

UNIVERSITY OF HAWAII  
WAR SAVINGS BOND SERIES E  
C76 286 557 E  
NOT TRANSFERABLE

WAR SAVINGS BOND  
100  
THE UNITED STATES OF AMERICA  
ISSUE DATE  
WHICH IS THE FIRST DAY OF  
C76 286 557 E  
NOT TRANSFERABLE

UNITED STATES SAVINGS BOND  
100  
THE UNITED STATES OF AMERICA  
TEN YEARS FROM THE ISSUE DATE HEREOF WILL PAY  
ONE HUNDRED DOLLARS  
ISSUE DATE  
WHICH IS THE FIRST DAY OF  
AR SAVINGS BOND SERIES E  
C76 286 557 E  
NOT TRANSFERABLE

# THE ARCHITECTURAL FORUM

UNITED STATES SAVINGS BOND  
100  
THE UNITED STATES OF AMERICA  
TEN YEARS FROM THE ISSUE DATE HEREOF WILL PAY  
ONE HUNDRED DOLLARS  
ISSUE DATE  
WHICH IS THE FIRST DAY OF  
MR. AND MRS. A. J. A. A. A.  
EVERETT  
J. S. A. A. A.  
WAR SAVINGS BOND SERIES E  
C76 286 557 E  
NOT TRANSFERABLE

ENTRANCE LOBBY  
FINANCE  
Planting Box  
Stainless Steel Copying  
Ramp Up to 10' 0" 2"  
Carson's idon Strips  
Ramp Up to 2' 1 1/2"  
Carson's idon Strips  
JUNE 1944



## HOW ARCHITECTS AND ACOUSTICAL EXPERTS HELPED A PUBLISHER WIN

# A Vote of Thanks



This is the way the main office of the Indianapolis Times looked before Russ-Harrison, architects, went to work on their job of modernization.



This is the same office after re-designing, and after the application of Acousti-Celotex\* by the Celotex Acoustical Products Distributor, Indianapolis, Indiana.

### Acousti-Celotex\* Used In Quieting Indianapolis Times Main Office

THERE'S BOUND to be bustling activity in a lively newspaper office. That of the Indianapolis Times is no exception. But today, after modernization, the main office of this great Indiana newspaper is a far more pleasant place to work. It's sound conditioned with Acousti-Celotex\*, the world's most widely used acoustical material.

Here is a typical example of how an Acousti-Celotex\* distributor works with an architect in solving acoustical problems. The result in this case was an attractive, efficient, modernized office with both sound and light conditioning.

Consult with the Acousti-Celotex\* distributor in your city about your sound conditioning problems. There is no obligation. He is a member of the world's most experienced acoustical organization and guarantees results. A note to us will bring him to your desk. Celotex Corporation, Chicago 3, Illinois.

### In Appreciation...

TO  
The Management  
of  
The Indianapolis Times

January 25, 1943

We, the undersigned employees of the Business Office, the Advertising and Circulation Departments, wish to express our individual and collective thanks and gratitude for the improvements made in the general appearance of the first floor. We feel it fitting to express our feelings deeply that the management may know that we are appreciative of the efforts being made in giving us better lighting, less noise disturbance, and a much more pleasant atmosphere in which to work.

*[List of 50 employee signatures follows]*

Here is the scroll presented to the management of the Indianapolis Times. Signed by 50 employees, it expresses their appreciation "of the efforts being made in giving us better lighting, less noise disturbance and a much more pleasant atmosphere in which to work."



## Sound Conditioning with ACOUSTI-CELOTEX

\* PERFORATED FIBRE TILE - SINCE 1923

REG. U. S. PAT. OFF.

Sold by Acousti-Celotex Distributors Everywhere  
In Canada: Dominion Sound Equipments, Ltd.



## NEWS

**AN INTERVIEW WITH ABNER FERGUSON**

The Federal Housing Administration's astute Commissioner gives his ideas on FHA's rôle in bolstering the housing market while curbing inflation. An exclusive feature.

**FRESNO CITY HALL**

Franklin & Kump and Associates design one of the few really modern municipal buildings, using ramps in place of elevators.

**THE FACTORY OF THE FUTURE**

The H. K. Ferguson Company illustrates a series of proposals for more efficient and attractive industrial buildings.

**PLANNING WITH YOU**

New York City's Postwar Building Exhibition presents designs for \$1,270,000,000 worth of public buildings.

**PREFABRICATION**

Britain solves its emergency housing problem with an all-steel factory-built house.

**FAMILY BEHAVIOR, ATTITUDES AND POSSESSIONS**

The Pierce Foundation's study of specific functions of the bedroom-bath portion of the typical house.

**HOUSES**

Two houses overlooking San Francisco Bay . . . a gatehouse in Delaware and a house near Detroit of special interest to builders.

**PRIVATE ART GALLERY**

An addition to the home of a well-known motion picture star to house his extensive collection of paintings.

**FORUM OF EVENTS**

A scientific study of space and motion reveals patterns anticipated by abstract art forms . . . Postwar idea of the month . . . Moscow subway.

**PRODUCTS AND PRACTICE**

Modular masonry: the first step towards complete coordination of building dimensions. It will introduce long-needed simplification into design.

**BUILDING REPORTER**

Technical News: safe relative humidity for insulated buildings . . . Lumitile . . . New Products: Marvinol . . . a wind-actuated exhaustor . . . Technical Literature.

**BOOKS**

TVA: Democracy on the March, by David E. Lilienthal.

**LETTERS**

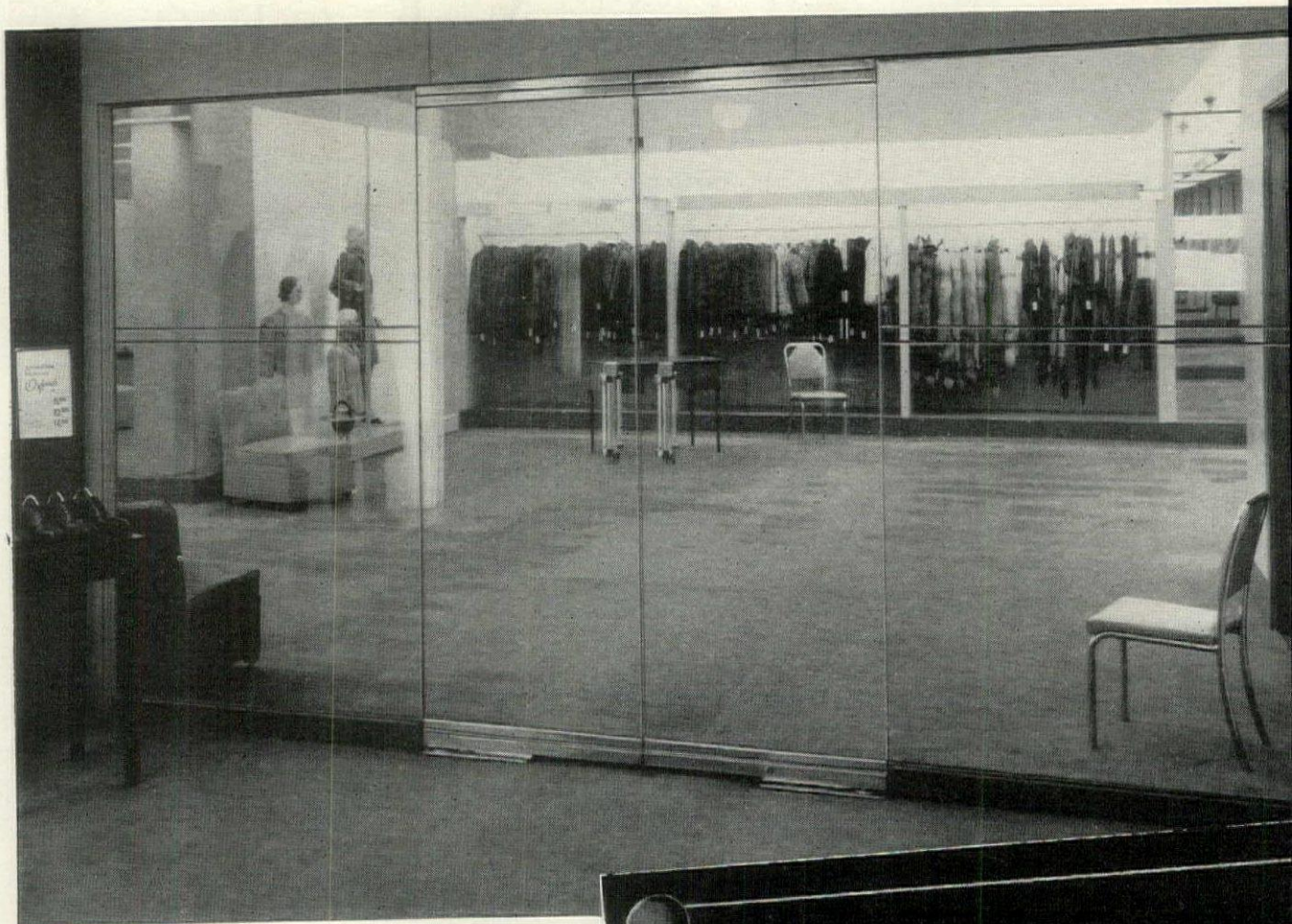
**NEXT MONTH:** Rainbow bridge . . . New Kensington and Paterson housing projects . . . St. Mark's church in Vermont . . . Houses . . . Prefabrication.

Since January 1, 1943, TIME, LIFE, FORTUNE and THE ARCHITECTURAL FORUM have been cooperating with the War Production Board on conservation of paper. During the year 1944, these four publications will use 73,000,000 lb. (1,450 freight carloads) less paper than in 1942. In view of the resulting shortage of copies, please share your copy of THE FORUM with friends.

*In Military Service:*  
Robert W. Chasteney, Jr.  
William J. Conway  
Robert Hanford  
Joseph C. Hazen, Jr.  
George B. Hotchkiss, Jr.  
S. Chapin Lawson  
Amnon Rubinstein  
A. Banks Wanamaker

*Managing Editors,* George Nelson, Henry Wright; *Art Director,* Paul Grotz, *Assistants,* Louise Cooper, Ruth Felerabend, Mary Jane Lighthown, Mary Mix, Mary Sanders, Charlotte Speight, Dorothy Oshlag, Richard E. Saunders.  
*Publisher,* Howard Myers; *General Manager,* Ruth Goodhue; *Advertising Manager,* George P. Shutt.  
THE ARCHITECTURAL FORUM is published by Time Inc., Maurice T. Moore, Chairman; Roy E. Larsen, President; Charles L. Stillman, Treasurer; David W. Brumbaugh, Secretary. Publication and Subscription Office, Orange, Conn. Subscription may also be sent to 330 East 22nd Street, Chicago 16, Ill. Executive, Editorial and Advertising Offices, 19 West 44th Street, New York 18, N. Y. Address all editorial correspondence to 19 West 44th Street, New York 18, N. Y. Yearly subscription payable in advance U. S. and Possessions, Canada, Mexico, South America, \$4.00. Elsewhere \$6.00. Single issues, including Reference Numbers, \$1.00. All copies mailed flat. Copyright under International Copyright Convention. All rights reserved under the Pan American Copyright Convention. Entered as Second Class Matter at the Post Office at Orange, Conn., under the Act of March 3, 1879. Copyright 1944 by Time Inc.  
VOLUME 80—NUMBER SIX





A beckoning finger to the eager shopper is an entrance like this to some special department or salon in a large store. Permitting wide, clear vision of the attractions within, these panels and doors of Herculite Tempered Plate Glass are very good-looking in their own right. Sturdy, too . . . because tempering makes them 4 times as strong as regular plate glass of equal thickness. Architect: Edward M. Conboy.

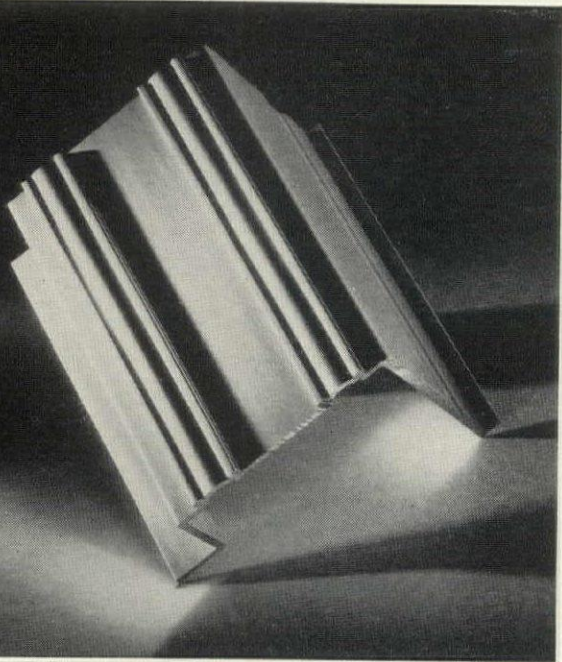
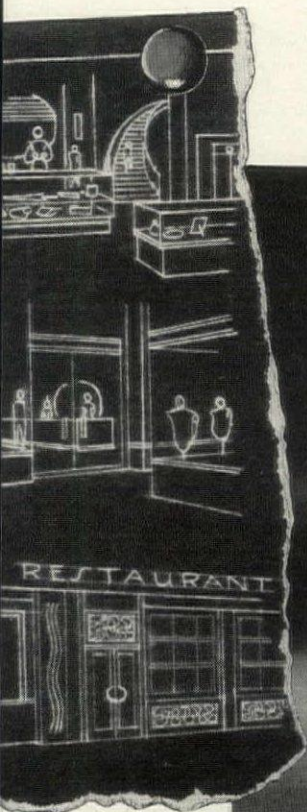
## INTERESTING WAYS TO USE GLASS IN COMMERCIAL BUILDINGS



Store fronts must have sales appeal . . . the ability to turn sidewalk traffic into store traffic. Pittsburgh Glass Products are calculated to supply the beauty and appeal you demand in the execution of your store front designs. Carrara Structural Glass in many colors, PC Glass Blocks, Herculite, Pittsburgh Plate Glass and Pittco Metal work as a team to help you create exteriors of distinction.



Commercial interiors, whatever their size or style, almost invariably benefit from the brightness, smart appearance and lively reflections of large structural mirrors made with Pittsburgh Polished Plate Glass. Such mirror applications as this one in the coffee shop of a southern hotel, aid greatly in achieving an atmosphere of spaciousness. Architect: Lyman W. Cleveland.



**Unity of design.** Pittco Metal was developed specifically to be used in connection with Pittsburgh Glass Products for store fronts. In consequence, this quality metal, when so used, is noteworthy for the pleasing and harmonious relationship it bears to other parts of the finished store front.

**We believe** you will find much to interest you in our new, illustrated booklet of ideas showing the use of Pittsburgh Glass in architectural design. Send the coupon below for your free copy.

*"PITTSBURGH" stands for Quality Glass and Paint*

★ Design it better with **PITTSBURGH GLASS**  
THE ACCEPTED LINE FOR EVERY ARCHITECTURAL USE

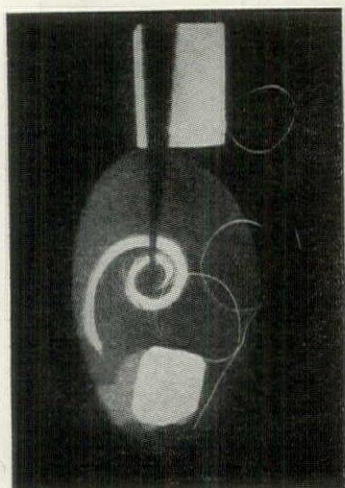
**PITTSBURGH PLATE GLASS COMPANY**

Pittsburgh Plate Glass Company  
2105-4 Grant Building  
Pittsburgh 19, Pennsylvania  
Please send me, without obligation, your new booklet entitled: "Ideas for the Use of Glass in Building Design."

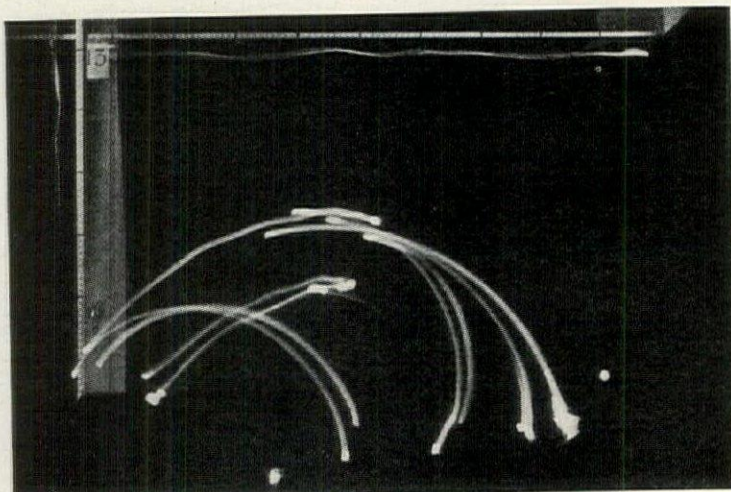
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Address.....  
City..... State.....



