better things, "Castell" costs more. Today, start using "Castell."

A. W. Faber's "Castell" Polychromos Colored Pencils are superb for sketches or renderings. Give beautiful water color or oil effects. Available in 65 colors.

NO GRIT
NO SCRATCH
NO SMUDGE



WORLD'S FINEST DRAWING PENCIL—NONE HIGHER PRICED IN AMERICA

AW FABER-CASTELL

DRAWING PENCIL IN THE METAL BOX

15¢ each ★ \$1.50 per dozen

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 40, Advertising Section)

ROYALCHROME RECREATION ROOM FURNITURE.—Booklet showing a line of furniture designed and constructed especially for recreation room use. 12 pp. 7 x 9½. Royal Metal Mfg. Co., Michigan Blvd. at Park Row, Chicago, Ill.

STRAN-STEEL RESIDENTIAL CONSTRUCTION.—Folder presenting construction data on the subject of Stran-Steel, a steel framing material for houses, partitions and all other light load-bearing structures. 4 pp. 8½ x 11. Stran-Steel Division, Great Lakes Steel Corp., Detroit, Mich.

SUBDRAINAGE WITH TONCAN DRAINAGE PRODUCTS.—New publication, dealing with the subject of subdrainage, describes numerous types of subdrainage systems employed today and is illustrated with many photographs and drawings. Specifications, tabular matter, etc. 32 pp. 8½ x 11. Toncan Culvert Mfrs. Assn., Republic Bldg., Cleveland, Ohio.

MANUFACTURERS' DATA WANTED

GEORGE A. THOMPSON, Architect, 424 State Street, Baton Rouge, La.

M. H. GOLDSTEIN, Engineer, 305 Morris Street, Charleston, W. Va. (Data on heating and air conditioning.)

MARK B. LEVINSON, Architect, 2019 N. Kedzie Avenue, Chicago, Ill. (Samples of building material wanted for use in architect's office.)

A. E. COCKBURN, Architect, 1292 Ferry St., Niagara Falls, (Ontario), N. Y.

THOMAS WATSON, Architect, 569 Prospect Ave., Ridgefield, N. J.

A. J. BERMAN, Architectural Designer, 1336 Estes Avenue, Chicago, Ill.

E. G. BRADY, Designer and Builder, P. O. Box 8, Beverly Hills, Calif.

RUBIN DREIBLATT, Draftsman, 5449 Brynhurst Avenue, Los Angeles, Calif. (Data on house plans and modern equipment.)

W. J. SCHUSTER, Draftsman, 2503 Campbell Avenue, Schenectady, N. Y. (Data for A.I.A. file on residential work.)

HARRY M. DOYLE, Draftsman, Southern Pacific Milling Company, San Luis Obispo, Calif. (Data for complete A.I.A. file, especially on residential work.)

EDWARD A. DAVIS, Draftsman, 12 So. Rhode Island Avenue, Atlantic City, N. J. (Data for A.I.A. file.)

CHARLES W. SCHWAB, Draftsman, c/o Duquesne Light Co., 2101 Beaver Avenue, N. S. Pittsburgh, Pa. (Data for complete A.I.A. file, also on mechanical equipment.)

BILL BEESON, Draftsman, 1100 Edgecomb Avenue, Benton Harbor, Michigan. (Complete catalogs and samples to be used in drafting shop.)

CARLOS A. COWES & COMPANY, Apartado 117, Panama, Rep. de Panama. (Data on modern furniture.)

WOO YE-CHING, Student, Architectural Department, Hanchow Christian College, 622 Tse Shu Bldg., Shanghai, China.

CHARLES MARCHESE, Student, 343 Jackson Street, Lawrence, Mass. (Data for complete A.I.A. file.)

JUST PUBLISHED

Index No. **F1**
CONSTRUCTION

TERRAZZO FLOORS

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

THE NATIONAL TERRAZZO AND MOSAIC ASSN., INC.

5/8" terrazzo topping

Dividing strip (with proper anchorage)

1 1/8" mortar underbed

1 1/4"

Structural slab

Minimum 1 3/4" by terrazzo contractor

BONDED TO CONCRETE

5/8" terrazzo topping

Dividing strip (with proper anchorage)

1 5/8" mortar underbed

Light reinforcing mesh

Tar paper lapped 2"

1/4" bed of sand to prevent bond

2 1/2"

Structural slab

Minimum 2 1/2" by terrazzo contractor

SAND CUSHION OVER CONCRETE

5/8" terrazzo topping

Dividing strip (with proper anchorage)

1 7/8" mortar underbed

Temperature and reinforcing bars or wire mesh

2 1/2"

Precast concrete, steel or wood joists

Minimum 2 1/2" by terrazzo contractor

DIRECTLY OVER JOISTS

1. Depth (1 1/4" is standard). 2. Gauge or face thickness of cement. 3. Gage or face thickness of sand. 4. Spacing and arrangement. 5. 200 lbs. marble granule to not less than 100 lbs. white or gray portland cement. Mortar underbed (cement, 4 sand). To be indicated on plans and/or specified to show: 1. Depth (1 1/4" is standard). 2. Gauge or face thickness of cement. 3. Gage or face thickness of sand. 4. Spacing and arrangement. 5. 200 lbs. marble granule to not less than 100 lbs. white or gray portland cement. Mortar underbed (cement, 4 sand). To be indicated on plans and/or specified to show:

FREE!

1939

DATA SHEETS ON TERRAZZO FLOORS!

Use this coupon for your set

HERE ARE the first Data Sheets ever made for Terrazzo. You will want these eight pages of basic, authoritative facts on Terrazzo Construction Standards because they are the latest available and because they will save time in detailing. In preparing this material, Don Graf, B. S., M. Arch., has compiled only information that has been found useful in actual practice.

How thick should a Terrazzo topping be for different types of construction? How much of a mortar underbed should be used? What about dividing

strips? What is the construction for Terrazzo flooring, base and border?

The new FREE Data Sheets answer these and other important questions quickly. They give specifications that are fundamental in assuring the beauty and exceptionally durable service always associated with this permanent floor. They conform to the Pencil Points series in size and come punched for your Data Sheet Binder. Every architect needs one. Use the coupon and send for your Sheets today. They are FREE.

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

National Terrazzo and Mosaic Association
1420 New York Ave., N.W., Washington, D.C.

Gentlemen: Please send me the 8-page set of Data Sheets on Terrazzo Floors.

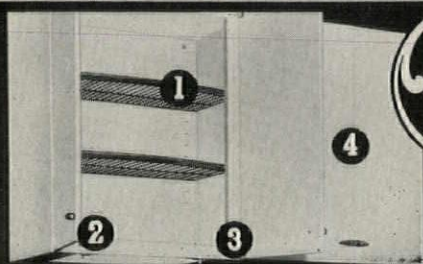
Name _____

Firm _____

Address _____

I am ☐ Architect ☐ Student
☐ Architectural Draftsman

Ready Now! Don Graf Data Sheets ON NEW LINE OF ALL-STEEL G-E Kitchen Cabinets



COMPETITIVELY PRICED!
Flexible to the fraction of
an inch. Incredibly easy to
install and at very low cost.

LOOK AT ALL THESE FEATURES!—

1. Adjustable shelves of steel wire—refrigerator type.
2. Concealed spring-action hinges.
3. Automatic interior lighting in both wall and base cabinets.
4. Self-contained "packaged" units—each one complete—no finishing necessary.
5. Adjustable sliding shelves.
6. Designed (including hardware) to harmonize with G-E Kitchen appliances.
7. Roller bearing drawer slides.
8. Interchangeable drawers.
9. Two-coat gleaming white Glyptal-baked enamel finish.
10. Scuff-resisting recessed toe space.

**Mail the Coupon NOW for
FREE Don Graf Data Sheets**

General Electric Co., Section CP6, Specialty
Appliance Div., Nela Park, Cleveland, Ohio.
Please send free Don Graf Data Sheets and
include complete information on the new
General Electric Kitchen Cabinet line.



Name _____

Firm _____

Address _____

GENERAL ELECTRIC

FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

Replies to box numbers should be addressed care of
PENCIL POINTS, 330 West 42nd Street, New York.
25 words or less in this Department FREE—over 25
words ten cents per word should accompany all notices.
Copy must be in by 12th of month preceding date of
issue.

(Continued from page 34, Advertising Section)

POSITIONS WANTED

CHIEF draftsman and office manager on largest public
housing project in the United States will be available
soon. Box No. 600.

A-1 DRAFTSMAN wishes position. Maps, charts, dia-
grams, graphs, fine letterer. Samples available. Try-
out at own expense. Highly recommended. Will ac-
cept any other work available. Box No. 601.

ARCHITECTURAL draftsman would like employ-
ment during July and August. B.S. and M.S. in
architecture, 20 months with U.P.S., 2 years as Uni-
versity instructor in rural architecture, some private
work in school and residential fields. Special interest
in presentation. Age 27. Keith Hinchliff, 522 Storer,
Fayetteville, Ark.

"TEXAS"—capable draftsman and designer, 8 years'
experience with reputable middle-western firm, plus
collegiate training, wishes to locate with Texas archi-
tect. Box No. 602.

DRAFTSMAN, age 26, neat and ambitious, wishes
position with architect or architectural firm. Paul
Pavlick, Jr., 5688 Hudson Blvd., North Bergen, N. J.

ARCHITECTURAL draftsman, 26, M. I. T. graduate,
would like work in architectural office, design and
working drawings. Three years' experience in office
and field. Box No. 603.

WOULD-BE-ARCHITECT, 23, wants "beginning
job" at \$20 with architect, builder or factory archi-
tectural department. Go anywhere. Walter Plane, 109
Northampton Ave., Springfield, Mass.