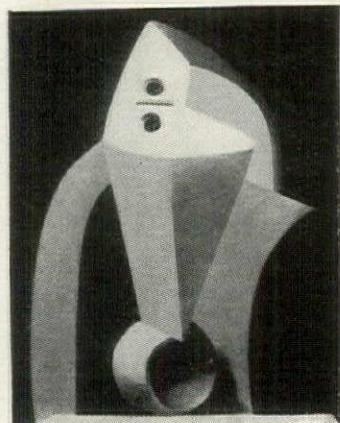
# FORUM OF EVENTS



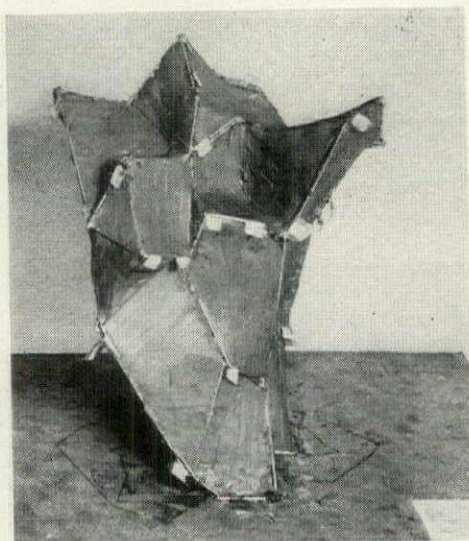
MAN RAY: Rayograph, 1922



PIERCE: Headroom above the sleeping surface, 1944



PICASSO: Woman in an armchair, 1929



PIERCE: Man dressing, 1944

MAN RAY with his photograms attempted a new art form using the photographic process. The John B. Pierce Foundation, employing flashlights to trace the definitive motions of retiring, arrived at a series of technically interesting facts but also, incidentally, at a picture which has some of the same characteristics as Man Ray's aesthetic venture. A similar kinship can be found in Picasso's painting and the Pierce Foundation's space form. The likeness of title is also worthy of note.

A scientific study of motion and space produces forms strikingly similar to those in abstract art.

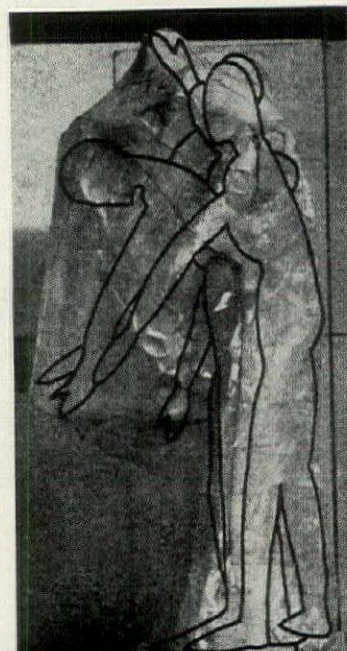
In a recent attempt to analyse the actual displacement of the human body while performing a given operation, the John B. Pierce Foundation developed several new techniques for measuring space and motion. One method used a camera with an open shutter, a dim room, a subject with flashlights strapped to wrists, ankles, etc. The other used paste-ups of photographs taken from all angles, superimposed until a solid was created. The two illustrations at the upper right show the results.

About twenty years ago artists in this country and Europe sweated mightily to produce paintings and sculpture of

a new kind. Two examples of what they turned out are seen in the above illustrations on the left.

A simple shuffling of the pictures on the left and on the right would produce a dilemma: without the labels who could tell which was Art and which was Science? Since the two are so remote in time and objectives, collusion seems to be out. If any FORUM readers have any idea what causes this kind of thing, the Editors would like to hear about it. Life is confusing enough these days without trying to disentangle Pierce and Picasso. For a somewhat more workaday approach to the Foundation's studies, see p. 97.

PIERCE: Consecutive motions, 1944





# CONFERENCES

WITH THE ARCHITECT AND DECORATOR

ARE GOING ON *Today*



ARMY (E) NAVY

## FORMICA

In order that our boys returning from the wars shall have employment waiting for them it is necessary that a great deal of planning be done in advance. And it is being done—in many cases with architects and decorators who will produce the first postwar stores, hotels, restaurants, theatres, stations and similar public buildings.

Before the war Formica architectural sheet had a large part in beautifying and making more durable the equipment and structural surfaces of these establishments. During the war new colors, new products and ideas have been developed which will make the material even more useful in years to come.

Be sure, when your plans are formulated that you are not overlooking possible uses for this modern plastic material. Be sure your plans for expansion and modernization are really up to date.

Data on the uses and methods of applying Formica are available for inclusion in your specifications. Write for it.

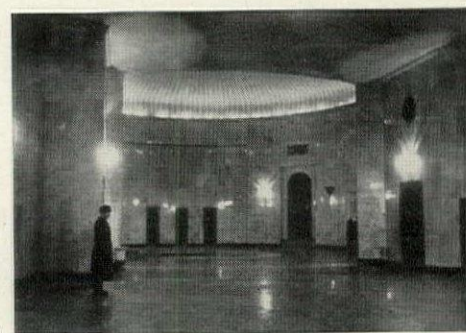
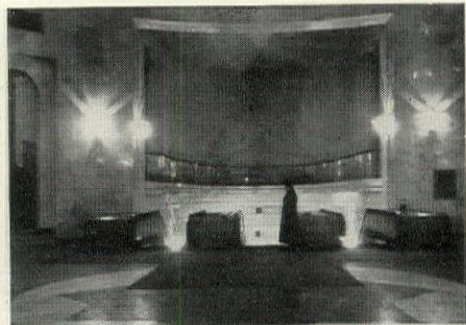
"The Formica Story" is a moving picture in color showing the qualities of Formica, how it is made and how it is used. Available for meetings of designers and business groups.

THE FORMICA INSULATION CO.  
4620 SPRING GROVE AVE. CINCINNATI 32, O.





VENTILATORS LOCATED ABOVE TRACK MINIMIZE PLATFORM DRAFTS



ESCALATORS DESCEND FROM ROTUNDA

## Built during the war, Moscow's new subway line shows a lavish use of non-critical materials.

In the world's sixteen or eighteen cities that can boast subways, they have always been accepted as devices for speed and convenience—a grim but unavoidable feature of the workaday world. It may be surprising that in the middle of a bitter war, the U.S.S.R. can produce a much embellished version of underground transportation.

The Moscow subway started about ten years ago, had still not been integrated into a city-wide pattern when the war

broke out. The present addition links these lines and various outlying residential sectors to the Stalin works, a key industrial plant, relieving the congested and inadequate surface tram system. The undertaking required country-wide participation since even the remotest provinces were called on for materials. Marble facing and granite flooring are non-priority products and have maintenance qualities which surpass the tile and cement of American subways.

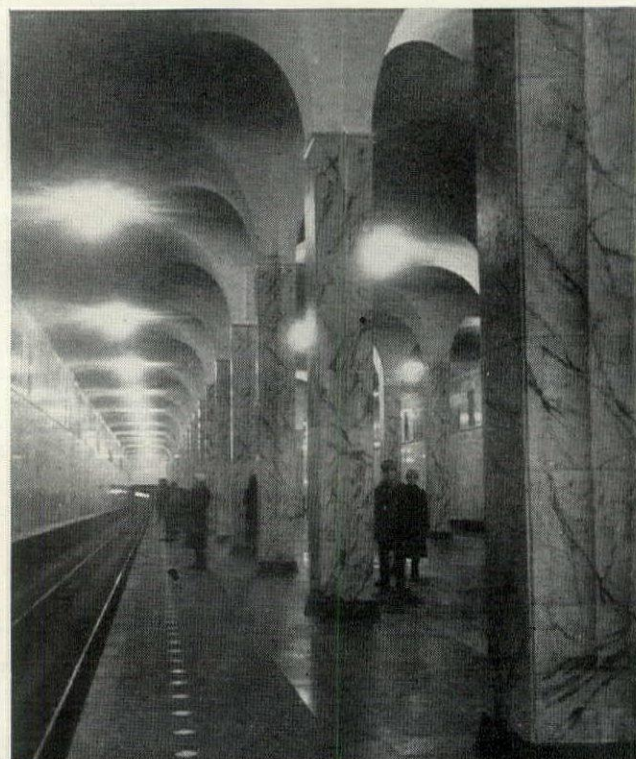
Most notable among the design features are the height of the station ceilings and the clean spaciousness, due in part to the complete absence of advertising posters. Extra wide platforms and good illumination are important contributions. Despite an unfamiliar and pretentious appearance, the new subway indicates that Russia's enterprise has not been totally sapped by her huge effort at the front.



### POSTWAR DESIGN OF THE MONTH

This ventilating tower, discovered in a 1941 competition of the Tunnel Authority was recently resurrected for New York's Postwar Plan Exhibit (page 87). Looking less like a ventilating tower than anything else, it bears a remarkable likeness to the cast iron, island bastion with which the aging and cautious Victoria fortified the English coast. Though somewhat younger, the Tunnel Authority seems equally apprehensive. Still, it is reassuring to know that in 194X the Brooklyn-Battery vehicular tunnel will have invincible ventilation.

NON-SKID SURFACE IS USED ALONG PLATFORM EDGE





**IN TONS**  
*for Large Fires*  
**In Pounds**  
*for Small Ones*

## A Single Cardox System Provides Engineered Extinguishing Coverage for One or a Number of Hazards ... Large and Small

The swift efficiency of carbon dioxide for fire extinguishment is thoroughly recognized. But, where a few pounds, properly applied, will stop one fire, another may call for tons ... for example, to provide total flooding of large plant production areas, or for severe outdoor hazards.

With the Cardox method of control and engineered application, Cardox CO<sub>2</sub>—supplied instantly *in pounds or tons*—gives new protection scope to this non-damaging, non-contaminating medium for fire extinguishing.

### Enhanced CO<sub>2</sub> Performance

A Cardox System—engineered for the specific hazards it covers—extinguishes fires by a timed *mass* discharge of Cardox CO<sub>2</sub>—stored at 0°F. in a mechanically refrigerated Storage Unit.

Enhanced extinguishing performance is possible because, as controlled and applied—*in pounds or tons*—in Cardox Systems: (1) Cardox CO<sub>2</sub> has uniform extinguishing characteristics regardless of plant or atmospheric temperatures; (2) Applications can be engineered in accordance with the requirements of each

specific hazard covered; (3) High CO<sub>2</sub> snow yield provides increased cooling effect (carbon dioxide released at 0°F. yields 45% CO<sub>2</sub> snow); (4) Effective projection through relatively great distance is achieved—even outdoors.

### Tough Hazards Have "Engineered" Cardox Systems

It is no coincidence that frequently when hazards are toughest to handle ... where fire or damage by the extinguishing medium would disrupt carefully planned war goods production schedules ... engineered protection is provided by Cardox Fire Extinguishing Systems.

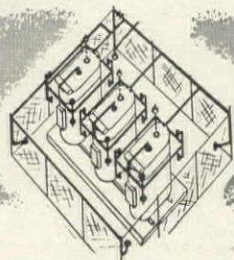
If you would like more information for use in solving current war plant fire protection problems ... or in formulating fire protection plans that will prevent dangerous delays in getting post-war production in high gear ... write on company letterhead for Bulletin 664.

**CARDOX CORPORATION**  
BELL BUILDING • CHICAGO 1, ILLINOIS  
District Offices in

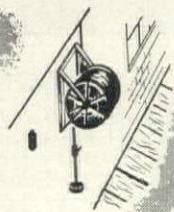
New York, Boston, Washington, Detroit, Cleveland,  
Atlanta, Pittsburgh, San Francisco, Los Angeles, Seattle

### FOR EXAMPLE

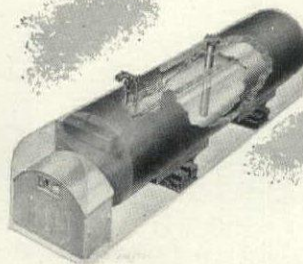
These sketches illustrate simply the broad scope of protection that can be provided by a single Cardox System. The range of efficient applications between these extremes is practically unlimited.



Outdoor Transformers. Local direct application at very high rate builds area flooding effect outdoors. For hazards such as this a Cardox System stands ready at the first flash of fire with *tons* of Cardox CO<sub>2</sub>, if needed.



Cardox Hose Reel provides effective protection for numerous hazards calling for a few pounds of Cardox CO<sub>2</sub>—or a few hundred.

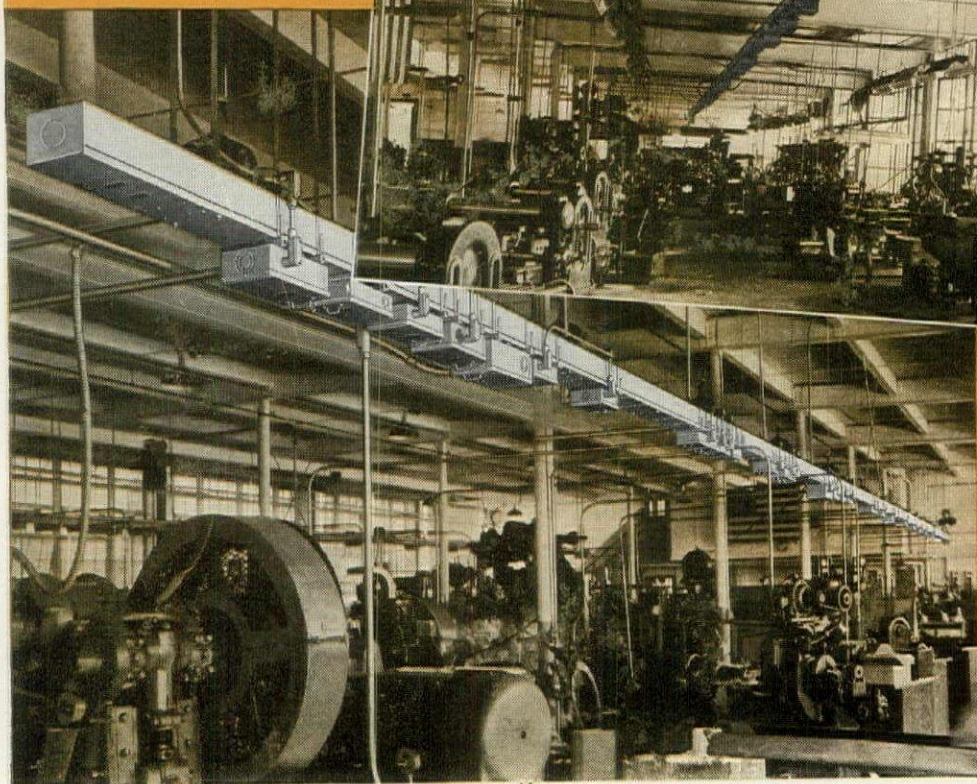


Cardox CO<sub>2</sub> is supplied instantly in pounds or tons from a single Storage Unit containing 500 pounds to 125 tons at controlled low temperature of 0°F. and 300 p.s.i.

**CARDOX**  
CO<sub>2</sub> FIRE EXTINGUISHING SYSTEMS



# Save Production Hours



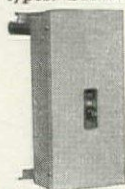
with



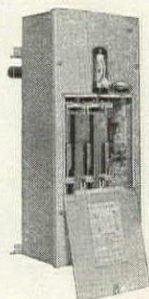
## BUSDUCT

### FA PLUGIN DEVICES

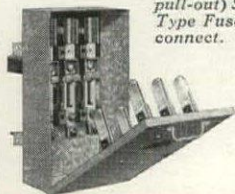
The FA Plugin Devices can be arranged to go on either or both sides of the Plugin FA Busduct, and each Plugin device is supported by independent fastenings. All FA Plugin Devices are equipped with proper capacity of rugged compression type bus bar connectors. They are made in three types: See illustrations below:



At left: FA Circuit Breaker Type.



Below: FA Klampswitchfuz (hinged type pull-out) Safety Type Fuse Disconnect.



Above: FA Shutoff (operating Switch) with Kamklamp Fuse Holders.

This is the *modern* method of light and power distribution... Relocation of machines is readily accomplished, with minimum interruption of operating time. Just "move the machine—plug in—go"!... If desired, FA Busduct may be taken down and moved to new location—quickly, and without appreciable loss of material... Economical for small plants as well as large, this convenient and flexible system (designed!

for 2, 3 and 4 wire systems, 575 volts AC, maximum) is installed at surprisingly low cost.