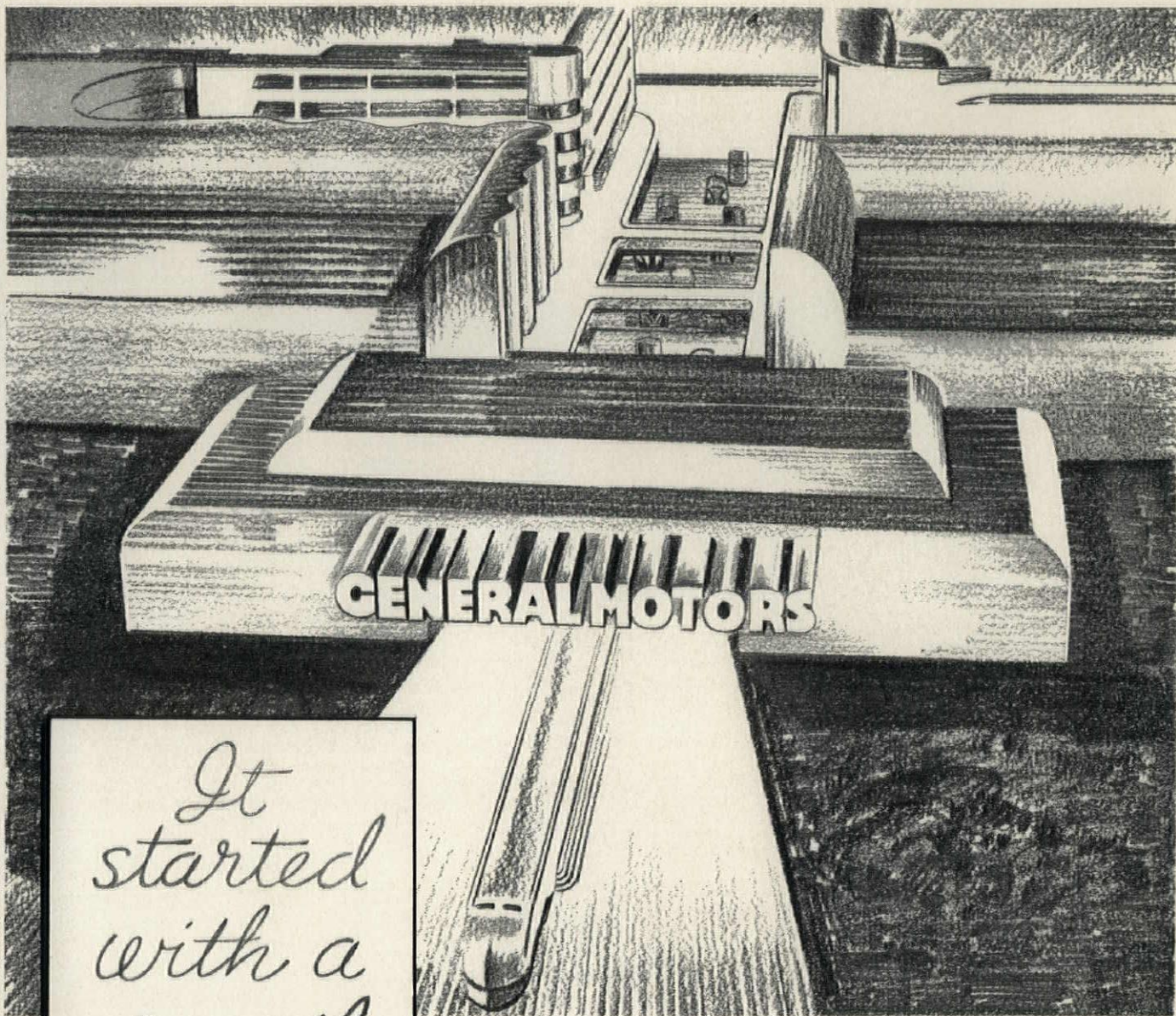
COLLEGE experience and student of California Col-
lege of Arts and Crafts would like start with archi-
tect. Salary not essential. Would like chance to work.
Chas. J. Woodbury, 5429 Thomas St., Oakland,
Calif.

SPECIFICATION WRITER, construction superintend-
ent, contract manager, diversified building construc-
tion experience. Registered architect and licensed pro-
fessional engineer. Consider position in New York
City only. Box No. 604.

ARCHITECTURAL draftsman, 38, 12 years' experi-
ence on residences and apartment houses, alterations
and general drafting. Best references. Location New
York City. Theodor Fritsch, 262-72nd St., Brooklyn,
N. Y.

DESIGNER, renderer, specification writer with prom-
inent New York country house firm; last 5 years as
head draftsman, will consider position anywhere out-
side New York City. Masters degree Eastern Univer-
sity, registered in New York. Also experience on
public buildings and housing. Box No. 605.

(Continued on page 46, Advertising Section)

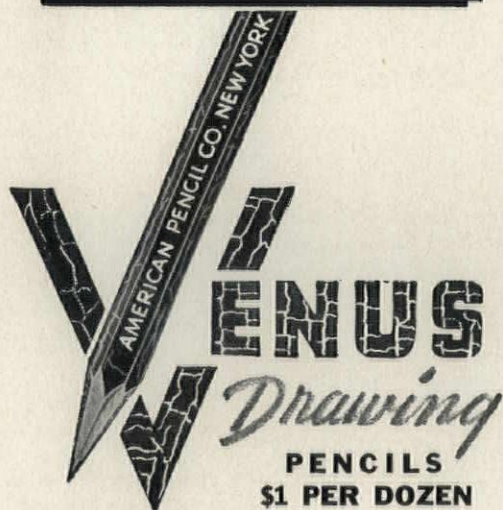


*It
started
with a
pencil*

Detailed above is one of the several distinctive entrances to the ultra-modern General Motors exhibit designed by Norman Bel Geddes for the New York World's Fair. In this entrance visitors have an opportunity to inspect a complete 4,000-horsepower, streamlined Diesel locomotive. The complete exhibit — "Highways and Horizons" — glorifies practically all phases of motor transportation of today and tomorrow.

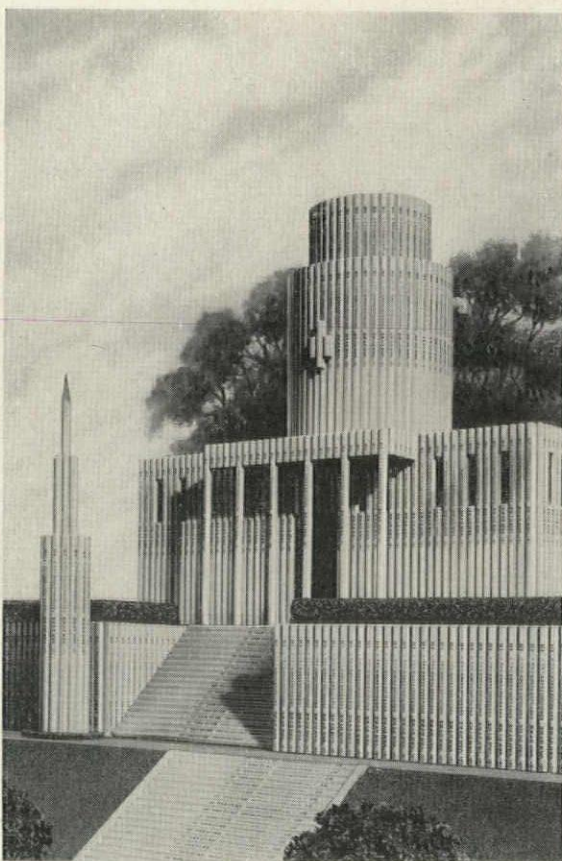
The American Pencil Company is proud that it is contributing to today's progress in architectural and engineering design, as typified in this amazing exhibit. For day in and day out, in the nation's leading drafting rooms, Venus Drawing Pencils are helping to maintain the easy, uninterrupted flow of ideas to paper.

Upon them have been lavished exclusive technical improvements available in no other pencil. Smoothness, strength and, above all, consistent uniform grading in 17 degrees are the characteristics that have made Venus Drawing Pencils internationally famous . . . Are you enjoying these advantages?



ALSO MADE
IN CANADA—Venus Pencil Company, Ltd., Toronto
IN ENGLAND—Venus Pencil Co., Limited, London
Colloidal Process Pat. No. 1,738,888

AMERICAN PENCIL CO., Hoboken, N. J.



This unique Model was constructed with MICROTOMIC VAN DYKE Drawing Pencils by A. G. Law, nationally known scale-model builder

BUILT WITH PENCILS

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(Continued from page 44, Advertising Section)

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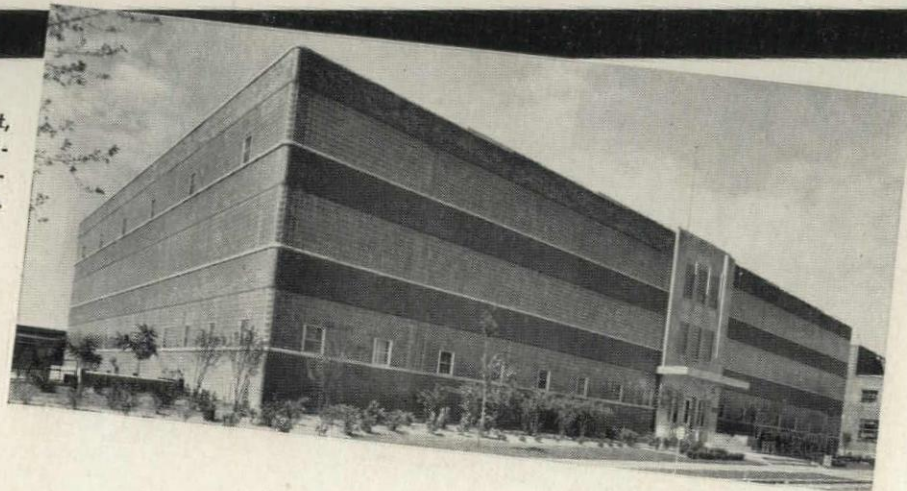
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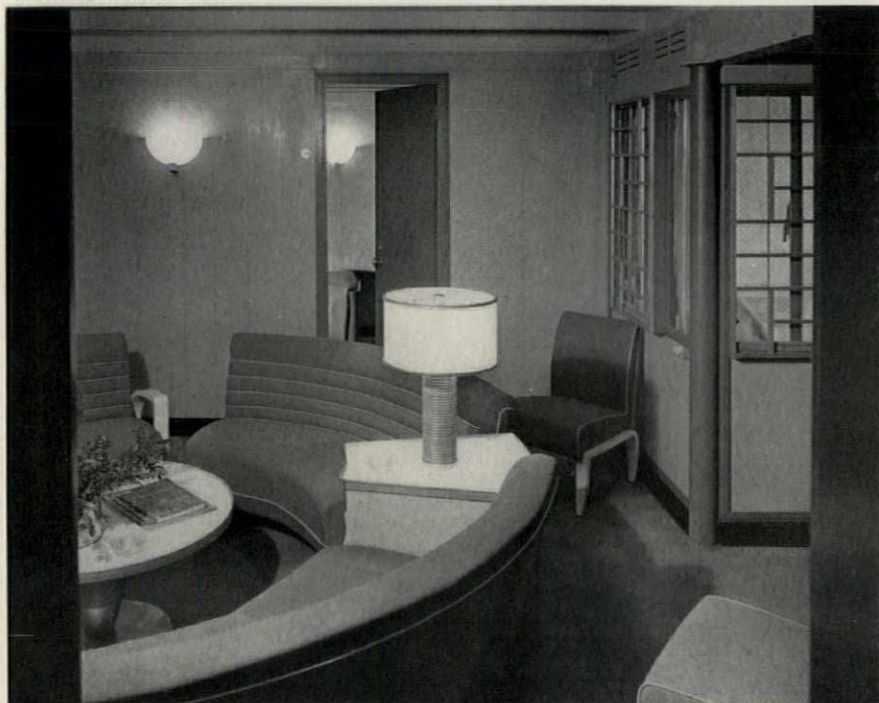
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Typical of the informal, cheerful interiors designed by Raymond Loewy, New York Industrial Designer, for the new \$4,000,000 S.S. Panama of the Panama Railway Steamship Line, are these views of the blue and yellow dining salon, above, and one of the inviting glass-enclosed private verandas provided on A-Deck for suites of four staterooms. The ship is the first completed of a trio of 10,000 ton fireproof passenger-cargo vessels designed by George Sharp, Naval Architect, with Loewy collaborating on interiors, and the exterior colors

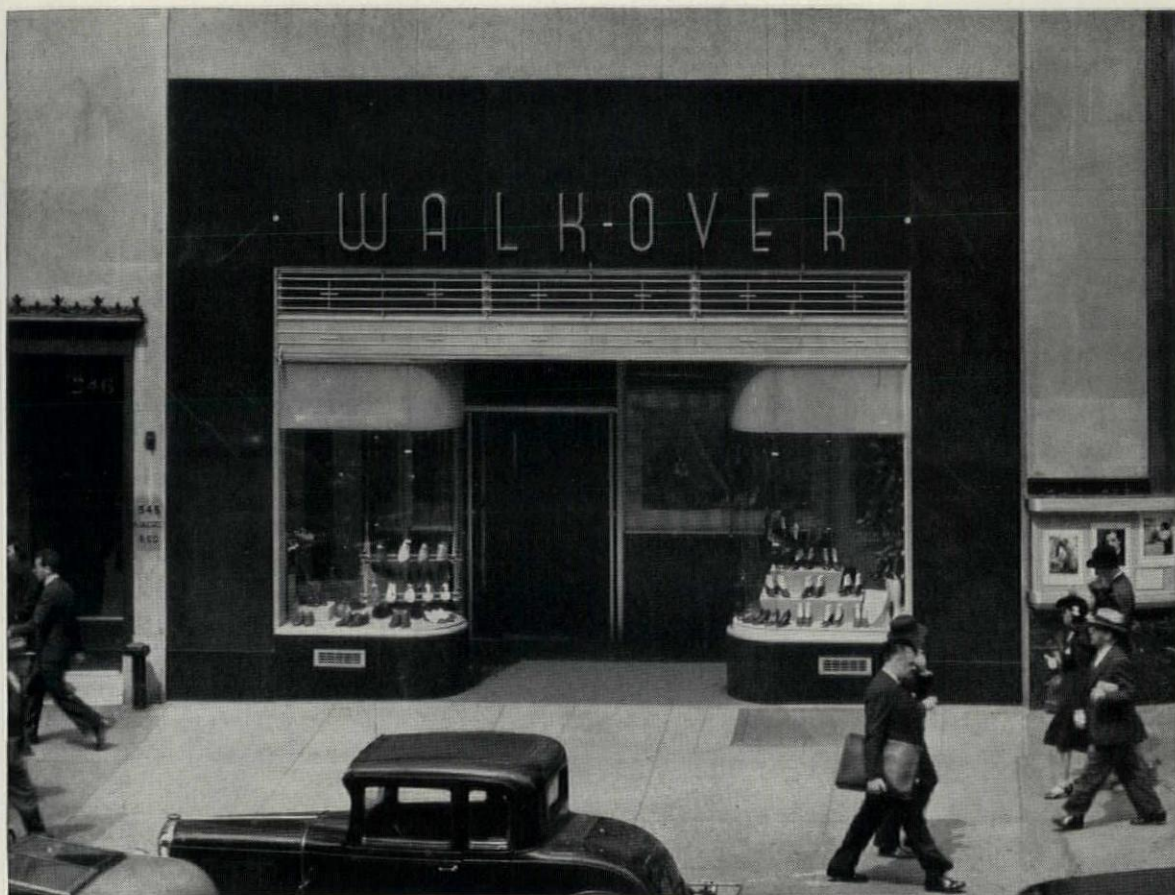
Photos by Damora



Developing a "Contemporary American" style for the interiors of three \$4,000,000 ships recently designed in collaboration with George Sharp, Naval Architect, for the Panama Railway Steamship Line, Raymond Loewy, New York Industrial Designer, explains that he is departing from "an American custom" of adapting classic styles to ship design—while other nations hasten to apply current design trends to their luxury liners.

"I believe that there will be a sharp reaction against such a school of decoration (*classic*) and that the next ships will be as modern in their decoration as they are in engineering and hull design," Loewy commented.

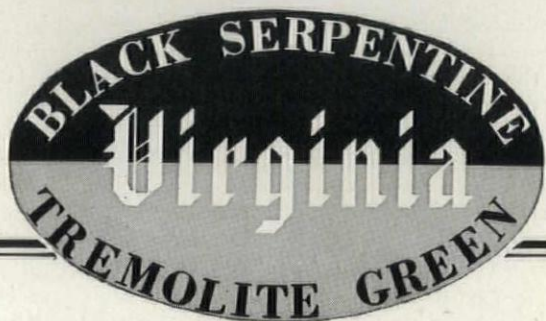
In designing the interiors of the S.S. Panama, which went into service last month, the S.S. Ancon, going into service next month, and the S.S. Cristobal, now on the ways at Quincy, Massachusetts, Loewy created small luxury liners with bright, cheerful color schemes, and public and private rooms notable for their comfort and easy informality. He also collaborated with Sharp in giving the exterior of the vessels a smart, stream-lined appearance by means of aluminum-stripped stacks, a distinctive bow emblem of red and white, and a color scheme of blue-gray for the hull, green boot-topping, buff stacks, and white for the hull and superstructure.



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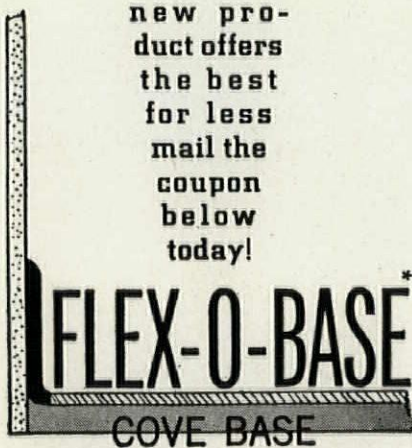
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(Continued from page 50)

Cambridge, Mass.; Hogg & Campbell, Boston; Richard J. Neutra, Los Angeles; Paul F. Schelp, St. Louis; Oscar G. Stonorov, with Frederick Savage, Philadelphia; and Andrew F. Euston, New Haven, Connecticut.

Rome Prizes Awarded

The American Academy in Rome has announced awarding its 1939 Fellowship in Painting to J. Robert McCloskey, 25, of Hamilton, Ohio; and its Fellowship in Sculpture to Robert Pippinger, 27, of Plymouth, Indiana.

McCloskey studied at the Vesper George School in Boston and at the National Academy of Design in New York. Pippinger studied at the John Herron Art School, Indianapolis, and has been in Europe for the last year on a traveling scholarship. The value of the Fellowships is about \$4,000.

There were 34 competitors in painting this year, and 18 in sculpture, representing many sections of the country. Honorable mention in painting went to Allan D. Jones, Jr., of the Pennsylvania Academy of Fine Arts; Robert Burns, of the Yale School of Fine Arts, and Minor C. Hubbell, of the John Herron Art School, Indianapolis, Indiana. H. Richard Duhme, Jr., of the Pennsylvania Academy of Fine Arts received honorable mention in sculpture.

Charles Peck Warren Medal

The Charles Peck Warren Medal, highest competitive award in construction bestowed by the School of Architecture of Columbia University, has been won by Albert Kennerly, 24, of 127 West 88th Street, New York, fourth-year student, it is announced by Dean Leopold Arnaud.

The problem presented to the students concerned the construction of a pylon for a world's fair, which would form a center of interest or attraction inside a main entrance to the fair grounds. The winning design was an example of wood construction and, according to Dean Arnaud, was well suited for the display of various kinds of wood.

Booth Traveling Fellowship

A jury composed of architects in Detroit and Lansing, and members of the faculty of the College of Architecture, University of Michigan, has awarded the Booth Traveling Fellowship for 1939 to Paul B. Brown, Highland Park, Michigan. Frank White placed second and J. Edward Luders third.

The problem was "An Aviators' Club." Of the fourteen competitors, three were Michigan alumni, the others seniors in the architectural

course. Paul Brown graduated in the Class of 1937.

Steedman Fellowship

The award of the Steedman Fellowship to Victor Curtis Gilbertson has been announced by Washington University, St. Louis, Mo. The Governing Committee—Louis LaBeaume, Chairman; Professor Lawrence Hill, Washington University, and Kenneth E. Wischmeyer—concurred in the decision of the final jury composed of Dean Sherley W. Morgan and Professor Jean Labatut of Princeton University, and J. Andre Fouilhoux, New York Architect.

The subject of the competition was a School of Fine Arts in Washington, a theoretical problem for the design of a school which would serve to foster friendly relations between the United States and other American countries through an exchange of culture.

Following his graduation from the University of Minnesota in 1935, Gilbertson studied for a year at the Massachusetts Institute of Technology. He is employed by O'Meara & Hills, Architects of St. Louis, and spends part of each year in their Minneapolis office, usually planning institutional buildings. He expects to leave for his ten months of travel in Europe on July 1.

Federal Buildings

The first of a series of eleven regional competitions for designs for Federal buildings has been announced by Admiral C. J. Peoples, Director of the Procurement Division of the Treasury Department.

Architects of seven states of District No. 8 are being called upon to design for the City of Leavenworth, Kansas, a new Post Office and Court House building, with a cost limit of \$250,000. Registered or qualified architects with home offices in this territory are eligible to compete. The district includes Minnesota, North Dakota, South Dakota, Kansas, Iowa, Missouri, and Nebraska.

The author of the winning design will receive \$2,600, as consultant during the preparation of working drawings and specifications which will be prepared under the direction of the office of the Supervising Architect, Public Buildings Branch, Procurement Division.

Louis A. Simon, Procurement Division, Treasury Department, is acting as Architectural Adviser, preparing the program and supervising the conduct of the competition. Drawings called for are to be in pencil, free from elaborate rendering; keeping to a reasonable minimum the labor involved in the competitive effort.