**The FA Sales-Engineer can help you** in planning an efficient and convenient FA Busduct Distribution System. No obligation, of course. Write for name of the one nearest you—and for Bulletin 65 (and supplement)... Frank Adam Electric Co., Box 357, St. Louis, Mo.

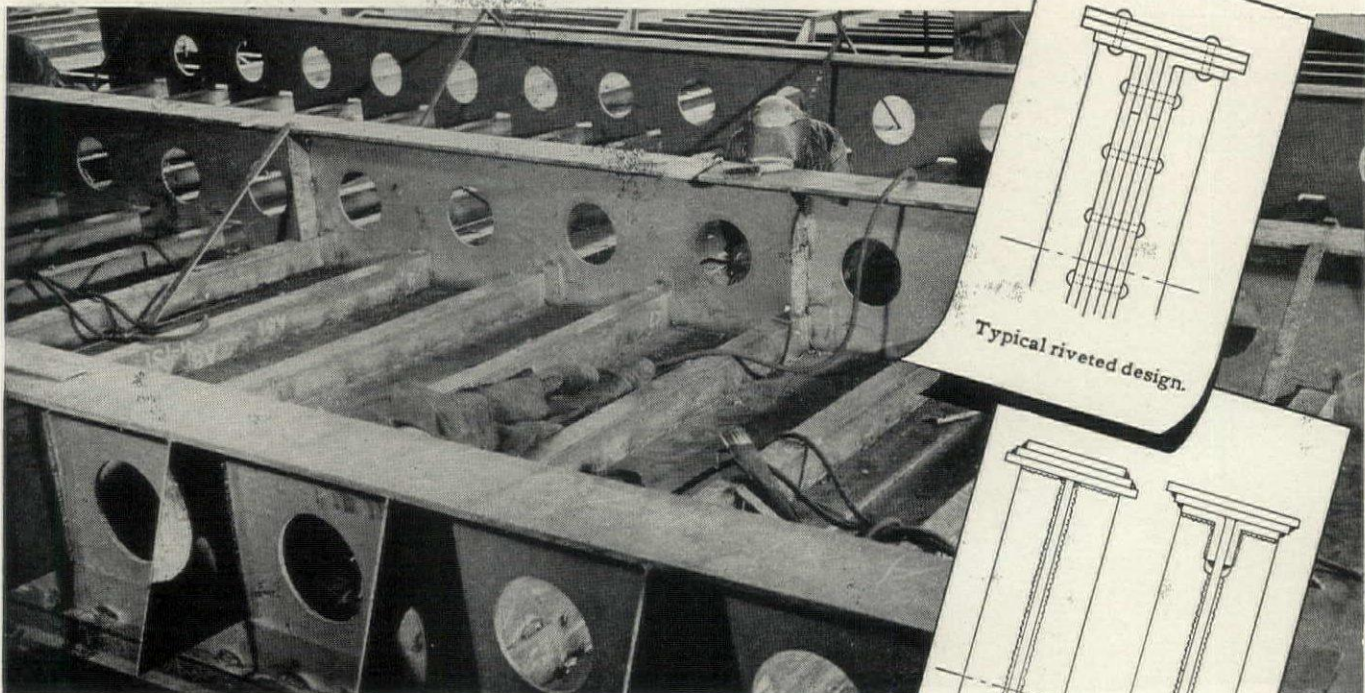
FA Busducts are now made under W.P.B. Limitation Order L-273. They have the same basic features of construction as the standard model.

**Frank Adam**  
ELECTRIC COMPANY  
ST. LOUIS



# **SIMPLICITY** IS THE KEYNOTE OF WELDED DESIGN

**...in buildings as well as ships**



Modern structural welding eliminates many of the complex details necessary with older steel-joining methods. This point is clearly illustrated in the sketches shown at right. Note the extreme simplicity of the welded design — simplicity which greatly increases the efficiency of the welded joint and reduces the cost of fabrication.

By taking full advantage of the basic simplicity of welded design, naval architects have achieved increased structural strength in welded cargo ships, while at the same time conserving valuable steel and labor. In the same way welded details for buildings should be planned with simplicity as the keynote, to take fullest advantage of the efficiency and savings which welding provides.

Architects, engineers, and designers are invited to call upon Air Reduction engineers for assistance in working out problems of structural welding design. For a free copy of the helpful guide "Arc and Gas Welding Symbols," write to Department AF, New York office.



★ BUY UNITED STATES WAR BONDS ★

## **AIR REDUCTION**

General Offices: 60 EAST 42nd STREET, NEW YORK 17, N. Y.

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Offices in all Principal Cities





## Where was Mary when the lights went out?

**T**HIS month we bring you another touching episode in the history of the BJones family—who built a dream home, only to have it turn into a nightmare.

Upstairs, Mr. BJones is entertaining (?) his boss—trying to make light conversation in a house as *dark and dismal* as Schickelgruber's future.

And where is Mary BJones? Alas, she's down in the cellar fussing and fumbling with fuses—*wondering why life is just one darn fuse after another!*

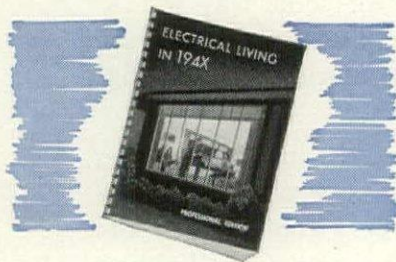
There are three reasons for the trials and tribulations of Mr. and Mrs. B . . .

*First*—their home was *inadequately wired* to carry the electrical loads imposed by modern lighting and electrical appliances.

*Second*—their home was not equipped with *modern circuit protection*—they could not restore electric service, at the flip of a switch, after the trouble was corrected.

*Third*—their home did not have modern circuit protection—*conveniently located*—they had to go to the “hard to get to” protective device in the cellar.

We have prepared a new book—“Electrical Living in 194X”—that will help you explain the urgent need for *better wiring and modern protection* to present and future home owners.



“Electrical Living in 194X” tells all about increased electrical loads in future homes—modern circuit protection—lighting and lighting controls—entrance equipment and distribution panels.

*This big, profusely illustrated, 64-page book is free!* Get your copy now, by writing Better Homes Department (AF-64), Westinghouse Electric & Manufacturing Company, Pittsburgh 30, Pa.

### BETTER HOMES DEPARTMENT Six Point Advisory Service

. . . offers free technical advice on the selection, application, and arrangement of fixed electrical equipment in 194X homes—dimensions and clearances, for proper installation and easy access for servicing—placing of lighting outlets and controls—location and size of wiring, water supply, and drainage lines.

Send your electrical problems to the Westinghouse Better Homes Department. Our housing specialists will give you authoritative information, promptly.

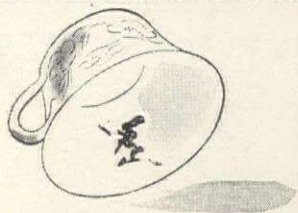
# Westinghouse

Plants in 25 Cities      Offices Everywhere

WESTINGHOUSE PRESENTS John Charles Thomas, Sunday, 2:30 p.m., E.W.T., NBC. “Top of the Evening”, Monday, Wednesday, Friday, 10:15 p.m., E.W.T., Blue Network



WHY LOOK HERE  
FOR THE POST-WAR BATHROOM



## when *experience* tells you so much

When shirt sleeves are rolled up and the "some-day-soon" homes actually get down to the blueprint stage, they're sure to reflect the teachings of past experience. Bathrooms especially will combine eye-pleasing design with the serviceability and long life that time has proved are worthy of your reputation—and the homeowner's investment.

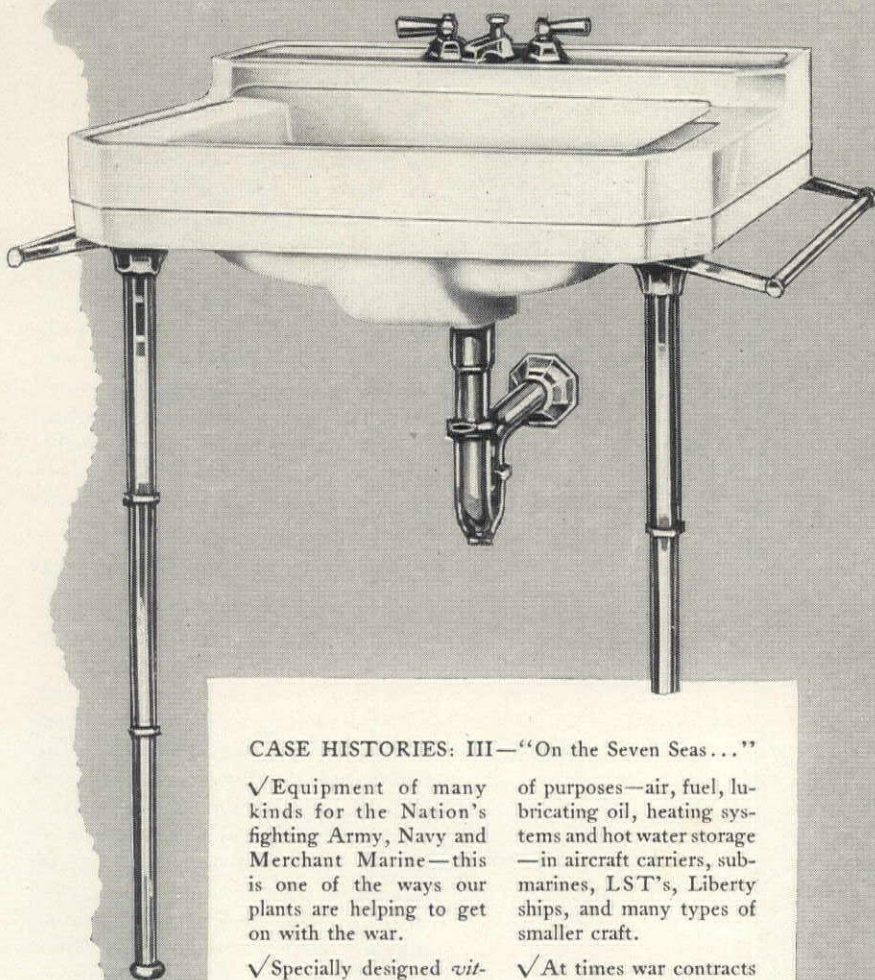
The famous Winston Lavatory shows why on both counts there has long been a preference for Case plumbing fixtures. Here is the *permanent* cleanliness and beauty of *twice-fired* vitreous china, the utility of an integral shelf, extra large basin, anti-splash rim and concealed front overflow. Fittings and accessories—styled to "fit" equally well in the mansion or the cottage—complete a fixture that denotes quality in every detail.

Case experience, revealed in so popular a lavatory as the Winston, is a mighty sound starting point for the post-war bathrooms of your clients and customers.

W. A. Case & Son Mfg. Co.  
Buffalo 3, N. Y. Founded 1853.

# Case

LIFETIME PLUMBING FIXTURES



### CASE HISTORIES: III—"On the Seven Seas..."

✓Equipment of many kinds for the Nation's fighting Army, Navy and Merchant Marine—this is one of the ways our plants are helping to get on with the war.

✓Specially designed *vitreous china* plumbing fixtures for combat vessels building on the Great Lakes and on the Pacific Coast. Steel engine housings for the Army's fleet. Steel portholes for cargo vessels. Thousands of *welded* tanks for a variety

of purposes—air, fuel, lubricating oil, heating systems and hot water storage—in aircraft carriers, submarines, LST's, Liberty ships, and many types of smaller craft.

✓At times war contracts have absorbed a high percentage of our production, with resulting delays in the flow of products for civilian use. We cannot promise any improvement in "civilian" production until after the successful invasion in the West.



IT'S NOT  
OVER YET  
Buy More  
War Bonds



# PRODUCTS AND PRACTICE

## MODULAR MASONRY — New brick sizes based on the four-inch increment are leading the way towards complete coordination of building dimensions in postwar construction.

One of Building's biggest problems has always been the fitting together of a great variety of materials from widely divergent sources into a finished structure. So long as buildings were relatively simple and did not include elaborate mechanical equipment the difficulties involved were not too great. Today, however, the problem has taken on an almost nightmarish quality because of the greatly increased complexity of every type of modern building. Thousands of diverse materials are required even for the construction of a small house. In larger structures eleva-

tors, large-scale heating systems, increased number of rooms etc. add to the general confusion. Making all of these parts fit together without a common denominator of design presents ever-increasing difficulties.

Unlike the automobile industry, Building is not in one set of hands. Many different industries contribute parts to the finished product. And there has never been effective inter-industry cooperation although attempts have been made to work out the problem. Individual manufacturers have done a good job of standardization on their own products thus taking advantage of the economies of mass production. But the products of different industries have never born any planned relationship to each other. Standard masonry has not fitted with standard sizes of doors, windows or framing lumber. Material units have had to be cut and fitted at the erection site with consequent waste of time and money. And up to the present time practical builders have simply cursed quietly and gone about the grimy task of figuring, cutting and fitting which constitutes so much of their work.

### REVOLUTION IN THE BUILDING INDUSTRY

Now for the first time Building has a solid-gold opportunity within its grasp. Modular dimensions have at last been accepted by many industries who want to coordinate their postwar products with those of other producers. This phenomenal victory over the old lack of coordination is due to a variety of factors. First, wartime conversion of industry presents a perfect chance for size changes when companies retool after the war. Second, the constant plugging of the modular idea, which has gone on for so many years, is finally taking effect. Third, there is widespread recognition that buildings must be better and cheaper than they have been in the past. And last, war experiences with prefabrication have proven beyond a doubt the advantage of unit materials which fit together without cutting at the erection site.

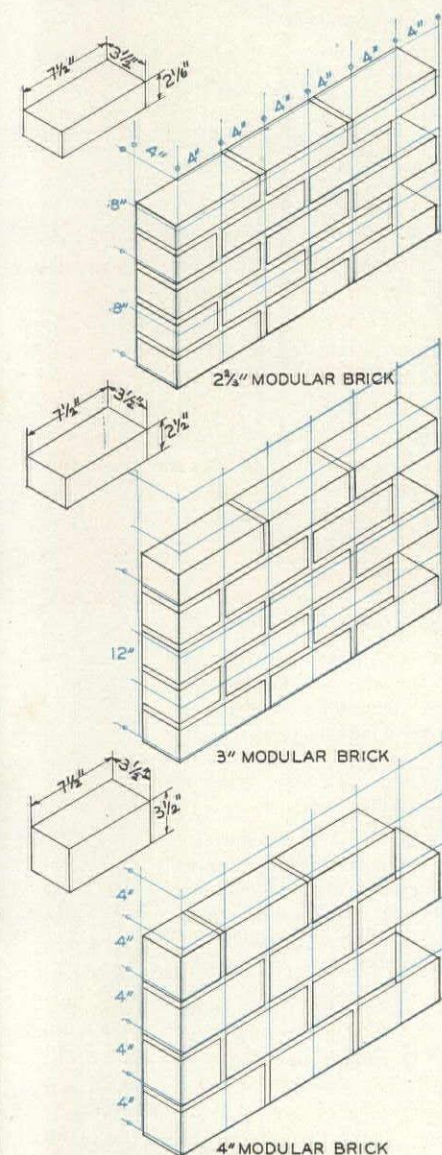
Back of this revolution is Project A62 of the American Standards Association which has been agitating for modular design since 1939. Sponsored by the AIA and the Producers' Council, Project A62 has also been pushed for-

ward by the generous assistance of the Modular Service Association which was founded by the heirs of the late Albert Farwell Bemis. Following regular ASA procedure, the committee has brought together all members of the building industry including product manufacturers, architects and contractors, for mutual examination of the problem which is finally reaching a solution. A basic unit, the 4 in. module, has been selected as the most efficient and flexible increment for construction purposes. Under this system all building materials and all building measurements except wall and floor thicknesses will vary according to the 4 in. base increment with actual sizes determined by modular assembly details. Each part of a building will fit neatly with every other part.

Such a happy state may be almost incomprehensible to those who have struggled with the old haphazard methods of design. And indeed the problem of coordinating building dimensions is almost limitless in scope. It includes the huge number of materials and the varied equipment which make a building. It includes all the headaches of all the people who have a finger in the building pie. The enormous initial task of putting diverse products on a related basis has overwhelmed most people although they considered present methods intolerable.