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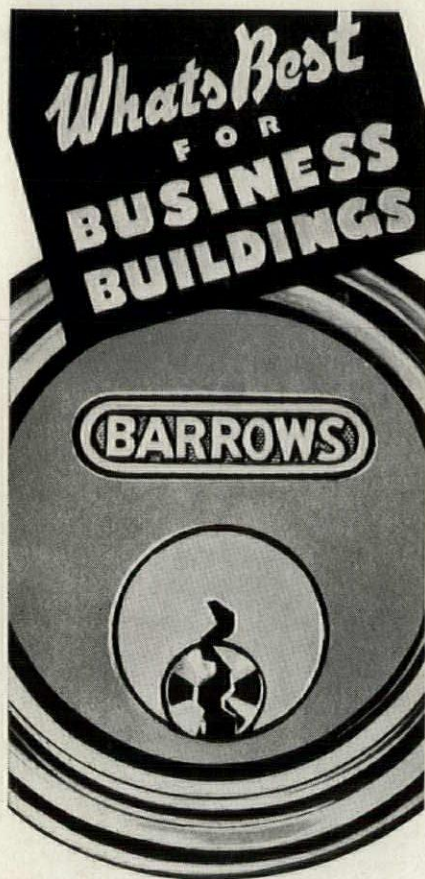
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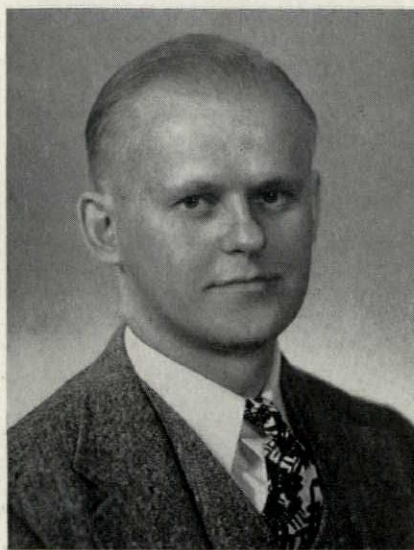
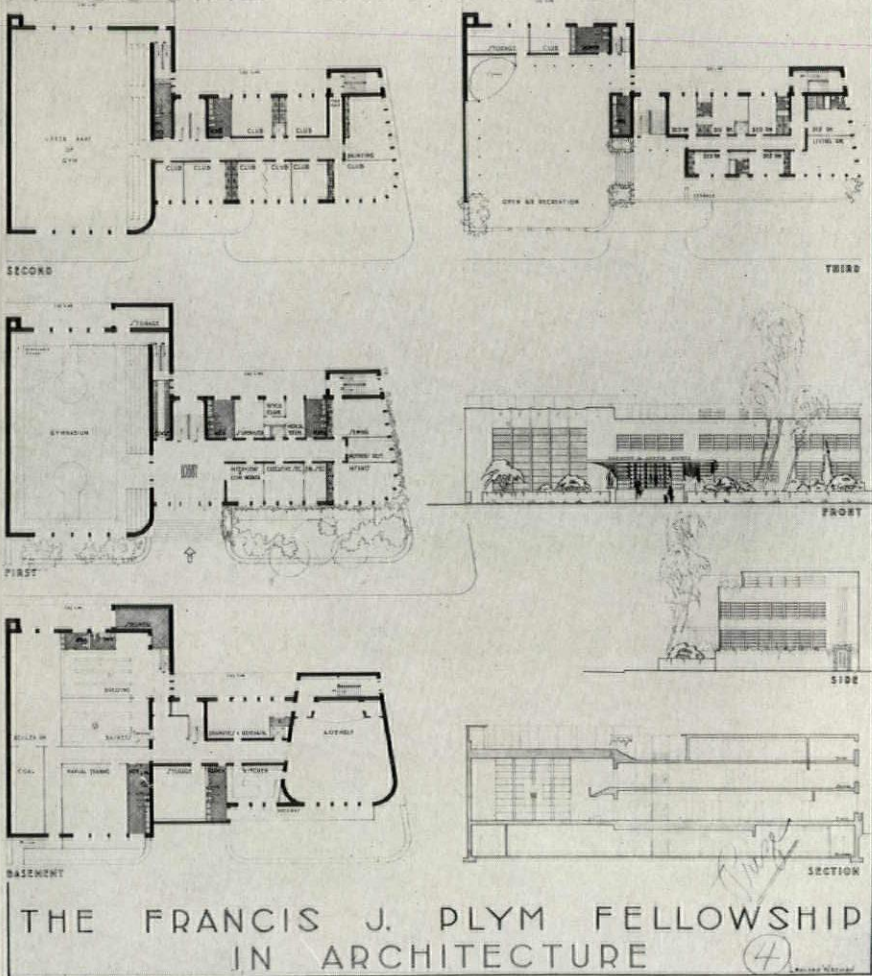
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Leonard Wayman, Chicago Architect, now a designer for Shaw, Naess & Murphy, is announced as the winner of the 26th Award of the Francis J. Plym Fellowship in Architecture, at the University of Illinois. The subject of the 26th Competition was "A Social Experiment Station" and the winning design is shown above. A site in Chicago was chosen for this proposed Settlement House, with its attendant educational, recreational, and service facilities. The \$1,200 Fellowship will be used by Wayman, who has had experience in city planning and housing research, to study the subjects in Europe. He is a University of Illinois graduate of the Class of '35

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The student draws directly on these sheets, using the printed lines as a guide for proportion and referring to the corresponding illustrations in the book for suggestions as to technique. The text of the book describes the best pencils for all such work and explains the procedure. These sheets have been popular in pencil classes as well as with the individual.

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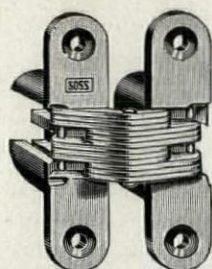
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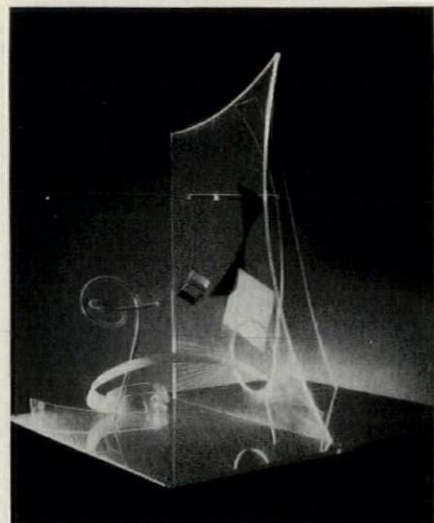
Plexiglas Sculpture Prizes Are Awarded

The prizewinning sculptures in the recent Plexiglas Competition sponsored by the Museum of Modern Art, New York, and Röhm & Haas, Philadelphia, makers of Plexiglas, are shown here in the order they placed, from top to bottom. The Competition was in two stages. In the first, 250 designs for sculptures in the new transparent plastic were submitted; and of these, five were chosen for execution by the contestants, and final judging.

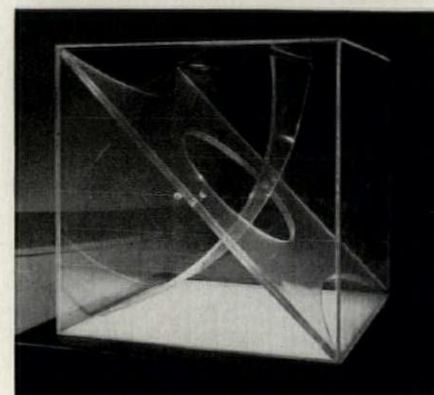
Alexander Calder's sculpture, above at left, is in red, purple, and white Plexiglas and was praised by the judges for its balance of color masses and use of a curved rod, to give motion and direction to the sculpture. The lighted rods and sheets also illustrate the manner in which Plexiglas transmits light without loss of intensity, even when curved or twisted. Calder received a prize of \$800 and his sculpture will be displayed in the Röhm & Haas Exhibit in the Hall of Industrial Science, Chemicals, and Plastics for the duration of the New York World's Fair.

The second prize went to the sculpture by Herbert Matter shown above at right. Also lighted from a concealed source, it illustrates the light transmission in Plexiglas forms and introduces a color contrast by a suspended red sheet to which a section of white Plexiglas is attached. The under surface of the transparent base is painted white. The forms and rhythm of the third prize sculpture by Werner Drewes, also are accented by concealed lighting. The complex forms exploit the flexibility of Plexiglas and also make an interesting composition when viewed from any angle. Great depth was achieved by C. K. Castaing in his fourth prize sculpture, in which edge lighting of Plexiglas sheets was utilized to create luminous circles.

(Continued on page 57)



Photos by Louis Werner



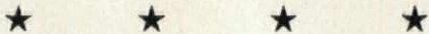
(Continued from page 56)

The fifth prize went to Xanti Schawinsky, whose sculpture was considered distinctive for its simplicity of curve and cube forms. The radiating, etched lines increase the interest and the sculpture remains geometrical when viewed from any angle. Judges were Katherine Dreier, Robert Laurent, and James Johnson Sweeney, all of New York; and Gilbert Rohde, New York Industrial Designer and Consultant to Röhm & Haas, served as Technical Adviser.

Pittsburgh Glass

Examples of "Uses of Glass" presented in the Comparative Details for this month, pages 367-372, include several selected by the Editors from the second annual Pittsburgh Glass Institute Competition.

These are the residence entrance designed by David J. Abrahams, Architect, of Boston, for Mr. and Mrs. Herman Cluthe, of West Harwich; the Monadnock Building entrance designed by Skidmore & Owings, Architects, of Chicago and New York; and the shop designed by Edwin J. Kraus, Architect, of Milwaukee, Wisconsin, for the Western Printing Company, of Poughkeepsie, New York.



AT LARGE IN THE LIBRARY

RICHARD UPJOHN, ARCHITECT AND CHURCHMAN, by Everard M. Upjohn (\$4.00, 243 pages, 6" x 9 1/4", illustrated — Columbia University Press, 2960 Broadway, New York).

A valuable historical record is presented in this first biography of Richard Upjohn (1802-1878), American architect who a century ago was commissioned to design Trinity Church in New York City. One of his descendants, Everard M. Upjohn, Assistant Professor Fine Arts at Columbia University, has prepared a well-rounded text, in support of his conviction that his distinguished ancestor's ideas and ideals, as well as his architectural designs, should be understood if his rightful position in the development of American culture is to be appraised.

Aside from Upjohn's success as architect for Trinity Church, which won for him the largest ecclesiastical practice in the country, his other works as a designer of public buildings and residences established him as perhaps the most important architect between Jefferson and Richardson. A. H.

TO-MORROW'S HOMES, by F. Vaux Wilson, Jr. (200 pages, illustrated

Gold Medal Received By Howe & Lescaze

The Jury of Awards of the Exhibition of Architecture and Allied Arts held April 20 to May 7 at the Philadelphia Art Alliance, awarded the Gold Medal of the Philadelphia Chapter, A. I. A., to the Philadelphia Savings Fund Society Building, designed by George Howe and William E. Lescaze. The Jurors were Paul A. Davis, III, Chairman, William C. Perry and William J. H. Hough.

Other mentions went to:

H. Lewis Dubring, for his restorations of the Powell House in Philadelphia; Tilden & Pepper, for the National Broadcasting Company Building in Philadelphia; Willing, Sims & Talbutt, for a residence at Newtown, Pennsylvania; John Lane Evans, for alterations to a residence near Charlestown, Pennsylvania.

Kenneth Day, for his house at Miquon, Pennsylvania; J. Roy Carroll, Jr., for The Church of The Restoration at Germantown, Pennsylvania; H. Martyn Kneedler, Jr., for a residence at Wawa, Pennsylvania; Kneedler & Zantzing, for a model of a residence at Fort Washington, Pa.

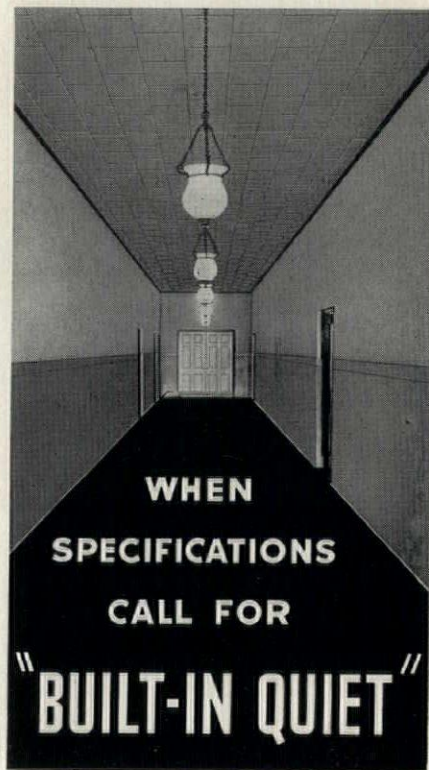
—a free copy available to each architectural office, actively engaged in practice, on written request to the Homasote Company, Trenton, New Jersey. Architects applying are asked to use their letterheads).