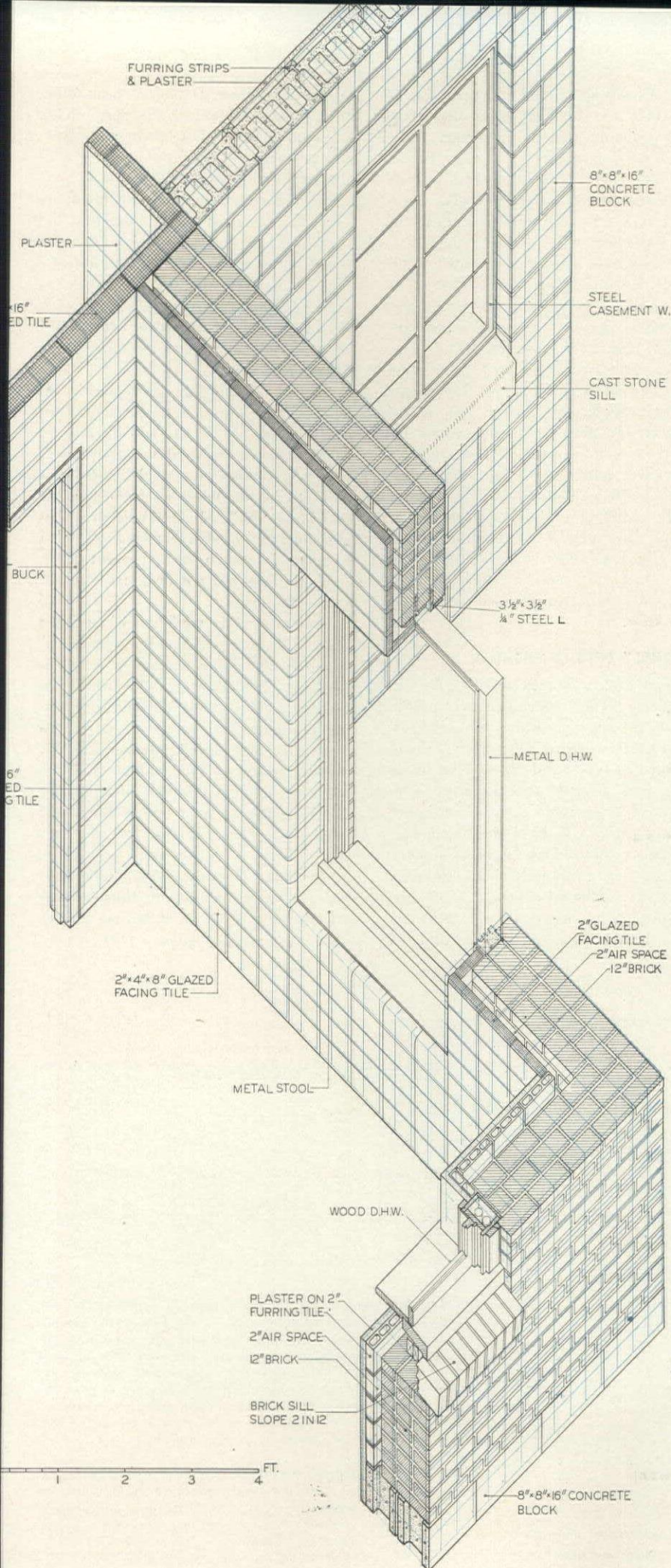
Now, in spite of complications inherent in the puzzle, the first and most important step has been taken to get out of the maze. The structural clay products industry, followed by the concrete block manufacturers, has agreed to make standard modular masonry after the war. In 1941 THE FORUM reported that simplified brickwork was available on order in the New England states. But now the clay products industry and the concrete block manufacturers have promised to produce modular masonry including brick, structural tile, glazed and unglazed facing tile, cinder blocks, and concrete blocks on a country-wide basis, available as stock products instead of on special order.

Since masonry is the basic material for most buildings, this decision is of far-reaching consequence. All efforts are being made to publicize the ven-



**MODULAR BRICK** in three new sizes scheduled for postwar delivery. Actual dimensions are  $\frac{1}{2}$  in. smaller than nominal sizes.





ture, both by Project A62 and by the building material industries as a whole. The Producers' Council, Inc. will soon release a booklet, *Modular Planning As Related to Building Design*,\* which explains in detail the principles involved.

By a happy coincidence the new modular masonry fits most stock sizes of wood windows and doors in the present form. Manufacturers of these products are cooperating to the fullest with the clay products industry in making necessary adjustments where needed. This is another step forward. Steel window manufacturers have also joined the parade and are presently working on the problem of creating modular stock sizes which will fit the complicated requirements of window installation. Manufacturers of radiator cabinets, air conditioning equipment, steel chairs, wallboard, steel flooring, and interior steel doors are considering similar changes in their products. Other manufacturers now in war work are also looking forward to the necessity of retooling after the war. They want to make their new products in sizes which will coordinate with other building products. By the sheer weight of change all manufacturers will eventually be pushed into line.

#### NEW MASONRY UNITS

New modular masonry products will eliminate the fractional dimensions which have always plagued architects. Actual sizes are still fractional, but the modular size, measured from center to center of the mortar joints will be used in drafting plans. Formerly one of the great faults of masonry dimensions was that the mortar joint was not taken into consideration in sizing basic units. Many products were actually made in multiples of 4 ins., or in 6 in. sizes, two of which made a three-module, 12 in. dimension. However, with the addition of the mortar joint, calculations were thrown off. For instance, floor tile measuring 12 in. x 12 in. become 12½ in. when used with a ½ in. joint, and the space required for six such tile is 6 ft. 3½ in. rather than 6 ft.

Under the modular system, 8 in brick normally used with a ½ in. mortar joint is reduced in length to 7½ in. Thus the over-all dimension of brick plus mortar joint equals 8 in.—the modular size. The over-all dimensions of other masonry units, such as glazed tile which require a smaller joint unit, also include the joint thickness. Thus where the nature of the material really calls for a larger or smaller joint it is sized accordingly.

Horizontally the new masonry di-

\*Available to architects and builders. Write Producers' Council, Inc., 815-15th St., N. W., Wash., D. C.



PRODUCTS AND PRACTICE

mensions are quite simple. Including the mortar joint, they are multiples of 4 in., allowing exact and easy fitting to other building materials. Specifications for types or grades of masonry can be changed without affecting the dimensions of the working drawings. In the building of 4 ft. brick piers, the nominal dimension on the plan would be given as 4 ft. When actually built they would be minus one mortar joint, making the actual dimension 3 ft. 11½ in. This is the only complication to be found in horizontal dimensioning and is one which the builder has always had to deal with in one form or another.

Vertically, sizes become more involved but substitutions can still be made. Three brick heights have been developed to take the place of the old standard size. To approach the appearance of former brickwork which was 2¼ in. high, one new brick has been given an actual height of 2 1/6 in. This means a nominal dimension of 2 2/3 in. which requires three courses to form two exact modules, or 8 in. The next size, 2½ in. in actual height, is a little larger than the former standard. It has a nominal dimension of 3 in. and must be used in four courses to produce three modules, or 12 in. The last brick is the simplest with which to work, but is so much larger than the one now in ordinary use that it may look odd until people grow accustomed to it. An actual height of 3½ in. gives it a nominal height of 4 in.

The brick manufacturer will find few practical objections to the new sizes. Since the 2 2/3 in. modular brick

is smaller than the old standard size, it will take less material while the price will probably remain the same. As a result of the smaller size, more bricks per foot of wall will be needed, upping labor as well as material costs. However, it seems probable that these increased costs will be more than balanced by the elimination of cutting and fitting during construction. The other two sizes of modular brick would undoubtedly decrease costs since they are larger than prewar standards.

The first two brick sizes take some finagling when planning window height and sill space, since 8 in. and 12 in. respectively must be used as units instead of 4 in. However, the architect has never had a condition where windows and brick courses would come out neatly without such complicated juggling. The new 4 in. modular brick actually does eliminate this problem. The other two smaller bricks, though tricky are easier to deal with than prewar sizes.

ASSEMBLY DETAILS PROMISED

Project A62 is already working on this problem. They have issued profile drawings (see cut) which show the system of dimensioning windows and doors of various types and sizes. Eventually they will furnish the architect with standard assembly details in great variety which will have the backing of the entire building industry. This is a very involved problem which will necessitate the combined efforts of architects, window manufacturers and masonry manufacturers. It will take time to

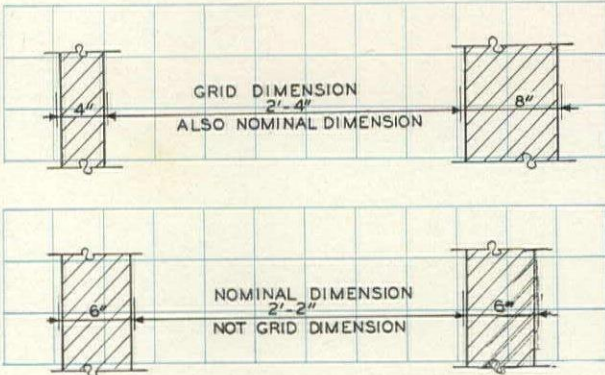
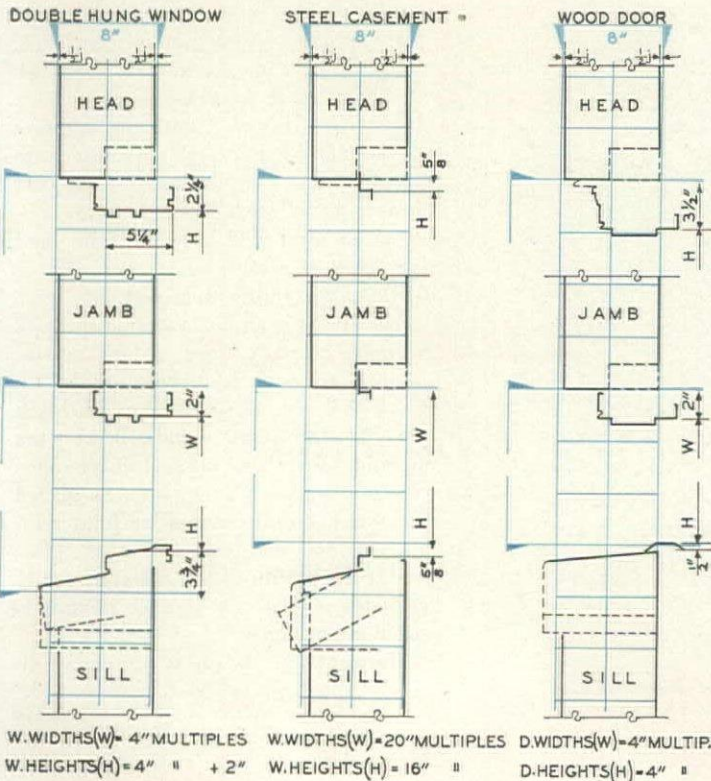
reach an agreement on the best structural assembly for all the possibilities of such details, but once an agreement is reached the most nerve-wracking part of the work will be over.

To understand the complexity of the problem, one need only realize that the fundamental dimensional principles of installing a wood window would probably require 25 to 30 different drawings. Included would be slate, brick or stone sills, various types of masonry such as tile back-up, inside glazed tile finish, and so on.

A large office building with steel windows would present similar complications. Assembly details will have to be worked out for most of the above-mentioned variations plus steel lintels, window stools, surrounding frames, venetian blinds and radiator enclosures. Dimensions for the window glass will also have to be taken into account since steel windows are not ordinarily glazed at the factory.

Project A62 is confident of arriving eventually at a satisfactory conclusion, since the modular system provides a common denominator with which to work. Discussions of particularly vexing problems have already brought encouraging new developments. Masonry manufacturers have volunteered to make a limited number of specially shaped bricks to solve one architectural headache. These bricks, for use over steel lintels, are proposed to provide extra space for the steel angle and waterproofing membrane, thus solving an awkward problem which has always

(Continued on page 146)



**ABOVE:** The problem of dimensioning room space between two walls of 4 in. or 8 in. thickness is a simple matter since these measurements fit the modular system. Six inch walls are set with one face aligned with the grid. Thus grid dimensions and nominal dimensions are not the same unless walls are aligned on opposite sides. When corresponding sides are lined up, as shown in the diagram, there is a 2 in. difference which must be taken into consideration.

**LEFT:** Profile drawings developed by Project A62 show the system of dimensioning wood and steel windows and wood doors with standard heads, jambs and various sill types. Actual structural details have not yet been worked out but will be developed and made available to architects as soon as possible.



AMERICAN WOMEN DESERVE A SPECIAL FREEDOM -

*Freedom from Trudgery*



This advertisement  
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THE LADIES' HOME JOURNAL  
GOOD HOUSEKEEPING  
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HOUSE BEAUTIFUL  
THE PARENTS' MAGAZINE

Trudgery isn't a pretty word, but it is descriptive of a large part of the housewife's kitchen day. If she is working in an inconvenient, poorly arranged kitchen where she must walk endlessly carrying things from the place in which they are kept to the place where they are to be used.

Trudgery implies the fatigue and frustration that begins early in her kitchen day and increases with every step until, at the end, she is too tired to do the things she really enjoys doing. Freedom from this trudgery would give her the extra hours and

energy she needs for better and happier living. This freedom from trudgery, which housewives so richly deserve, can be had in a Youngstown pressed steel kitchen—for these kitchens are planned to give plenty of storage space within arm's reach of the work surface.

Youngstown pressed steel kitchens will be available very soon after the war is over—and they will be worth waiting for. Buy War Bonds, today—Youngstown Kitchens, tomorrow.

YOUNGSTOWN PRESSED STEEL DIVISION, MULLINS MANUFACTURING CORPORATION  
Warren, Ohio

*Youngstown Kitchens*  
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In the meantime, send for the new Youngstown Kitchen, which shows how to plan for freedom from trudgery in your present kitchen.

YOUNGSTOWN PRESSED STEEL DIVISION  
Mullins Mfg. Corp., Dept. AF-644, Warren, Ohio

Please send me YPS kitchen ☐ Please send me Youngstown Kitchen ☐  
Name ☐ Street ☐  
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**Give American  
Women a special  
freedom  
FREEDOM FROM  
TRUDGERY**

THOUSANDS and thousands of American women, in wartime jobs, have learned factory and office efficiency. In the post-war years, they will appreciate and demand this same efficiency in their kitchen routine.

The "Freedom from Trudgery" idea will be featured in Youngstown Kitchen National Advertising. YPS dealers can have the advantage of coupon returns in their own territory.

*Youngstown Kitchens*  
YPS



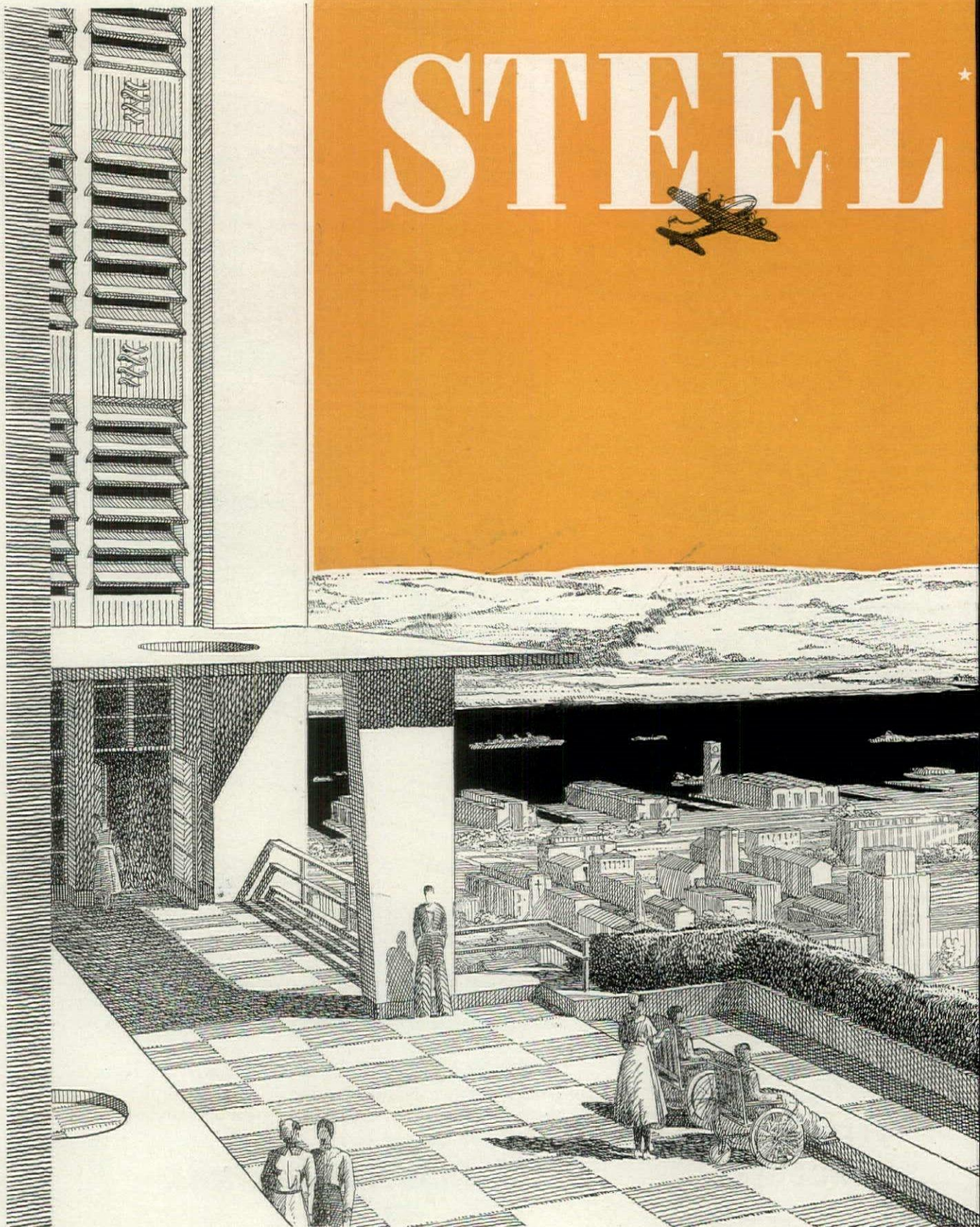
Please send me YPS booklet, "Get Acquainted with Your Kitchen Business."

**YOUNGSTOWN PRESSED STEEL DIVISION**  
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# STEEL



*Republic*

**STEELS AND**



# ★ ★ **ESSENTIAL FOR CONVENTIONAL CONSTRUCTION ★ AN IDEAL MEDIUM FOR *New and Unusual Designs***

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When you seek a material to turn new ideas into realities, remember that STEEL offers a combination of qualities found in no other building material.

STEEL is strong, tough, stiff, safe.

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- will not warp or shrink.
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- is sanitary and clean.
- provides a stable base for finishes—metallic, vitreous enamel or various colored surface coatings.
- provides, in stainless grade, a permanently attractive, lustrous, silvery finish.
- is easy to fabricate both by shop and job methods.
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- is low in cost per year of service.
- is available in a wider range of forms than probably any other material.

When you are ready to erect your postwar structures, Republic gain will be ready, as before the war, with the most complete line of steels and steel building products made by a single manufacturer. And many of them will be improved—through new developments in research—through new steels and methods of fabrication resulting from our wartime experience.

Design in STEEL—the versatile material—the proved material—for economy, for efficiency. Use it for conventional construction and for new or unusual designs.



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# STEEL PRODUCTS

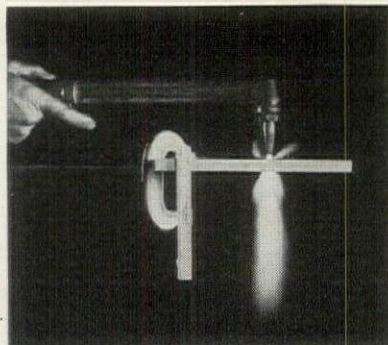


# BUILDING REPORTER

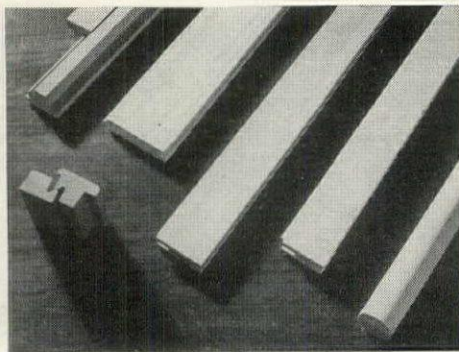


**TRANSMUTED WOOD**, many times stronger, stiffer and more durable than original wood has been produced by a methylolurea treatment. Through this amazing new process poplar becomes harder than hard maple which in turn becomes harder than ebony. Developed by the E. I. du Pont de Nemours & Co. the treatment eliminates tendencies of wood to swell, shrink or warp, and prevents grain from rising when moistened. It imparts a "built-in" finish throughout the wood instead of just on the surface. By mixing a dye with the impregnating chemical, the wood may also be permanently colored. Veneers sufficiently treated become self-bonding and require no adhesive to form them

into plywood. In the transforming process, a clear water solution of methylolurea is impregnated into the structure of the wood. It reacts with components of wood to form hard, water-insoluble, unmeltable resins within the lumber. The wood's natural acids initiate this reaction. Heat at normal or kiln temperatures completes the conversion. The process can be applied to almost anything made of wood. Doors and windows made of treated lumber will not stick or become loose. Furniture made of this wood can be shipped throughout the world with assurance that drawers will operate smoothly and remain close fitting under all climatic conditions.



**TRANSMUTED WOOD'S** low heat conductivity is demonstrated by oxy-acetylene torch which takes twice as long to cut through wood as though steel. (left) Durability and dimensional stability of building items is increased by methylolurea process (right).



**LUMITILE** provides modern lighting effects for walls and ceilings, home or display use. Originally introduced as a plastic tile for walls, its new use as a covering for built-in lights has many possibilities. The 6 in. square tiles are clipped together with small spring clips to form panels, which are set in hinged metal frames for access to the lamps. Double faced adhesive tape, or a solvent applied to the flanges of the tile prevent light showing through cracks between the tiles.

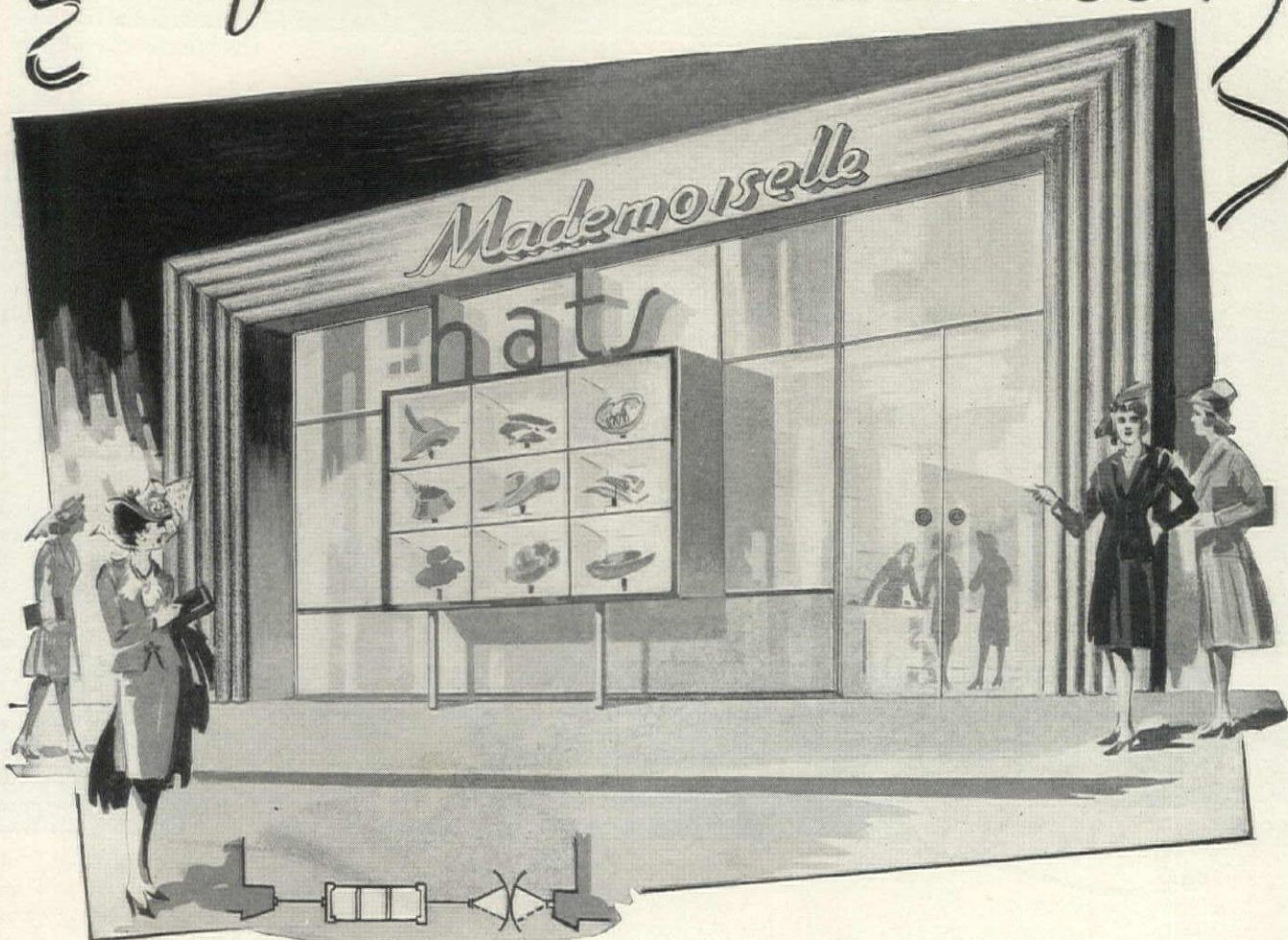
**SAFE RELATIVE HUMIDITIES** for insulated buildings without vapor barriers have been established by the U. S. Forest Products Laboratories, the University of Minnesota, and the Harvard School of Public Health in terms of different combinations of inside and outside temperature. Moisture vapor barriers are the preferred safeguard against excessive condensation. In existing construction, however, where the loose fill type of insulation has been used without a vapor barrier, experiments have shown that a relative humidity up to 33 per cent is safe at 70 degrees interior temperature and zero temperature outside. Relative humidities of 22 per cent at -10 degrees outdoors, and 49 per cent at 10 degrees above zero outdoors were also maintained with 70 degrees inside temperature. For new construction the National Mineral Wool Assn. still recommends the use of moisture vapor barriers installed on the warm side of the framing.

**STEEL CONVEYOR BELTS** developed by the Goodyear Tire and Rubber Co., will extend conveyor operations  $6\frac{1}{2}$  miles on a single belt. They are constructed of cables laid parallel, side-by-side and in a single plane for the full belt length. The cables are brass-plated before being covered with rubber, thus obtaining greater adhesion—rubber-to-steel—than was possible in steel-to-cotton. The over-all belt thickness is no greater than a conventional 6 ply structure and the cables alone do not exceed  $\frac{5}{32}$  in. OD. However, the conveyor has a strength equivalent to 60 plies of the heavy duck formerly used. It is this increased strength which makes possible the operation of a loaded 36 in. wide belt for a distance of  $6\frac{1}{2}$  miles, 13 miles of belting in one piece.

(Continued on page 170)



**BUILD SOUNDLY**  
*for the Future...WITH BRASCO !*



**Brasco**  
**MODERN**  
**STORE FRONTS**

... When the time comes to bring to life those post-war store front designs now on the boards, you can assure them permanent success by making Brasco the sound structural basis for the entire job.

Brasco Construction offers a complete and unified line of members, designed to effectively interpret advanced store front conceptions such as shown above. To safeguard this beauty, Brasco furnishes strongly reinforced, heavy-gauged units for every need, from sidewalk to coping — embodying patented features whose merits have been thoroughly proven over thirty years of actual service.

**BRASCO MANUFACTURING CO.**

**HARVEY**

**(Chicago Suburb)**

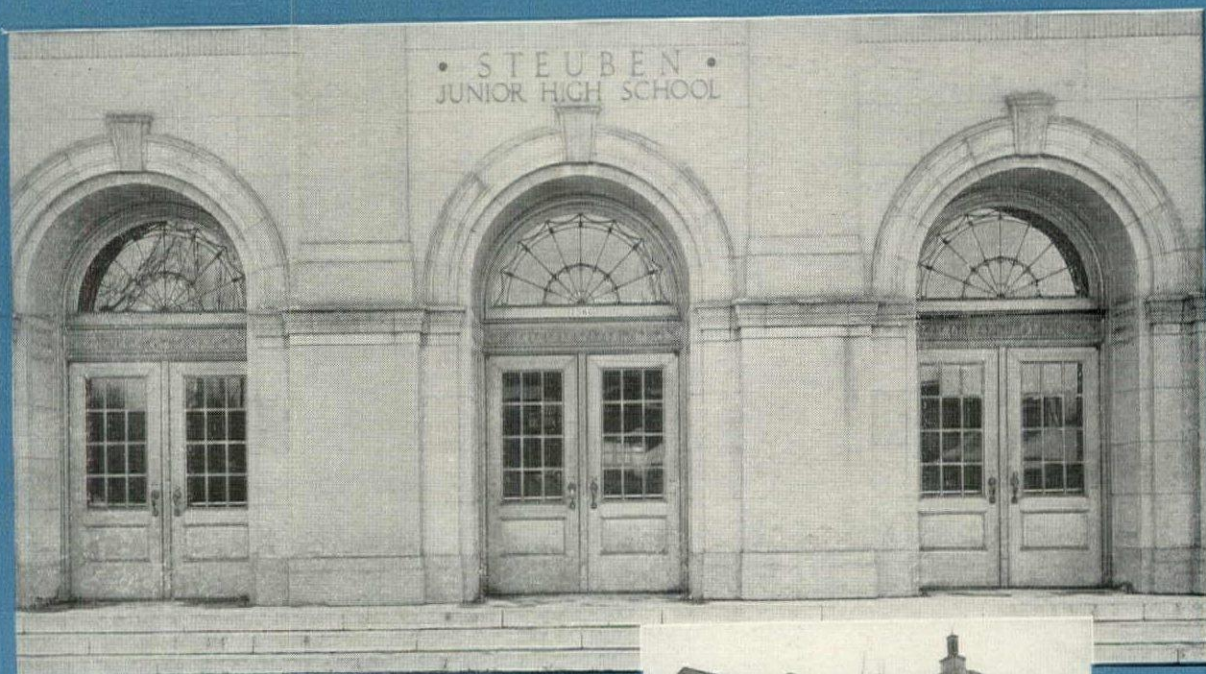
**ILLINOIS**

*National Distribution Assures Effective Installation*



# Aluminum Entrances

CONTINUE TO SAY A CHEERY "GOOD MORNING"



Entrances, skylights and tower are aluminum.  
Architectural Division, Board of School Directors, Guy E. Wiley, Architect.

Let's Look at the Record

Installed thirteen years ago, the aluminum entrances to Steuben Junior High School, Milwaukee, continue to present a pleasing appearance today. And even though exposed all these years to the eager exits of thousands of children, the aluminum doors are in top-notch condition mechanically.

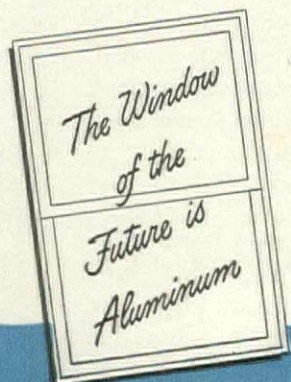
The aluminum skylights in this building, and the cast aluminum tower, are also reported to be in excellent condition.

In employing aluminum here, it was the intention of the School Board to let the



metal weather normally. It was felt that the aluminum would serve an extremely useful purpose by reducing the amount of painting and other maintenance required on the building. It has accomplished that, helping to hold down upkeep costs.

Alcoa is receiving reports on many aluminum architectural installations all over the country. They will serve as a guide in making recommendations on the use of aluminum as you make plans for postwar construction. ALUMINUM COMPANY OF AMERICA, 2166 Gulf Building, Pittsburgh 19, Pennsylvania.



## ALCOA ALUMINUM







*his mail*

**MAY BE SOME OF YOUR BUSINESS**

**As recently** as this morning "John Watts" ... your local electrical contractor ... may have received product information which concerns *you*. It may be the first inkling of some new development in the field of electrical materials or installation. Perhaps it should be incorporated in plans for a "building of tomorrow" you are designing today.

**War has accelerated** development of new electrical devices. Some new materials are proving to be superior to those they have replaced.

**Keeping up** with the latest developments in the thousands of details which affect building plans is a major task. Your local electrical contractor can render a vital service in keeping you abreast of tomorrow's electrical materials and processes.

**Before you reach** a final decision on any detail which calls for electrical supplies, equipment or wiring, talk it over with a qualified electrical contractor. The chances are he is keeping fully informed with the help of his GRAYBAR Man.