A system of modular construction utilizing conventional building materials is outlined by the author of this book. The theory is based on the conclusion that materials which can be made ready for installation more cheaply at the factory than on the site of the building should be thus fabricated. Conversely, where no economy results from factory fabrication, the conventional methods of cutting, fitting, and assembly at the building are advocated.

A. H.

THE REVIEW FOR ARCHITECTS, BUILDERS, AND INTERIOR DECORATORS, 1939 edition (\$0.02, 32-page pamphlet, illustrated; also separate portfolio of measured drawings and furniture design, 1 1/4c; and a portfolio on architecture, handicrafts, building construction, and history of buildings, 1 1/4c — Julius Hoffmann, Stuttgart, Germany).

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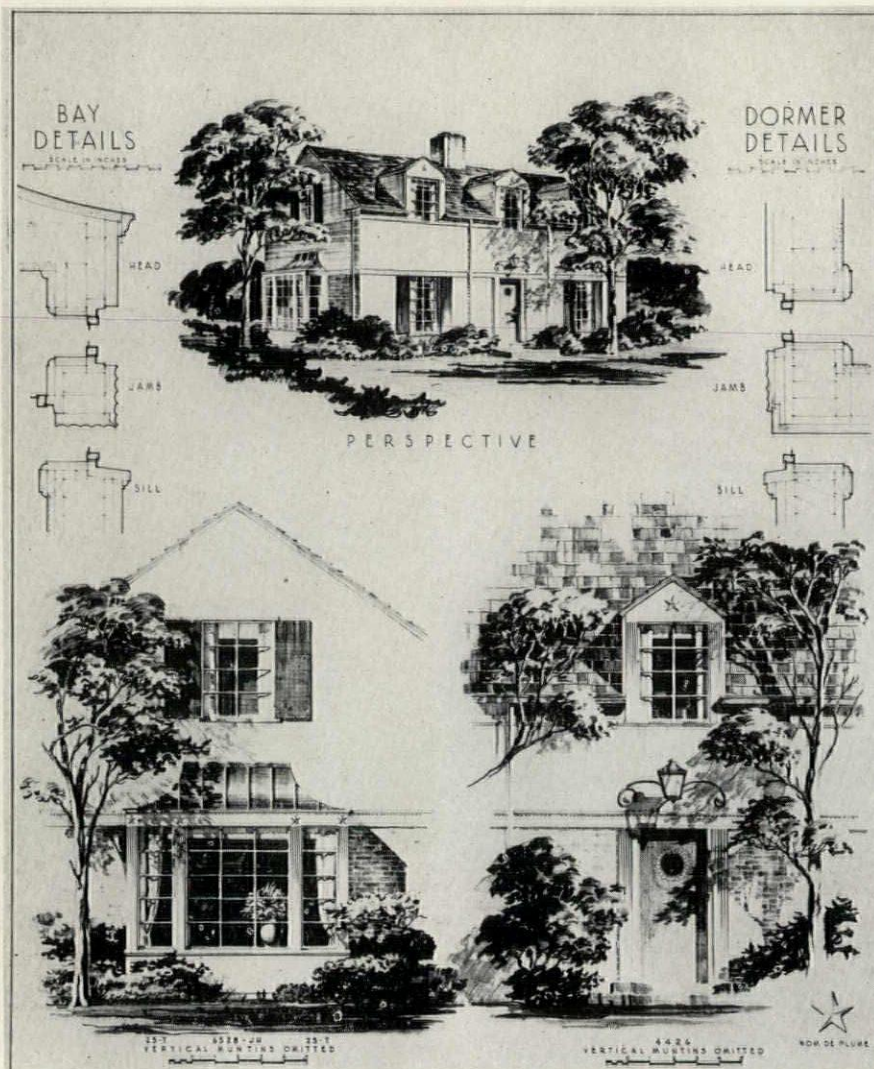
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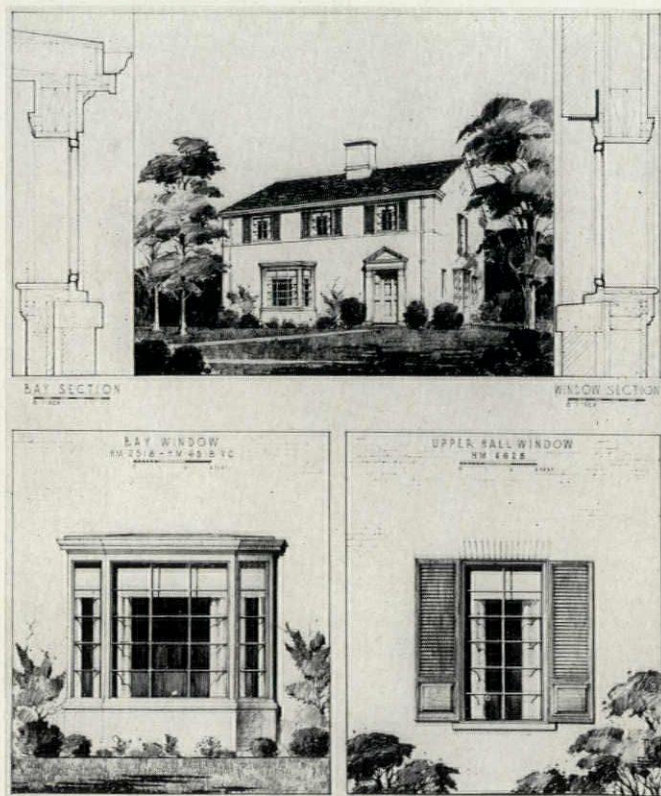
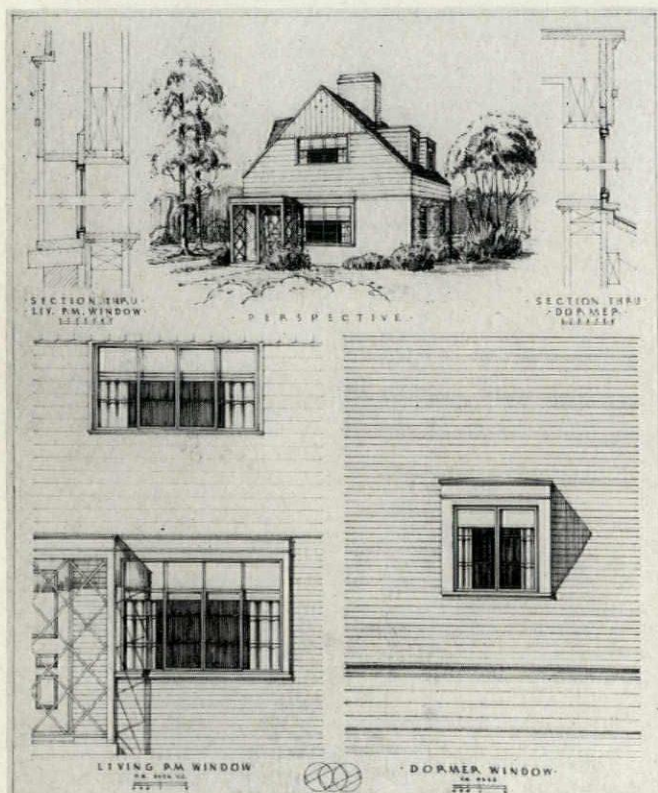


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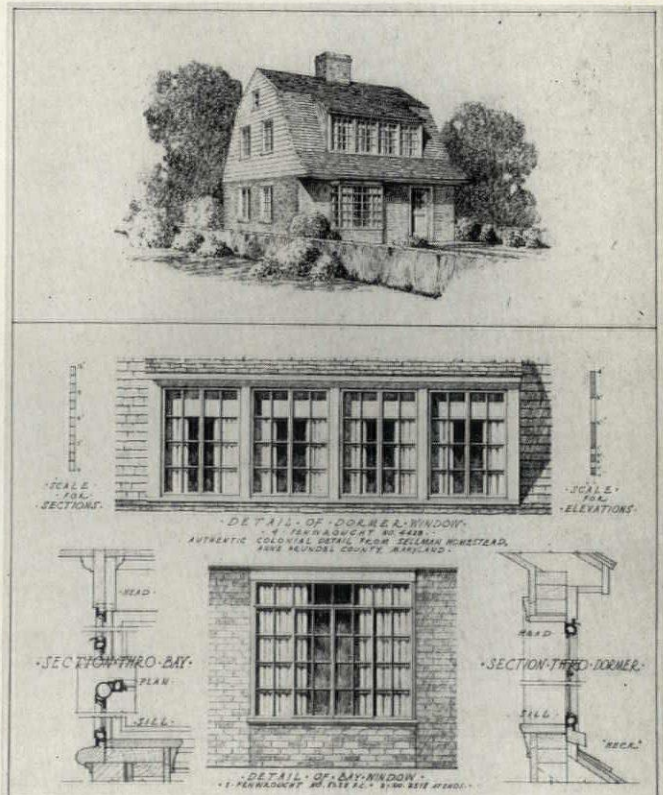
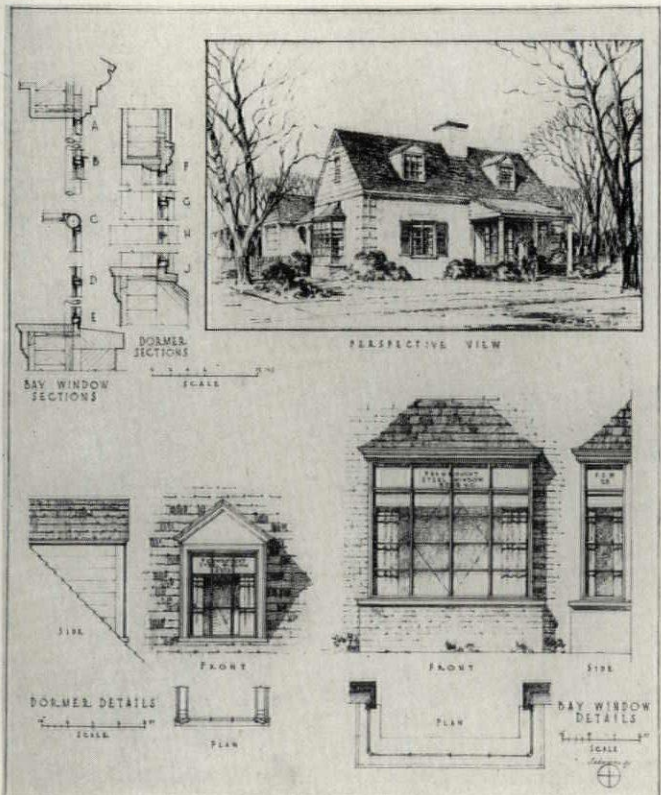
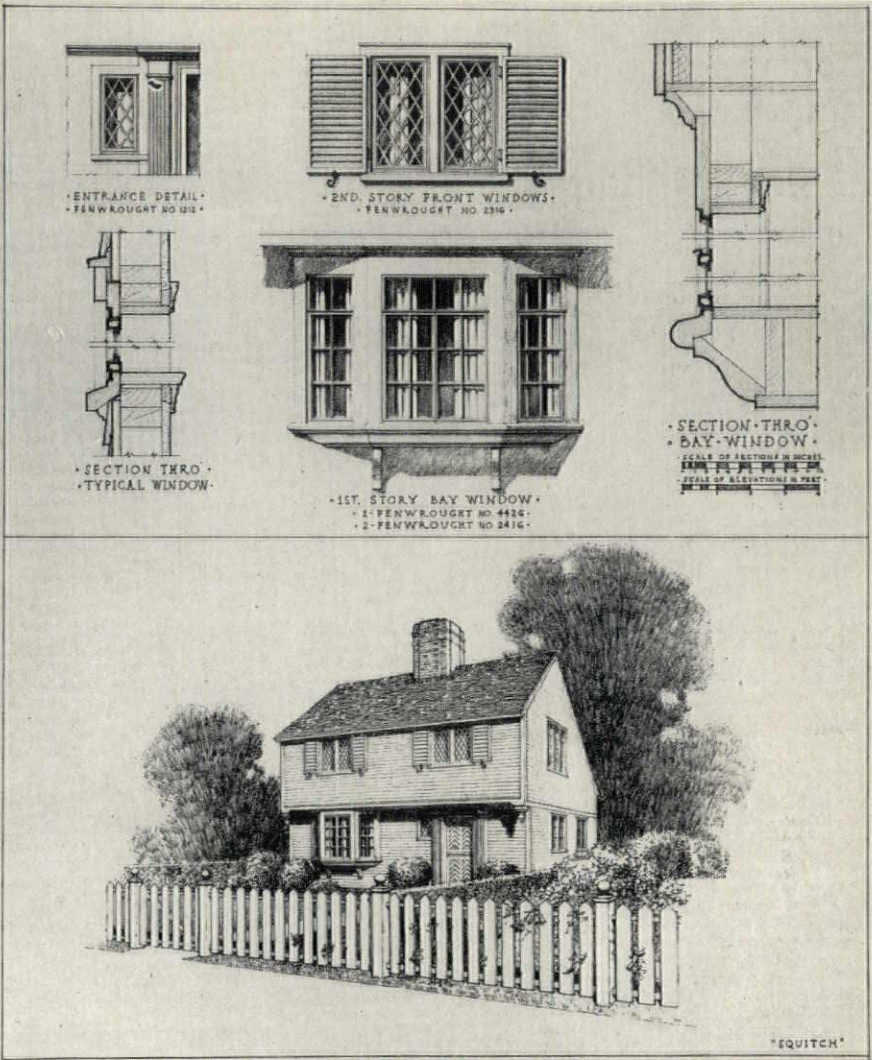
for noise-quieting and acoustical correction