3529

**GraybaR**

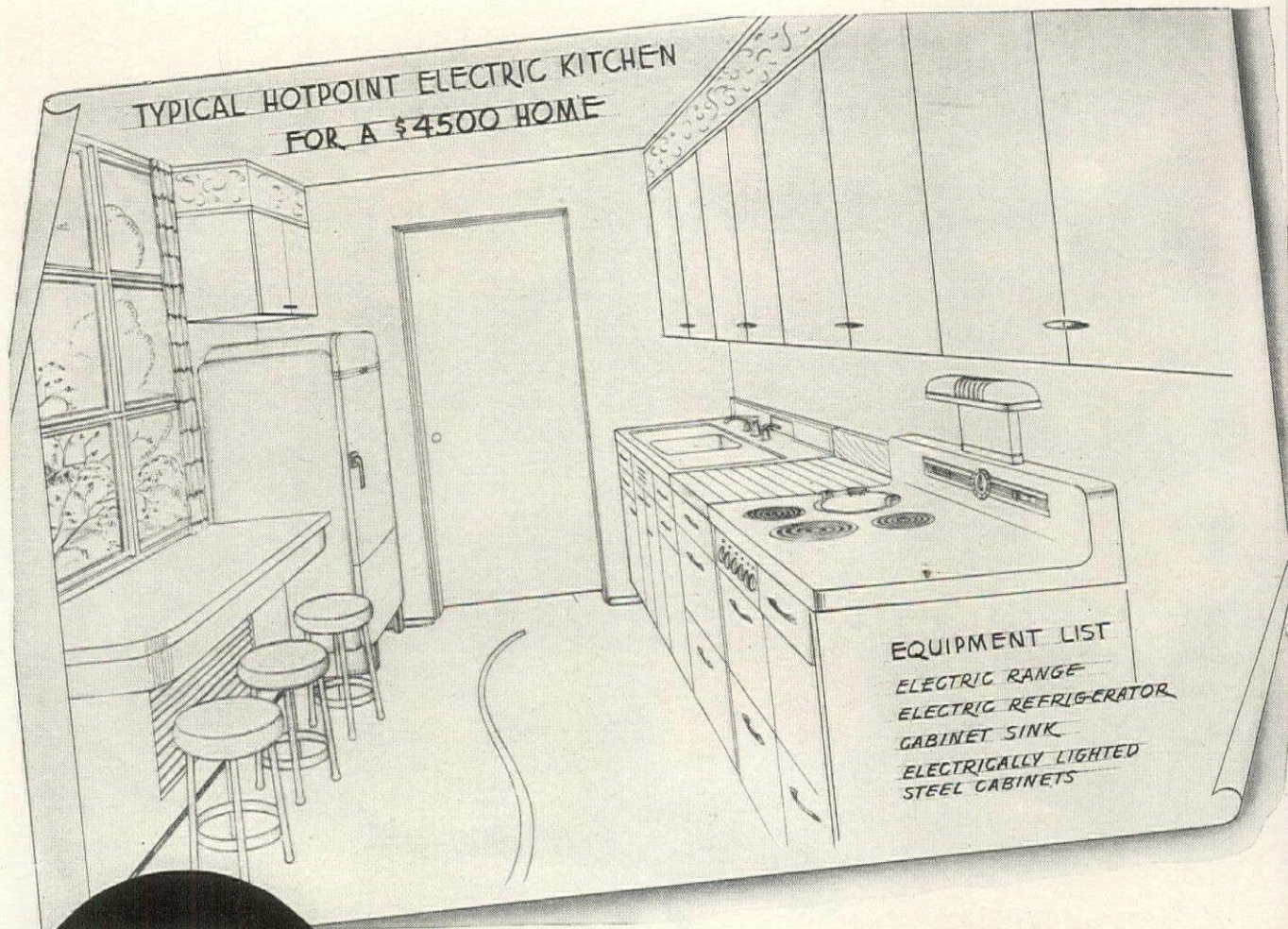
Executive Offices: Graybar Building, New York 17, N. Y.



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a qualified electrical contractor — heading a well-established firm with the trained organization, tools and know-how to give you specialized assistance on wiring, lighting, signaling, power supply, electronics. From offices and warehouses in over 80 cities, GRAYBAR serves a nation of JOHN WATTS, helping them to help you by supplying the newest and best in electrical materials.





77%

## of New Homes will be in price range for ELECTRIC KITCHENS

"More than seven out of ten postwar homes will cost \$3,000 or over."

That is the prediction of the United States Chamber of Commerce.

Buyers of those homes will be able to afford Hotpoint Electric Kitchens. And results from Hotpoint's advertising during the past two years show that they want them.

NEW POSTWAR HOMES, to be truly modern, must have new kitchen equipment. Appliances in the average kitchen today—like the average automobile—are well beyond the replacement age.

Postwar home buyers don't want the old-style stripped kitchen, but one that is "planned"—complete with all equipment new and modern. To American

women today, "a home is only as modern as its kitchen."

Take advantage of this trend. Homes with Hotpoint Electric Kitchens are complete homes...they create satisfied clients...they move faster, because they are truly modern. And financing costs for speculative building are reduced by faster turn-over.

Hotpoint offers you two advantages.

First, modern, finest quality electric kitchen equipment. Second, "Hotpoint Kitchen Planning Service," by an expert staff of kitchen designers—especially for builders and architects. Write for details today.

Edison General Electric Appliance Co., Inc., 5651 West Taylor Street, Chicago 44, Illinois.

In most states, all Hotpoint Kitchen equipment can be included in F. H. A. loan.



# ELECTRIC Hotpoint KITCHENS

REFRIGERATORS • RANGES • WATER HEATERS • WASHERS AND IRONERS • CLOTHES DRYERS • AUTOMATIC DISHWASHERS • ELECTRASINK • STEEL CABINETS



# TACO type S TEMPERING VALVE

## Automatically Regulates Domestic Hot Water Temperature to Fixtures

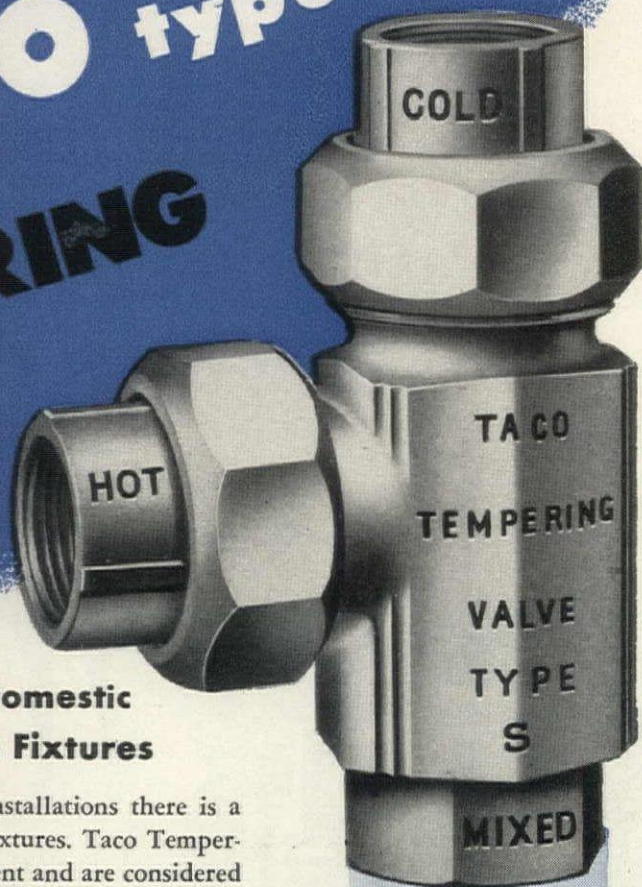
In many domestic hot water heating installations there is a need for controlling the temperature to the fixtures. Taco Tempering Valves are designed to meet this requirement and are considered essential on Tankless Heater installations where first domestic water drawn after long no-draw period may exceed 140°F.

The Type "S" Taco Tempering Valve, furnished in 1/2" and 3/4" sizes for one to three baths, is a quality product throughout, all-bronze construction and is provided with two unions, making it easy to install. This valve is inexpensive only because of its revolutionary design. It is non-adjustable and is factory set to maintain mixed water to the fixtures at a constant fixed temperature of 135° to 145°F. The valve operation prevents cold water from entering if temperature of hot water from heater drops below 130°-135°F.

### Adjustable Valves Also Available

Larger size (1", 1 1/2", 2") adjustable Type "T" Taco Tempering Valves are available for installations ranging from 3 to 90 baths.

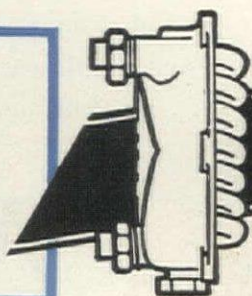
*Write for data sheet showing installation diagrams for tankless and storage tank heaters.*



Taco Type S Tempering Valve is all-bronze, strongly constructed. Simplified design. Inexpensive . . . .

### PEACETIME HERITAGE

Taco's contribution to Victory is Naval-aircraft machine-gun mounts. As a result, we now have more precision equipment and more skilled workers—available for post-war production of Taco products, made to their former standards of excellence.

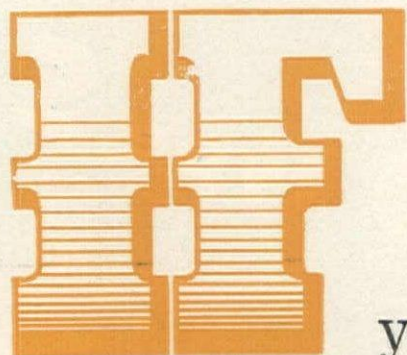


TACO-ABBOTT SYSTEM

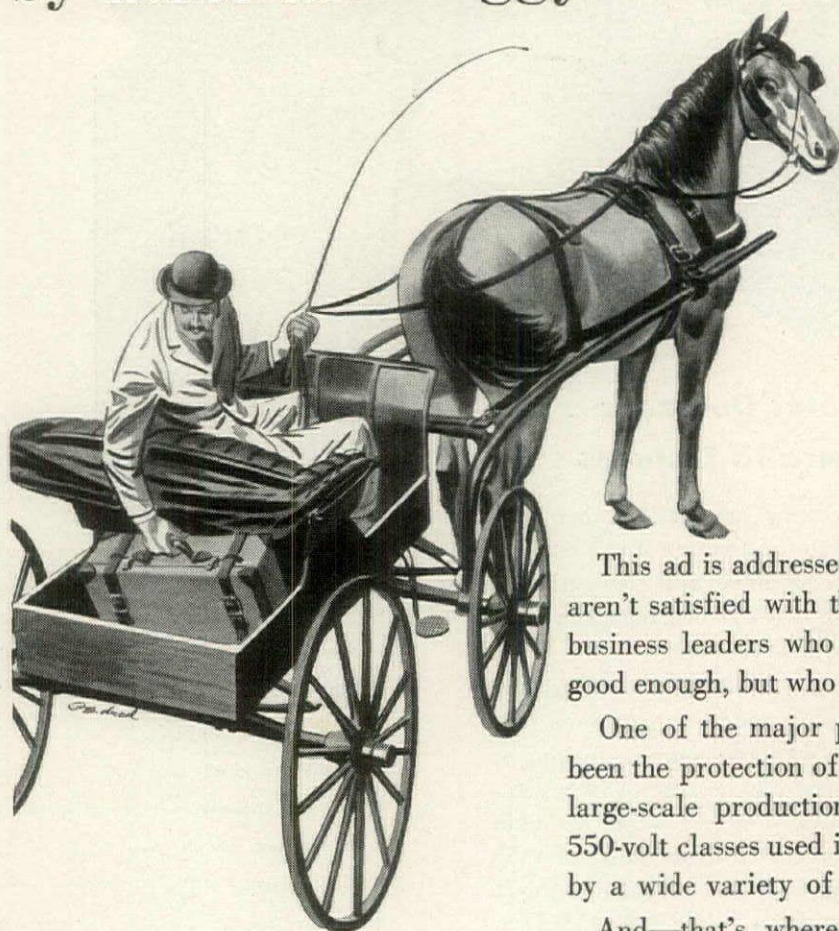
# Taco

TACO HEATERS, INC., 342 MADISON AVE., NEW YORK 17, N. Y.  
TACO HEATERS OF CANADA, LTD., 24 ADELAIDE ST. W., TORONTO





you're satisfied to travel  
by horse and buggy...or shave by candlelight



don't read this ad

This ad is addressed to those men in American industry aren't satisfied with things that are merely "adequate" . . . business leaders who aren't content with devices that are good enough, but who want something a bit better than the

One of the major problems of modern industry has always been the protection of electrical circuits essential to continuous large-scale production. These circuits (in the 220, 440, 550-volt classes used in every plant) have been and are guaranteed by a wide variety of protective devices.

And—that's where the horse and buggy and shaving candlelight come in. For, most of these devices—while affording adequate protection—are as out of date as Dobbin and old straight-edge.

They do the job—there's no doubt about that! But, how do they do it? Are they efficient? And—how much do they cost . . . These are questions to which every businessman should demand definite answers.

And, gentlemen, if you don't insist on the horse and buggy, here are your answers.



**Westinghouse**  
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE





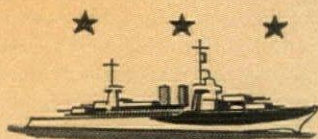
There's only one modern  
method of Circuit Protection

## The "DE-ION" (fuseless) CIRCUIT BREAKER of 1944 . . . . .

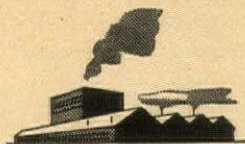
This breaker is as far ahead of ordinary circuit protective devices as is tomorrow's streamlined car by comparison with the old high-wheeled buggy.

And—when compared with previous breakers, it justifies the analogy of the modern fluorescent light and the first carbon bulb.

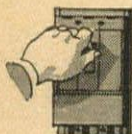
Here's what the "De-ion" (fuseless)  
Circuit Breaker of 1944 offers to industry:



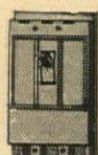
Provides positive "plus" protection of productive  
units . . . the same protection that controls circuits on  
modern battleships . . . where failure may mean defeat.



Permits maximum loading of circuits . . . will  
interrupt circuits on harmless momentary overloads  
prevents many work stoppages and delays . . . com-  
pletely eliminates need for replacement of protective  
devices or parts thereof.



3. Assures faster resumption of inter-  
rupted service after causes of overloads or  
short circuits are removed. There is nothing to  
replace or repair—to restore service, simply  
throw the handle. This feature alone saves American  
industry more than one million man-hours yearly.



4. Guarantees safe operation. Working  
parts are completely enclosed and sealed. These  
breakers are the safest protective devices ever  
built. They are absolutely tamperproof (can-  
not be bridged or blocked by pennies, nails or other  
foreign articles).

*and* 5. The lifetime cost of the "De-ion"  
(fuseless) Circuit Breaker of 1944 is less than that  
of any other protective device. Ask any Westinghouse  
representative for facts and figures. Westinghouse Electric  
& Manufacturing Company, Dept. 7-N, East Pittsburgh, Pa.

**"DE-ION" (fuseless) CIRCUIT BREAKERS**



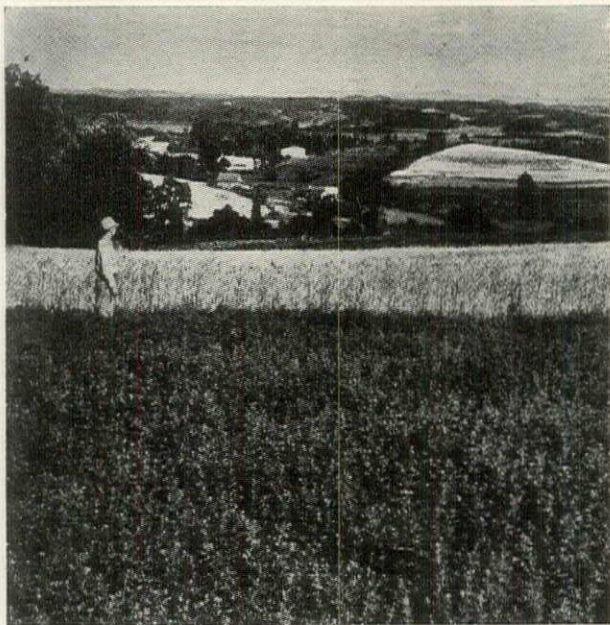


# BOOKS

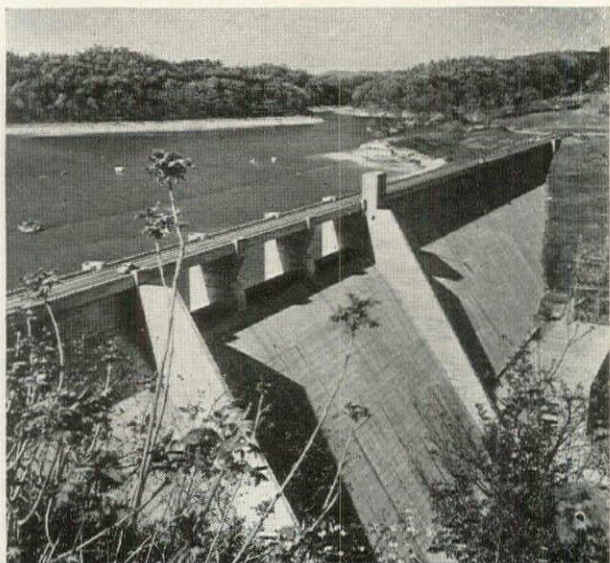
TVA Chairman Lilienthal describes how democratic methods have met the test of actual operation.



**LILIENTHAL'S** belief in community participation is backed by the success of TVA's farm demonstration program.



**TVA** philosophy: people and not power are the region's prime resources; methods are as important as results.



**TVA—DEMOCRACY ON THE MARCH.** By David E. Lilienthal. Harper & Brothers, New York. 248 pp. 5 x 9. Illustrated, 8 plates. \$2.50.

For professionals who expect a planning testament, David Lilienthal's book is not recommended as reassuring reading. It is characteristic both of the writer and of his record as manager of the only significant U. S. achievement in regional planning that this account of the Tennessee Valley Authority reads rather like an obituary for the planning profession as such. For planning isolated from management and wrapped in the germicidal cotton-batting of specialization, Mr. Lilienthal has only impatience. TVA, he reminds, was charged not only with the job of planning for the development of the region's resources, but also with unequivocal authority for executing its plans, which were necessarily on a scale heroic enough to unnerve even the most determined long-viewer.

That the prospect of operating responsibility will have both a vitalizing and a sobering effect on the men who make plans seems to be fairly obvious to private management, which has never displayed any alarming schizoid tendencies in this area. The fear of U. S. businessmen that public planning is likely to give birth to an offspring hideously resembling a Communist father is fairly remarkable in view of the consistent record of sterility hung up by municipal, state and national planners. But fear of public planners, an impressive if backhanded tribute to their potency, has survived mainly because their specialized activities are mysterious to the layman. Men are fearful of what they do not understand. And the executive who regularly makes five and ten-year plans for his own firm has seen little similarity between the business plans that stem naturally from day-by-day operations and the paper visions of specialists who have, for example, no responsibility for balancing a working budget. Because the essential feebleness of this kind of public planning has not been widely understood, many still cling to the notion that its possibilities, whether for good or for evil, are enormous.

Significant as is the TVA synthesis of programming and operating functions, it is only a logical part of the infinitely larger lesson of Mr. Lilienthal's book. For the chairman of TVA is at once an extremely practical man and a moralist. That the one quality is the imperative corollary of the other is his major conviction. Backed by the gigantic TVA achievements, this conviction is an impelling one. It is also heartening evidence that 20-century man, in spite of his endless genuflections at the altar of technique, has never been able to amputate his moral sense.

We now know precisely how to produce both penicillin and block-busters, but we lack, as Lilienthal notes, a "technology of goodness." Nor can we hope that the technological mastery which has produced the block-buster will somehow eventually yield as a by-product free and good men who can get along without bombs. This dim faith has not stood up at all well against the mass horror of political and scientific techniques skillfully wielded by the brass-knuckled hand of the barbarian. Here, for example, is Arthur Koestler's version of the world the Fascist technicians would organize.

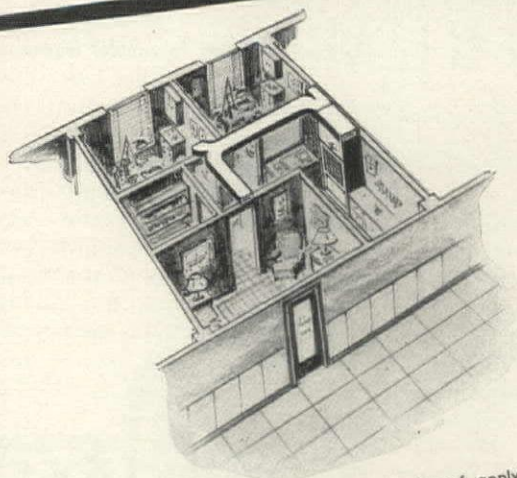
"Imagine Europe up to the Urals as an empty space on the map. There are only fields of energy: hydro-power, magnetic ores, coal-seams under the earth, oil-wells, forests,

(Continued on page 28)

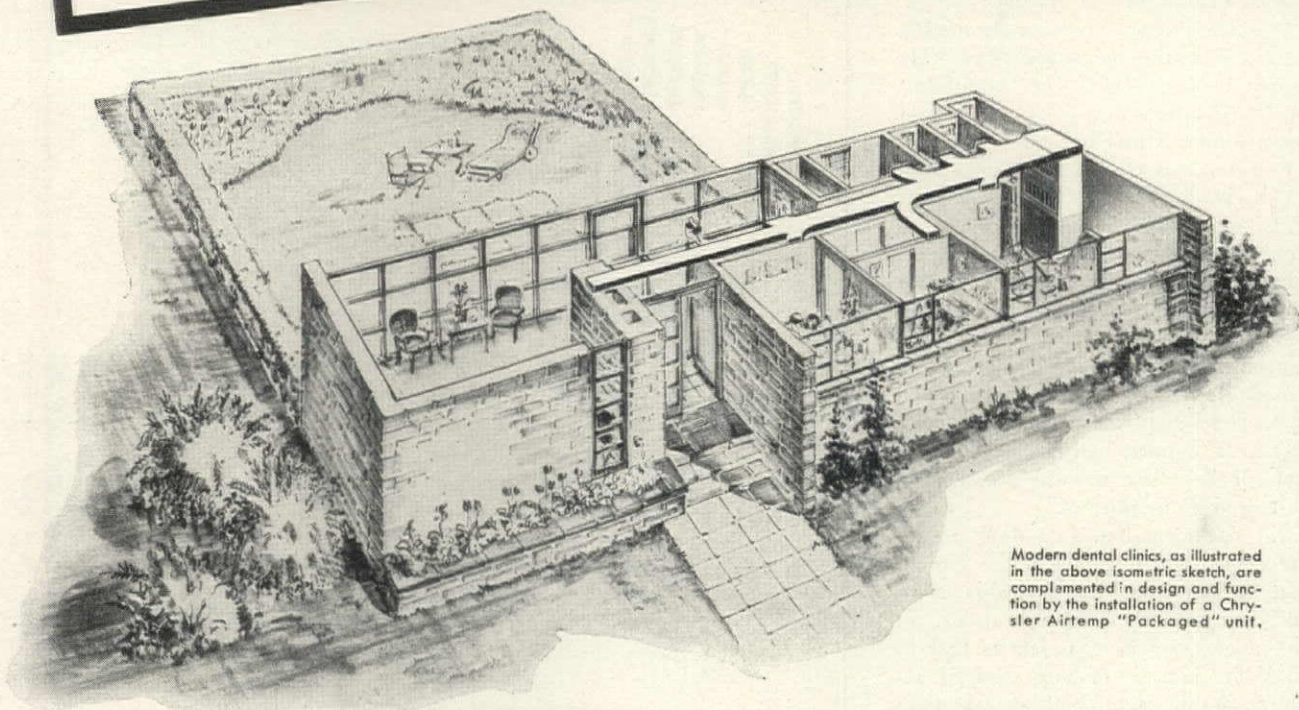


# Chrysler Airtemp

## "Packaged" Air Conditioning



The above architect's conception of applying Chrysler Airtemp "Packaged" air conditioning to a dental suite in an office building, demonstrates its adaptability and the simplicity of installation.



Modern dental clinics, as illustrated in the above isometric sketch, are complemented in design and function by the installation of a Chrysler Airtemp "Packaged" unit.

## Ideal for Dental Suites and Clinics

The many benefits to dentist and patient, provided by air conditioning are rapidly causing the entire dental profession to study it with serious interest.

The hot, humid days of summer have long been a source of discomfort to both technicians and patients, often resulting in a sharp decline in appointments under normal peacetime conditions.

Architects are finding the simplicity and ease of application of Chrysler Airtemp "Packaged" units, a practical answer to the problem of providing proper,

adequate air conditioning facilities in dental suites and clinics, irrespective of floor plan or floor space.

Chrysler Airtemp was first to build 3 and 5 H.P. "Packaged" Air conditioning units. Singly or in multiple, these complete factory-assembled and tested units will serve over 80% of air conditioning requirements.

The Chrysler Airtemp organization will be glad to cooperate with architects making estimates and plans for not only air conditioning, but all types of domestic heating and commercial refrigeration installations.

BUY WAR BONDS

**CHRYSLER**  **AIRTEMP**  
AIRTEMP DIVISION OF CHRYSLER CORPORATION • DAYTON, OHIO

Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.



(Continued from page 28)

fertile and barren lands. Connect these sources of energy and you get the distributive network. Work out the human labor required to feed the net at any given point and you get the adequate density of population for any district; divide this figure by the quantity of horsepower it produces and you get the standard of living allotted to it. Liquidate the surplus population in areas where they are not required. . ."

But, even where there is respect for the democratic purpose, few managers have understood clearly that their machines must serve the good of the men who operate them. Lilienthal's account of the unplanned exploitation of Ducktown, U. S. A. makes a fair contrast, in miniature, to the planned Fascist exploitation of Europe:

"Copper ore was discovered; mining began. But the developers had only copper in their plans. The magnificent hardwood forests to a distance of seven miles were cut and burned as fuel for the smelter's ovens. Sulphur fumes from the stacks destroyed the thin cover that remained. The dead land, shorn of its cover of grass and trees was torn mercilessly by the rains; and the once lovely and fruitful earth was cut into deep gullies that widened into desolate canyons. Silt, swept from the unprotected slopes, filled the streams and destroyed fish life. One of Ducktown's resources, copper, had been developed. But all its other resources had been destroyed in the process."

No sentimentalist, Lilienthal argues the democratic purpose on the ground that it has been indispensable as a unifying factor in TVA operations. In an undertaking as complex as that of TVA or, indeed, of any modern resource development, nothing less than the most rigid adherence to the long-term good of the many, Lilienthal believes, can efficiently serve as the base for administrative decision. Over the long-run, nothing less can balance the book. And nothing less could have split the professional shells of the specialists who play an enormous part in the TVA scheme and merged their compartmentalized thinking back of the big decisions necessary to do the job.

Nor is Lilienthal's espousal of the democratic method as the most efficient way to get the job done less convincing. As many visionaries have learned to their dismay, an arbitrary concept of long-range good, however gilt-edged, seldom stirs the imagination of all the little men who are the intended beneficiaries. Nor can any managerial elite,

(Continued on page 134)

## IN THE FORUM

According to popular legend, Samuel A. Marx has never discriminated against the wealthy. He has built for them handsome houses and not-too-public eating places. Ever been to the Pump Room? So you've

never been to Chicago! He has done clubs like the Tavern and cars for Pullman. Currently, he is doing over the Hotel Pierre in New York, a large new house in Hollywood, a few factories and a town house for Albert and Mary Lasker. Mr. M. is doing all right. And it is hard to see how his clients could do better. If you were Eddie Robinson and wanted to hang one of the most discerning collections of modern painting in the world, would you settle for the gallery on page 110? Mr. Marx also collects—and paints—pictures. He collects, but does not paint, neckties and stories which leave the farmer's daughter untouched. In short, Mr. Marx is quite a subscriber.



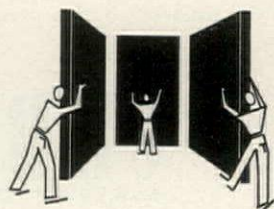
To the joy of journalistic wags, the long nose of research recently led the John B. Pierce Foundation into some pretty compromising statistics which touch, not too lightly, on the indoor aspects of the married menage (pages 4 and 97). When the studies were published the press was beside itself with indelicate snickering. As one of the flannel nightgown boys, we are twice removed from sleeping in the raw. However, we are not above exploring the whole situation. Will you join us?

Peeking, as is our custom, across the street into the drafting room of the H. K. Ferguson Co., we discovered not long ago, a regular dynamo of activity. After a beseeching pantomime on our part, Guy Panero, who is a naval strategist at heart, rigged up a breeches buoy and in conspiracy with Egon Gerner, slipped us the plans for the nifty postwar factory (page 79). Now it can be told and we are proud to be the first to tip off Big Business.

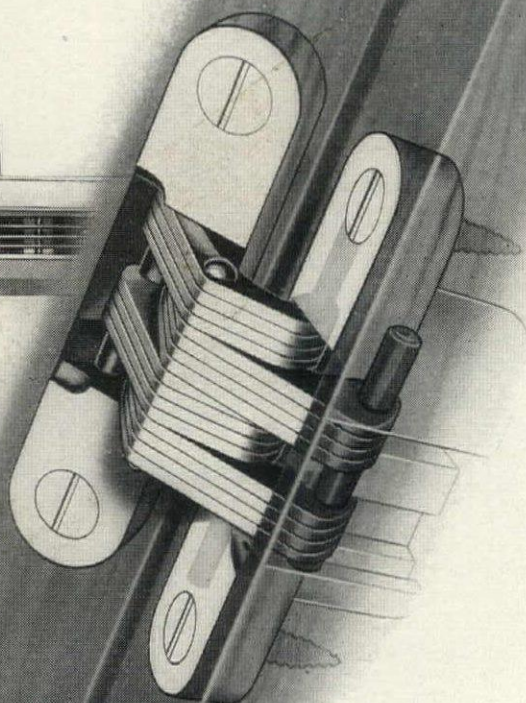
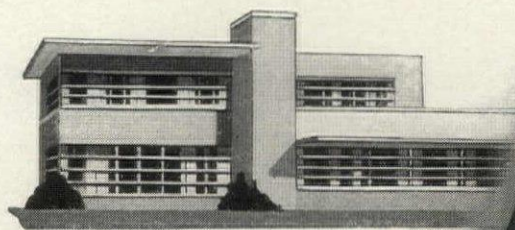


As though the Watts house (page 101), weren't enough in itself, architects John Campbell and Worley Wong got up a presentation that would make Schiaparelli double-dose with "Shocking". Suspicious though we were of the fuscina-hued folder, the fowl lived up to its brilliant plumage. For the moment, the Allied offensive is utilizing all the Campbell-Wong ability, but high on our list of postwar "musts" are more houses by this team.

Ernest J. Kump, designer of Fresno's smooth City Hall (page 67), is as keen on progressive education as he is on city administration. "Time-Flexibility," his new idea for school construction, simply means that all walls and equipment can be moved to meet the modern teacher's whim. Coincidentally, it delights the modern child. Time was when tiny tykes could only express themselves by defacing walls. Now they'll be able to take the whole d — building apart and, as a taxpayer, we hope, put it back together.







## *a necessary feature for tomorrow's home*

**T**HE HOME OWNER of tomorrow will demand every modern feature which enhances pride of ownership. Certainly he will insist upon the ultra-modern detail that permits the flush, unbroken interior surfaces provided by SOSS INVISIBLE HINGES.

No longer need surfaces be marred by those unsightly gaps and projections wherever hinges are necessary. Soss Invisible Hinges are out of

sight when the door is closed. The use of Soss hinges beautifies doors, cupboards, folding partitions—and widens the opportunity for modern, unusual design. Write for full details.

**SOSS MANUFACTURING COMPANY**  
21775 HOOVER RD. DETROIT 13, MICHIGAN







## The Floor of Tomorrow...

### What Is the New Tuf-Lustre Finish?

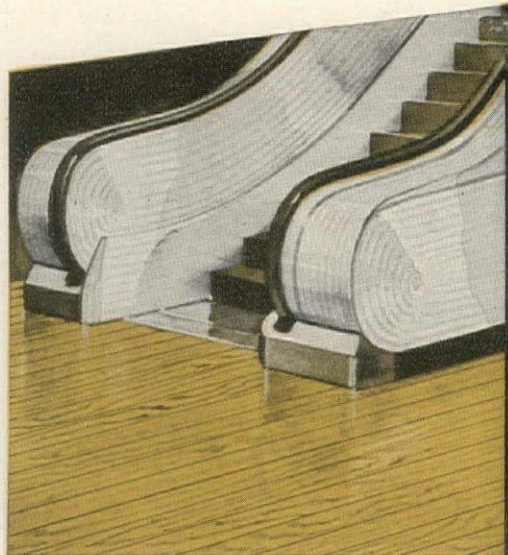
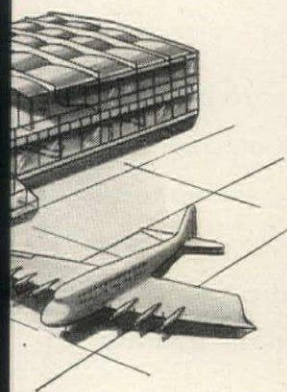
Tuf-Lustre is the new *deep-seal* floor finish that brings out the full beauty of wood by developing its natural grain and figure. Penetration, the secret of Tuf-Lustre, seals the wood pores against dirt and produces a long lasting, lustrous finish that will not scratch, chip or peel.