First prize in the Fenestra Architectural Competition conducted recently by the Detroit Steel Products Company, with Clair W. Ditchy, A.I.A., as Professional Adviser and other participating architects as Jurors, went to the drawing at the left entered by Hyde & Williams. The purpose of the Competition was to encourage Detroit small house architects to study the possibilities of adapting "stock" and "standard" steel casement windows to Colonial houses in the \$7,000 price class. First mention went to the drawing, below left, by Ditchy-Farley-Perry and second mention to the drawing, below right, by Earl W. Pellerin



This drawing by J. Ivan Dise won the second prize in the Competition. A perspective of the house, elevations of first and second story windows, and installation details were required by the Program. Talmadge C. Hughes received third mention for the drawing at the left, below, and fourth mention went to another drawing by J. Ivan Dise, below



A Notable List of Outstanding Architectural Books

THE DESIGN OF LETTERING, Egon Weiss.

Alphabets of every style, with "net values" carefully worked out, are provided for the convenience of the user of this book. By the use of Mr. Weiss' system of "Net Values" an inscription to fit a given space can be laid out right the first time—so accurately spaced that only minor modifications, if any, will be necessary. 192 pages, 9 x 12, 155 text illustrations \$5.00

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SKETCHING AND RENDERING IN PENCIL, Arthur L. Guptill.

A book of 200 pages with exhaustive text and hundreds of illustrations. 9 x 12 inches, cloth bound \$5.00

DRAWING WITH PEN AND INK, Arthur L. Guptill.

Furnishes a sound and thorough guide for the study of pen and ink and its various techniques. 444 pages, 9 x 12 inches, profusely illustrated, cloth bound \$8.50

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Presents a new and thoroughly tested method for making perspective drawings without the use of a vanishing point. 64 pages, 10 plates, 9 x 12 inches \$1.50

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Contains 114 plate pages of practical construction details covering 300 subjects. This book, originally published in two parts selling at \$4.00 each, has now been revised, enlarged and bound in cloth and published in one volume \$6.00

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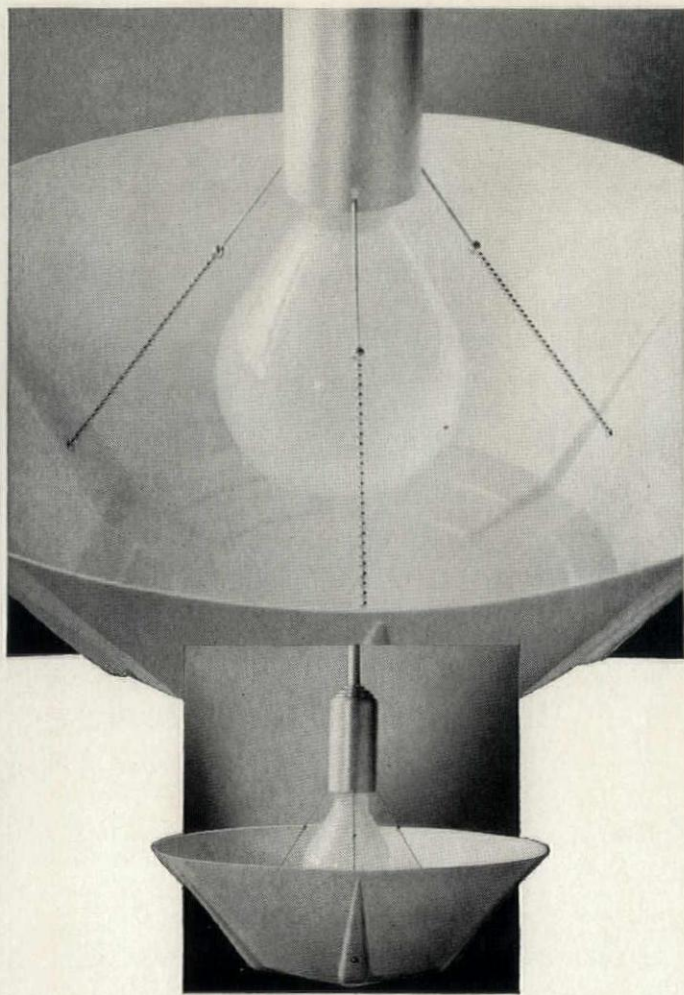
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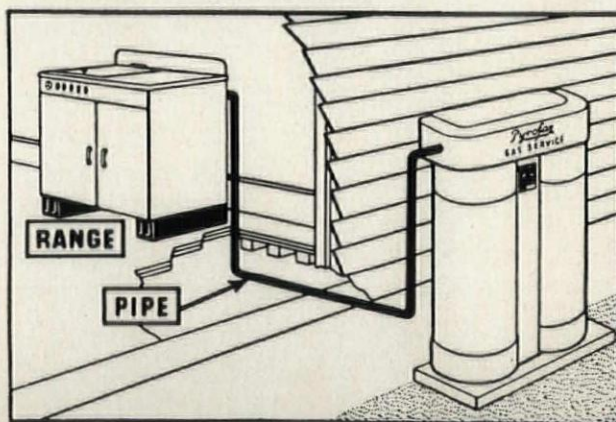
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THE Monographs that were published in PENCIL POINTS during 1937 and 1938 were devoted entirely to the historic towns in Massachusetts. They include Boston, Salem, Watertown, Beacon Hill, Cambridge, Old Marblehead, and Danvers. These Monographs are now available at fifty cents a copy.

The Monographs mentioned above are a continuation of the Work that was started in 1915 as The White Pine Series of Architectural Monographs, known since 1929 as The Monograph Series.

For those who do not own The White Pine and Monograph Series, may we point out that each Monograph is a document in itself with text, that refers to the plates, by such authorities as Frank Chouteau Brown, Wesley S. Bessell, Richard H. Dana, Jr., Richard B. Derby, Aymar Embury, II, Electus D. Litchfield, H. Van Buren Magonigle, Hubert Ripley, etc.

This genuinely inspiring and useful Series of Monographs provides the profession with a wealth of unhackneyed documents relating to all phases of design created during the Colonial Period. The entire territory, comprising the original States formed from the Colonies has been painstakingly explored. Few pleasing examples of American Architecture which contain something of particular individuality have been overlooked. None of the material in these Monographs has been published in any other Work.

Each of the Monographs in Volumes XI through XXIV contains at least two measured drawings by Kenneth Clark and Frank Chouteau Brown.

The Competition Monographs contain full page plate reproductions of pen and ink renderings, floor plans, elevations, and details of the Prize and Mention Designs, with the Program and Report of the Jury Award.

The page size of the Monographs is 8½" x 11". Printed on dull surface paper from clear plates with non-fading ink.

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| 60 | Late 18th Century Architecture in Western Mass. | 80 | The Edwards-Smyth House, Charleston |
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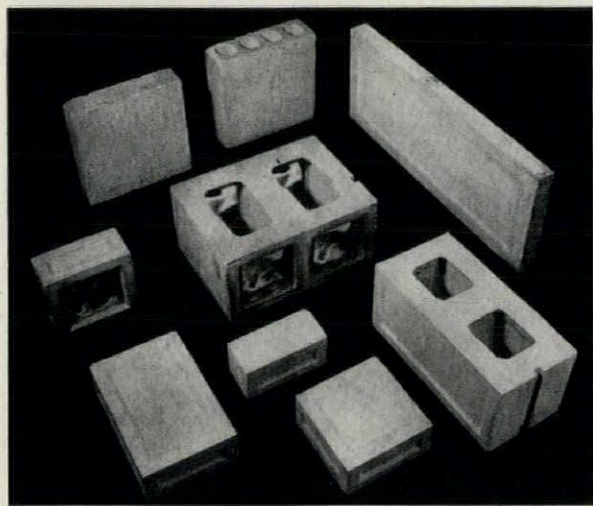
NATION-WIDE STANDARDIZATION OF PRECAST CONCRETE BUILDING UNITS

Announcement is made of the organization of the Cemenstone Corporation, Pittsburgh, which will engage in the nation-wide standardization of prefabricated concrete units, produced by newly patented principles of manufacture.

The D. J. Kennedy Company, Pittsburgh, is the corporation's first licensee. Its new equipment for the manufacture of Cemenstone products has just gone into steady production.

W. P. Witherow, founder of the Witherow Steel Corp., and president of Blaw-Knox Co., is chairman of the Cemenstone board. Leslie M. Johnston, former vice president and general manager of the A. M. Byers Company, is president, and Albert Henderson, who has been superintendent of construction on a number of the largest building projects in the United States during the past 20 years, developed the system and is the corporation's consulting engineer.

The Cemenstone Corporation will not manufacture precast concrete products. It will supply its patented equipment to licensees in designated areas, throughout the United States, who will be granted exclusive rights to manufacture, under the company's patents and its trademark Cemenstone. Products will be made according to the corporation's established standards of quality. By this means it will be possible for architects, contractors and owners to obtain products of known quality and utilization throughout the United States.



The system provides for standards of size and quality in precast concrete such as have been developed for steel. These concrete units also have been coordinated with standard steel construction elements for the first time in the history of the use of either steel or concrete in building.

Among the products which can be produced by the Cemenstone method are blocks for wall construction and channel-shaped, short-span slabs for floors and roofs, as well as long-span slabs, concrete plank, joists, brick, insulating tile, and veneering, also curbs, sidewalks, fence posts. The veneering will be capable of taking a large number of surface treatments. In addition to being cast in colors, their surfaces can receive

stains or paints satisfactorily and other materials can be molded to their surfaces. It also is planned to produce blocks inset with glass panels so that they will not only be load-bearing wall units but will admit light. Another type of product, made of portland cement, expanded by the addition of aluminum powder to make it highly cellular, is stated to have high insulating qualities and to weigh only one-fourth as much as ordinary concrete.

Blocks made by this new system may have plain or paneled faces and recessed ends for the reception of sash. It is stated that these blocks, meet all construction requirements for which many different shapes now are required. They are adaptable for walls, sills and jambs, lintels, corners, pillars, and coping.

NEW PORCELAIN LAUNDRY TRAY

The General Ceramics Co., 30 Rockefeller Plaza, New York, announces the introduction of a new Perma-Gloss porcelain two-compartment laundry tray for either new installations or modernization. It has a wide shelf at the



back with two self-draining soap receptacles and is equipped with an integral overflow and a swing spout for tempered water.

Among other features of the new tray are a pure-white glazed surface which is acid-proof and scratch-resistant; ease of cleaning due to round corners; peel-proof and rust-proof; large compartments set at a comfortable working height.

NEW GYPSUM PLANT BROADENS LINE OF CELOTEX PRODUCTS

Through the purchase of the properties, plant, goodwill, and manufacturing facilities of the American Gypsum Co., Port Clinton, Ohio, The Celotex Corporation, according to H. W. Collins, vice president in charge of merchandising, enters the gypsum business and broadens its scope of service to the building industry. The move brings the corporation one step closer to rounding out the present diversified line of Celotex products.

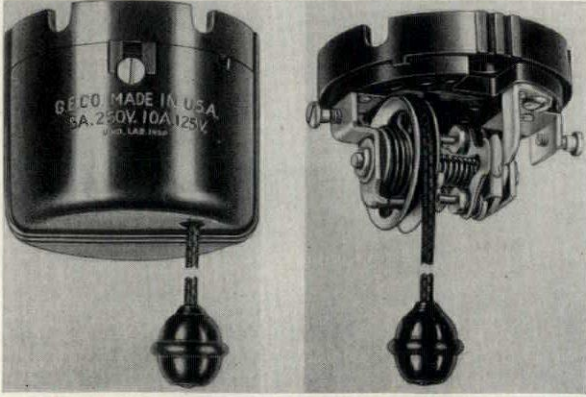
The purchase adds a complete line of gypsum wall-boards, liner boards, gypsum lath and gypsum block, base and finish coat gypsum plasters, specialty plasters, acoustical plaster, land plaster, lime, building products and accessories.

The line bearing the Anchor, Indian Head, and White Rock trade-marks will be continued under their present names and markings. These trade-marks will be identified with The Celotex Corporation by adding the "Celotex" trade-mark to all existing packages. As rapidly as possible, it is stated, the manufacture of such materials will be extended to other points strategically located throughout the country.

C. F. Miller, formerly president of the American Gypsum Co., will remain with The Celotex Corporation as general manager of the Port Clinton operations.

NEW G-E TEXTOLITE CEILING SWITCH

An improved ceiling switch, made of Textolite and with modern styling has been announced by the wiring device section of the General Electric Appliance and Merchandise Department, Bridgeport, Conn. The new switch, Cat. No. GE857, replaces a previous switch of the same number which had a porcelain base and metal cover. The older switch is no longer available.

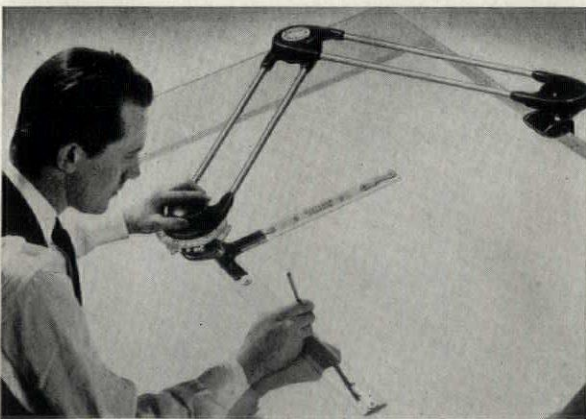


The new G-E Textolite ceiling switch is light in weight, and sturdy in construction. Its steel frames are anchored with two screws at each end. Blades, contacts and spring are extra heavy. There is a strong operating spring in the switch mechanism. Top wiring facilitates installation.

The pull cord with which the switch is equipped is sturdy and durable, pulling directly over a wheel and thereby minimizing friction. A slot in the wheel permits easy cord replacement.

EXCELLO FREE FLOATING DRAFTING MACHINE

Designed to minimize drafting fatigue, the new Excello Free Floating drafting machine announced by the Eugene Dietzgen Co., Chicago, it is stated will definitely permit draftsmen to work for many hours without strain and, therefore, with continuously greater accuracy. The free floating feature which accomplishes this is obtained by the use of new light weight alloys, roller bearings, and precision construction; together with an advanced method of gravity control that does not place



a drag on the drafting machine's motions under any conditions. This latter feature eliminates both friction brakes and overhanging weights as the means of overcoming the effect of gravity when the new machine is used on inclined drafting boards. The protractor head of this new machine also minimizes fatigue by placing the control of angles directly under the thumb without tiresome wrist-twisting.

All moving parts are completely enclosed, protected against dust and handling. This feature, it is stated, not only eliminates band breakage which normally comes from handling but prevents the operator from cutting his hands on the bands' edges. The possibility of band breakage from temperature changes is eliminated by the use of non-continuous bands which incorporate a most unique automatic tensioning arrangement which offsets the expansion or contraction which occurs.

The new Dietzgen Excello drafting machine is finished in non-glaring satin aluminum and black. It can be used for drawings up to 36 x 60, with either standard or civil engineers' protractor head as desired. The Excello chuck plates take all standard scales.

STAEDTLER ANNOUNCES INCREASE IN DEGREES OF LUMOGRAPH PENCILS

J. S. Staedtler, Inc., 53-55 Worth St., New York, has recently announced an important increase in the number of degrees in which several of its items are now obtainable.

The No. 2886 Mars Lumograph drawing pencil is now to be had in 19 degrees of hardness, instead of 17 as formerly. The new range includes ExExB-ExB-6B-5B-4B-3B-2B-B-HB-F-H-2H-3H-4H-5H-6H-7H-8H and 9H.

The No. 1018 Mars Lumograph artists' pencils and the No. 1904 refill leads are now made in 15 degrees, as follows: ExB-6B-5B-4B-3B-2B-B-HB-F-H-2H-3H-4H-5H and 6H.

The increase in choice has been made as a result of the demand of many pencil users who require most exact gradings in their drawing pencils.

NEW ADHESIVE FOR APPLYING WALL AND CEILING FINISHES

A new adhesive for use in applying fibreboard and hard-board wall and ceiling finishes has been announced by the Armstrong Cork Co., Lancaster, Pa. High initial bond of the new product is said to lessen the possibility of installation failures due to improper application methods.

The new adhesive is of the modified oil base type. It is waterproof, easily worked, and remains plastic indefinitely. Its longitudinal shrinkage is reported to be less than one-half of one per cent. The new product may be safely used for the application of hardboards and similar materials against smooth concrete and plaster surfaces, as well as against wood furrings, solid wood sheathing, gypsum board, and gypsum lath.

Samuel D. Van Vleet, comptroller of The Ruberoid Co., manufacturers of asphalt and asbestos building products, has been elected to the additional position of secretary of the corporation. Mr. Van Vleet succeeds as secretary the late Miss Estelle M. Johnson, who died recently after a continuous association of more than fifty years with the Ruberoid organization.

Edward H. Crabbs, eastern executive of the Philip Carey Co., Cincinnati, O., has accepted the presidency of the newly reorganized body of business men, The Executives League of America, Inc. This League contemplates being represented in every county in the United States.

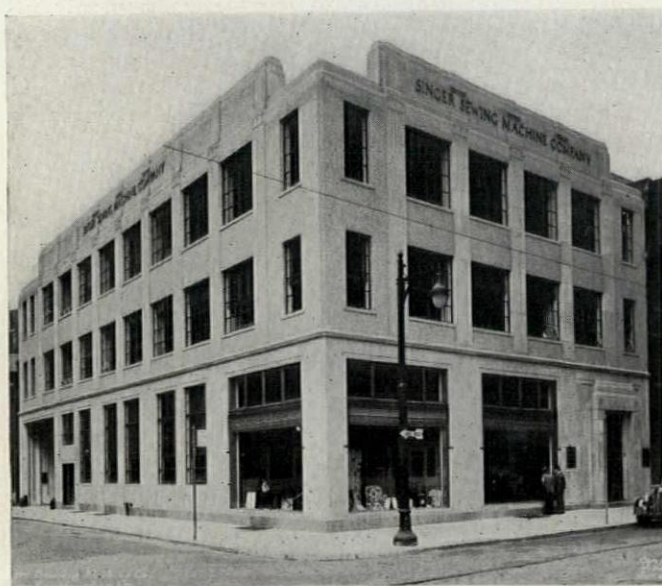
James E. Auten, president of the Barber Asphalt Corp., Barber, N. J., has announced the appointment of Lafayette D. Lytle as sales manager of the roofing division. Mr. Lytle has been with the company since 1905.

INDEX TO ADVERTISERS

Advertising Offices: 330 West 42nd Street, New York, N. Y.
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| | |
|---|---------------|
| Adam, Frank, Electric Company | 49 |
| Alberene Stone Corporation of Virginia | 51 |
| American Brass Company | 2nd Cover |
| American Pencil Company | 45 |
| American Seating Company | 8 |
| American Steel & Wire Company | 6 |
| American Telephone & Telegraph Company | 68 |
| Anemostat Corporation of America | 67 |
| Armstrong Cork Products Company, Building Materials Division | 2, 13, 35, 57 |
| Barber-Colman Company | 10 |
| Barrows Lock Works | 54 |
| Bead Chain Manufacturing Company, The | 61 |
| Carey, Philip, Company | 39 |
| Celotex Corporation, The | Back Cover |
| Congoleum-Nairn, Inc. | 26 |
| Consolidated Expanded Metal Companies | 28 |
| Conté Crayons | 53 |
| Crane Company | 21 |
| Dixon, Joseph, Crucible Company | 33 |
| Eberhard Faber Pencil Company | 46 |
| Elkay Manufacturing Company | 20 |
| Faber, A. W., Inc. | 42 |
| Field, Alfred, & Company, Inc. | 53 |
| Formica Insulation Company | 4, 5 |
| General Electric Company, Specialty Appliance Division .. | 44 |
| Gibson & Kirk Company | 18 |

| | |
|--|-----------|
| Higgins, Chas. M., & Company, Inc. | 22 |
| Holland Furnace Company | 37 |
| Kennedy, David E., Company, Inc. | 52 |
| Koh-I-Noor Pencil Company, Inc. | 16, 55 |
| Libbey-Owens-Ford Glass Company, Vitrolite Division | 27 |
| Louisville Cement Company | 3rd Cover |
| Maple Flooring Manufacturers Association | 17 |
| Miami Cabinet Division Philip Carey Company | 14 |
| National Terrazzo & Mosaic Association | 43 |
| Norton Lasier Company | 40 |
| Overhead Door Company | 25 |
| Owens-Illinois Glass Company | 47 |
| Pecora Paint Company, Inc. | 66 |
| Pittsburgh Plate Glass Company | 3, 41 |
| Portland Cement Association | 12 |
| Post, Frederick, Company | 53 |
| Pyrofax Gas Division Carbide and Carbon Chemicals Corporation | 61 |
| Resinous Products & Chemical Company | 36 |
| Rolscreen Company | 23 |
| Samson Cordage Works | 55 |
| Smyser-Royer Company | 18 |
| Soss Manufacturing Company | 56 |
| Taylor, Halsey W., Company, The | 20 |
| Tile-Tex Company | 15 |
| United States Gypsum Company | 19 |
| Universal Atlas Cement Company | 9 |
| U. S. Steel Corporation Subsidiaries | 6, 9 |
| Vonnegut Hardware Company | 24 |
| Weis, Henry, Manufacturing Company, Inc. | 38 |
| Westinghouse Electric & Manufacturing Company | 16 |
| Wheeling Corrugating Company | 11 |
| Wilson Engineering Corporation | 46 |
| Wood Conversion Company | 7 |



Singer Sewing Machine Co. building, Philadelphia, Pa.
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*Permanent Exhibition of Decorative Arts and Crafts, Rockefeller Center, New York.



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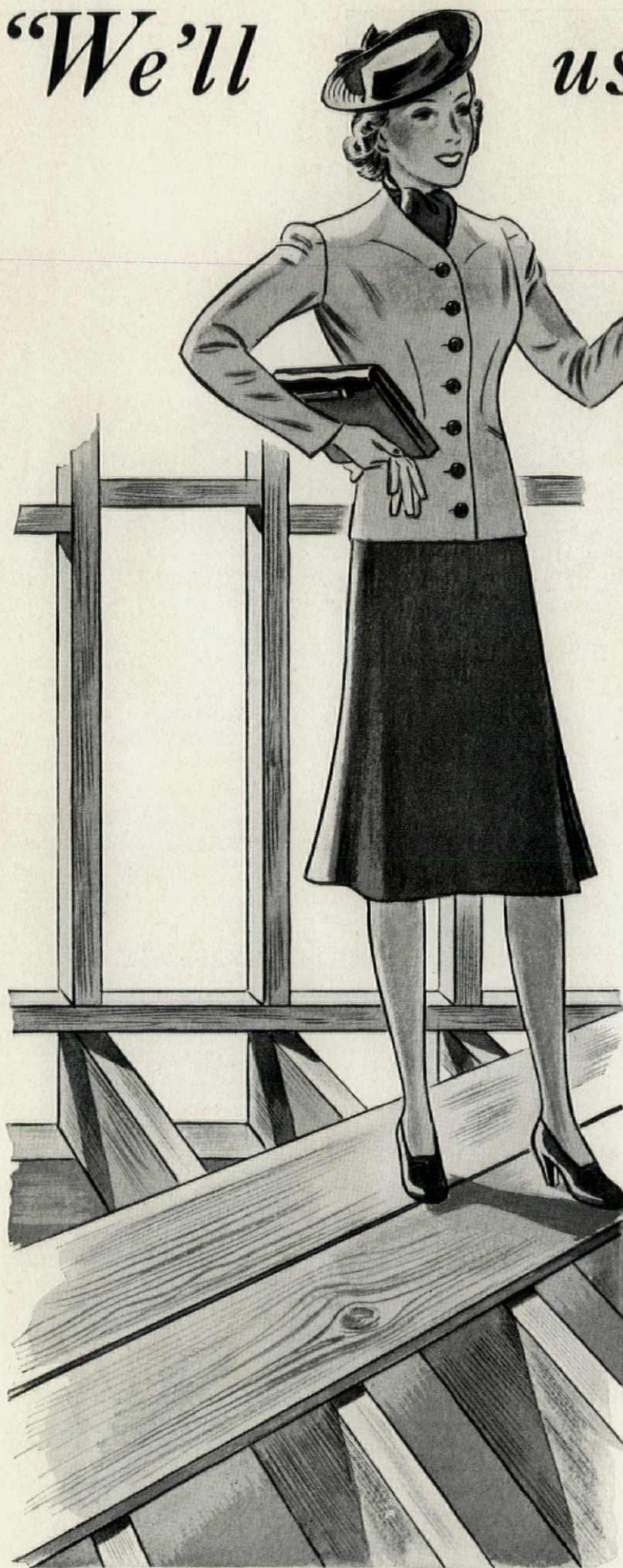
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JUNE, 1939

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ANOTHER PAGE
from the
BRIXMENT HANDBOOK

This is a sample page from the Brixment Handbook—a book which contains many important, yet often little-known facts about mortar, and about brickwork in general. Your copy will be gladly mailed you, on receipt of this coupon. Address:

LOUISVILLE CEMENT CO., Incorporated
301 Guthrie Street
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BRIXMENT

Assures a Good Bond

After all is said and done, the first function of a mortar is to form a good, tight *bond* with the brick. Upon this characteristic depend both the strength and the water-tightness of the wall. (See pages 4 and 9.) * A good bond is particularly important in securing water-tight walls, because most cases of leakage are caused by the passage of water *between* the brick and the mortar.

Brixment mortar assures a good, strong, *thorough* bond because: (1) Its great plasticity permits a more complete bedding of the brick, and an increased area of contact

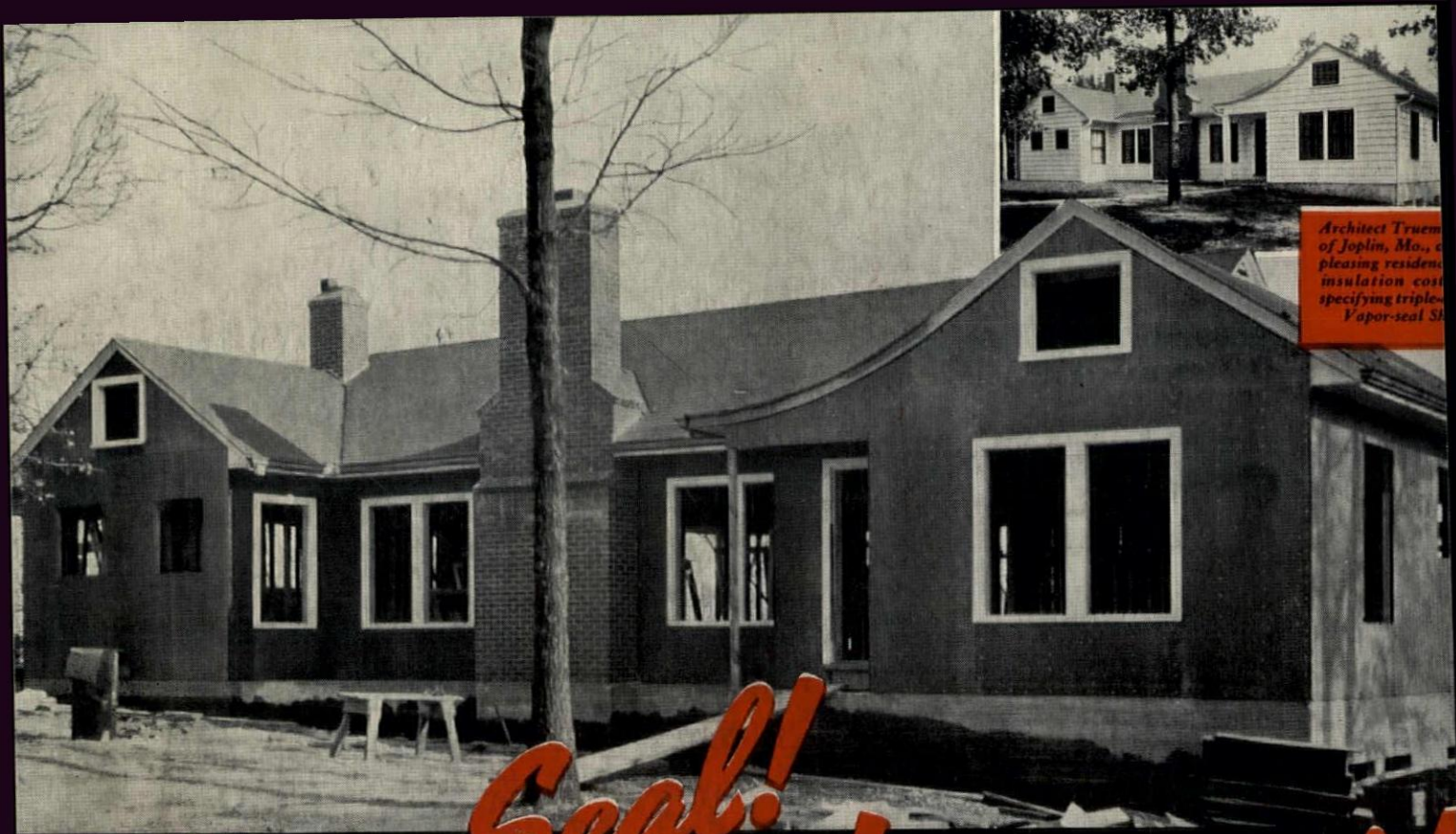
between the brick and mortar. (See page 5.) *

(2) Its high water-retaining capacity keeps the brick from sucking the water out of the mortar too fast, and prevents the mortar from congealing and shrinking away from the brick. (See page 6.) *

(3) It hardens slowly enough to permit deeper penetration and more thorough keying into the pores of the brick.

Because of these characteristics, Brixment mortar makes a *better bond*. Isn't this what you want in *your* brickwork?

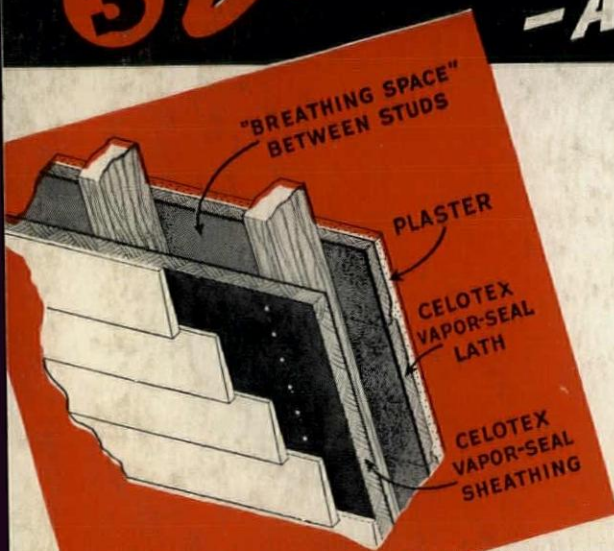
* See further details in the Brixment Handbook.



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of Joplin, Mo., is
pleasing residents
insulating cost
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Vapor-seal Sh

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