THE SCRATCH TEST  
PROVES TUF-LUSTRE  
FLOOR FINISH  
SUPERIOR!



Half of the panel illustrated is *surface* finished the ordinary way and the other half Tuf-Lustre *deep-seal* finished. A coin scraped across both finishes at the same time, will scratch, chip and mar the surface finish but leave the Tuf-Lustre finish unharmed.





## Bruce Streamline Floors

with the new  
**Tuf-Lustre  
Finish**

**The Deep-Seal Floor  
Finish that will not  
Scratch—Chip—Peel!**

# For Peace-Time Planners...

Walls that disappear at the touch of a button, electric eye servants, and many other so-called miracles *may* be a part of the buildings you are planning for peace-time America... but a beautiful, easy-to-care-for floor is *sure* to be.

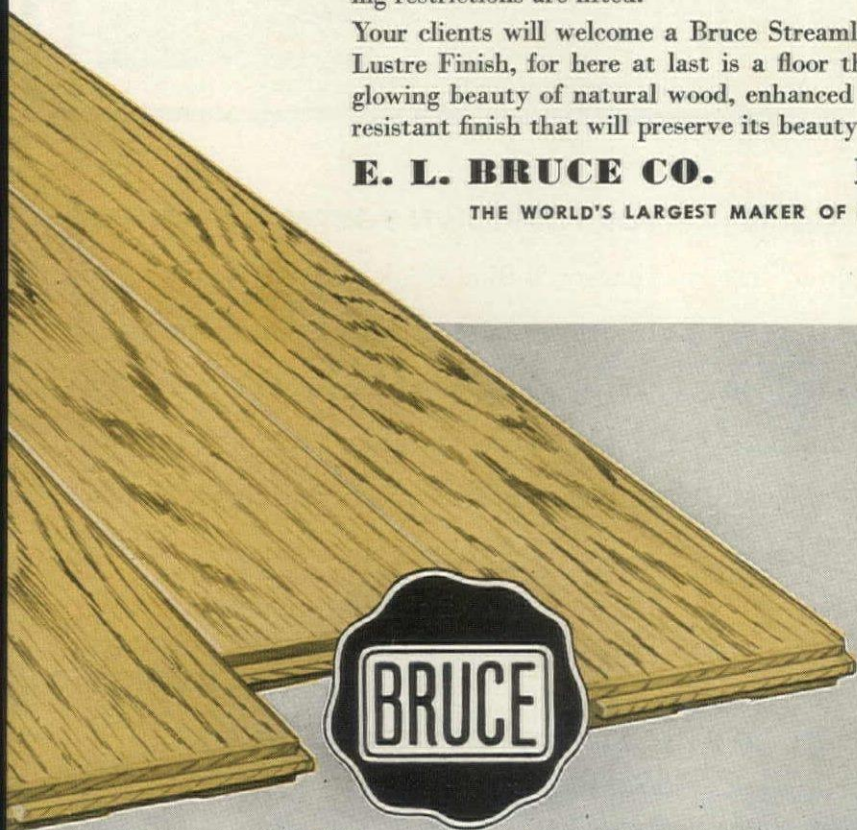
And such floors are Bruce Streamline Floors with the New Tuf-Lustre Finish—the flooring perfected through six years of research and development, and already proved in the laboratory of daily use in thousands of public and private structures. Yes, this floor of tomorrow is no dream, no “wonder-product” still in the experimental stage. It is ready, waiting to become a part of the homes you will design and build the moment building restrictions are lifted.

Your clients will welcome a Bruce Streamline Floor with its New Tuf-Lustre Finish, for here at last is a floor that brings to a home all the glowing beauty of natural wood, enhanced and protected by a damage-resistant finish that will preserve its beauty indefinitely.

**E. L. BRUCE CO.**

**Memphis 1, Tenn.**

THE WORLD'S LARGEST MAKER OF HARDWOOD FLOORS



## TO ARCHITECTS NOW PLANNING ESSENTIAL CONSTRUCTION

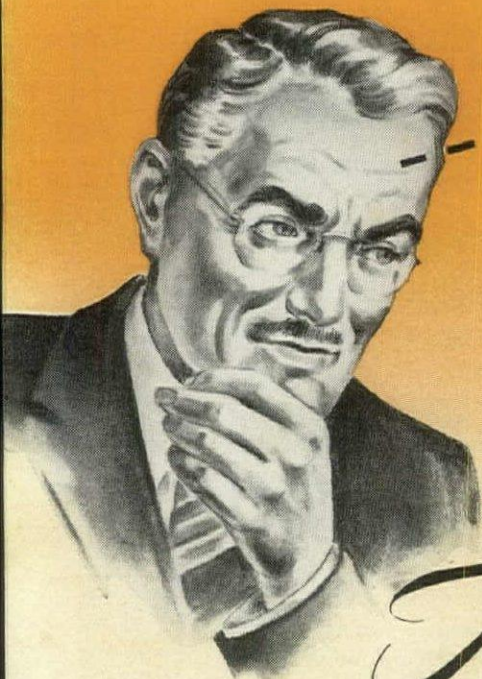
Bruce Streamline Floors are still available for projects which carry War Production Board approval. You are invited to consult with us on any jobs you now have pending.

AMERICA'S

MOST BEAUTIFUL FLOORS



# POSTWAR JOBS START HERE



The decision to start postwar planning has to be made in the minds of businessmen, prospective homeowners, school and hospital officials, and government authorities. It can't start with you—or with us.

If these men will plan now, the building industry can have jobs ready for service men when the fighting stops—millions of jobs.

*That's why:*

building, drawing, the attention of your school, hospital and public

COMPANY  
as Manufacture  
Grand Blvd. • Detroit 11, Mich.  
Pacific Coast Plant at Oakland, California

*Fenestra* SUGGESTS

WINDOWS • DOORS • ROOF DECK • FLOOR DECK • METAL SIDING • AND OTHER BUILDING PRODUCTS

START AN ARCHITECT ON  
A POSTWAR  
PLAN NOW



Every month since last July, the suggestion to "Start an Architect on a Plan Now" has been the theme of Fenestra's advertising in Newsweek, a magazine that is read by 550,000 influential people. Many of them are businessmen, school, hospital and government officials in your neighborhood—people you must count on for future commissions.

## FOR YOUR OWN POSTWAR PLANNING

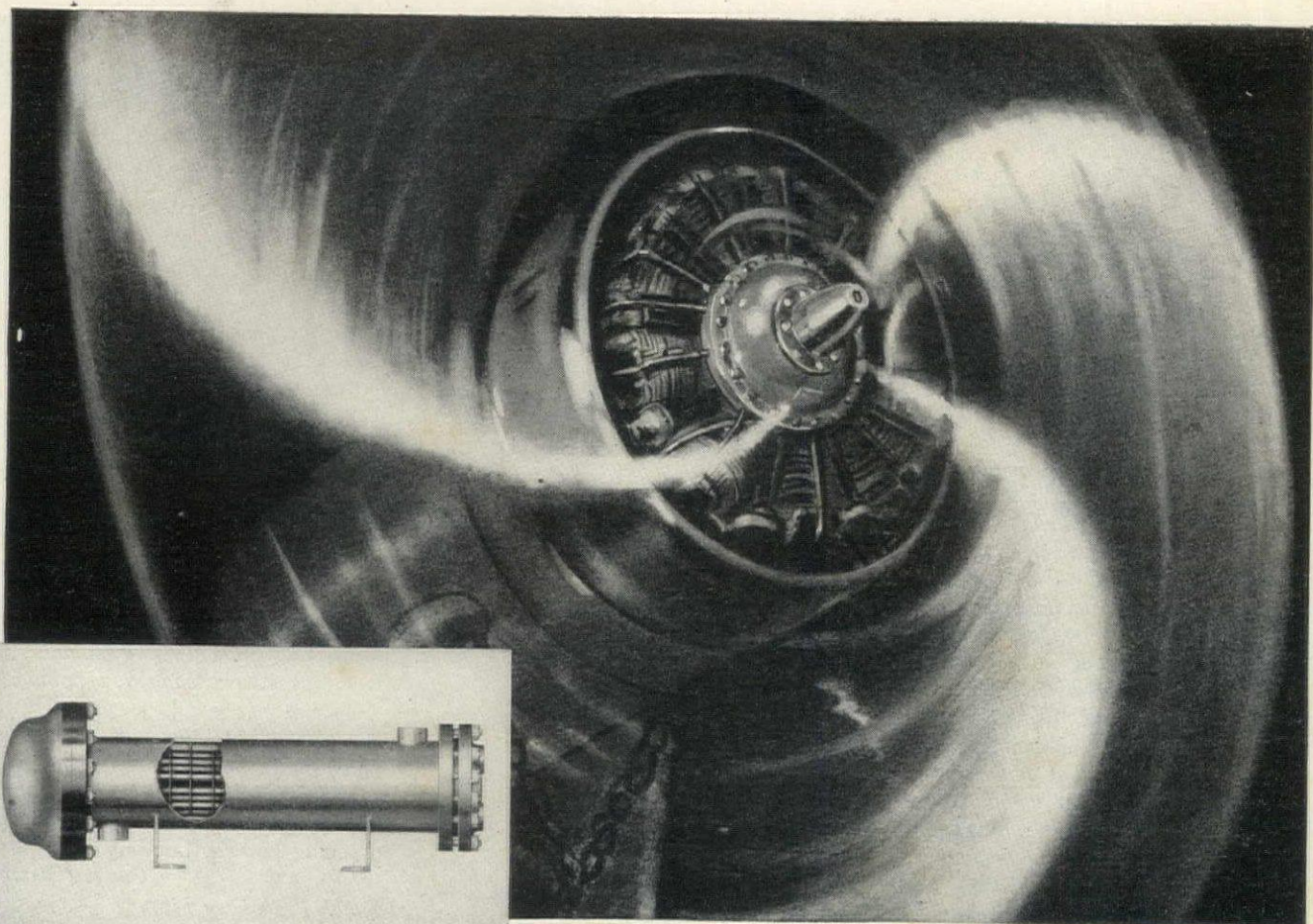
Fenestra's Blue Book of Steel Windows and Doors contains much valuable information that will help the designer of tomorrow's homes, office buildings, schools, hospitals and many other types of buildings. Write us for your copy of this factual, illustrated book. It's free, of course. No obligation!

## DETROIT STEEL PRODUCTS COMPANY

*Now Chiefly Engaged in War Goods Manufacture*

Dept. AF-6 • 2252 East Grand Boulevard • Detroit 11, Michigan  
Pacific Coast Plant: Oakland, California





## How to speed up aircraft engine testing

AIRCRAFT engines as they come from the assembly line must be tested thoroughly under actual operating conditions. Heat in the wrong place at the wrong time can seriously delay production.

For instance, the engine is placed in test cells and connected to fuel and oil lines. If the oil is cold, time is lost while heat is added to bring the temperature of the engine to actual operating conditions. On the other hand, as one engine after the other is tested, heat is added to the oil. Thus actual operating conditions are destroyed. More time is lost while the heat in the wrong place is dissipated.

To make heat an aid rather than a time waster, one large aircraft engine maker installed Trane Shell and Tube Heat Exchangers. These versatile heat exchangers apply steam to warm the oil to proper temperature

before testing operations begin. Then, reversing themselves, they constantly keep the temperature of oil at actual operating conditions by cooling it with cold water. In this way, aircraft engines are tested in the quickest possible manner.

Actually, heat is exchanged for more aircraft engines.

The Shell and Tube Heat Exchanger is but one of the many products of The Trane Company, manufacturing engineers of heating, cooling and air handling equipment. This application is but one of hundreds to which Trane Products are being applied in today's battle of production. Tomorrow Trane Products using the same principles of heat exchange will be applied to processes that will make a better world in peace.



# TRANE



THE TRANE COMPANY LA CROSSE, WISCONSIN

TRANE COMPANY OF CANADA, LTD., TORONTO

AIR CONDITIONING • HEAT TRANSFER • AIR HANDLING EQUIPMENT



# LETTERS

A new plea for competitions . . . correction from England . . . Louisville and "outside planners" . . . our ebullient readers . . . on the postwar closet.

## STILL A GOOD IDEA

Forum:

If architectural magazines would advocate competitions for all future public buildings, much could be accomplished of value to the architectural profession. There is a chance now for such an improvement.

A competition is the best means of getting good architecture. Invariably the winning design is a superior effort. If there were ever a period when the best efforts of the profession should be exploited, it is now. We, as members of the profession, should do all in our power to see to it that every building is as well designed as possible. Competitions for *all* public buildings would be a good starting point. It would not be a difficult matter to sell the idea to any building committee, as it would be obvious to them that they would get a better designed building.

I believe it is time that the profession realizes that a very good way to combat criticism of our profession is by improving its architectural output. There has been too much work done by poor architects and too little by good architects.

ARTHUR F. DEAM

*University of Illinois  
Urbana, Ill.*

## 235,452 BRICKS

Forum:

THE ARCHITECTURAL FORUM is read and recognized over here as one of the really factual technical papers devoted to building. Unfortunately, these days copies take a long time coming over, and it is only recently that we have seen your January issue.

In the interesting account of Mr. Ralph Walker's trip to England there is one reference to British labor that in the interests of accuracy and good will should be corrected. Mr. Walker was apparently told that "the British mason restricted his daily stint to 200 bricks even when working on air raid shelters." In fact, there is no sort of restriction on output, either among bricklayers or any other craftsmen in the industry, and some very remarkable figures of output, particularly in bricklaying, have been secured. The most spectacular is: in 1,278 hours, six

bricklayers laid 235,452 bricks, an average of 185 bricks per manhour.

This is possibly a record, but there are a great many instances where 80 or 100 bricks per hour have been laid under wartime conditions.

HAROLD LEWIS, Publicity Officer  
*Ministry of Works  
London, England*

## DELAYED REACTION

Forum:

Thank you for the article in the March issue describing the Louisville Area Development Association.

However, the statement that "Louisville does not expect to hire outside planners, for Louisville has had its fill of them" is incorrect. "Outside planners" are and will be consulted in order to give our citizen committees the advantage of factual surveys and opinions. We recognize the value of consultants on many problems and expect to use them. The implication that Louisville is dissatisfied with the work done here by Harland Bartholomew & Associates is also incorrect. The comprehensive plan which Mr. Bartholomew and his staff prepared was adopted by the City of Louisville and has been closely followed. As Director of Welfare in 1933-1935 and in 1937, I know that the plan has been extremely valuable and is now the basis for Louisville's future plans. The City has changed considerably during the fifteen years since the adoption of the plan and it is desirable to make some revisions, but that does not lessen the value of the work done by "outside planners" and it is certainly incorrect to say that "Louisville has had its fill of them. . . ."

KENNETH P. VINSEL

*Louisville Area Development Assn.  
Louisville, Ky.*

## AIRMAIL ORCHIDS

Forum:

I must say your paper more than lives up to my expectations. I must especially congratulate you on your article "Planning With You," as a clear and concise view on postwar town planning and reconstruction. . . . I intended making the article a basis for a lecture on the subject as it is a matter of vital

interest especially to us out here who have to go back to a Britain which requires so much rebuilding.

ALBERT COURTS

*Royal Air Force  
India Command, India*

Forum:

. . . Libraries are hard pressed to find up-to-date material for prospective home builders in simple enough form not to frighten them back to the 1939 Cape Cod model or even the 1914 bungalow. Everything you publish on the small postwar house is helpful to us and we are taking a second subscription to THE FORUM in order to have a copy for people to take home. We need something *right now* for people who are planning postwar building.

GRETTA SMITH

*Enoch Pratt Free Library  
Baltimore, Md.*

Forum:

I am a student in architecture at this University. South Africa is fortunate in having a group of young architects who are very keen on their profession.

THE ARCHITECTURAL FORUM I find a very valuable supplement to my lectures, and I would welcome more articles on planning techniques and more illustrating the latest work of contemporary American architects. I am thinking in particular of an article you published recently about a cosmetic shop by Richard Belcher. Articles like that greatly assist students.

May I also take this opportunity to congratulate you on your series "Design Data," and that magnificent little book "Planning With You. . . ."

GEORGE RHODES-HARRISON

*Univ. of Witwatersrand  
Johannesburg, South Africa*

## CONFUSED CLOSETS

Forum:

Your series on "Planning the Postwar House" really hits a high level in reader service and we were particularly interested in the February article as it relates to the design of wardrobes.

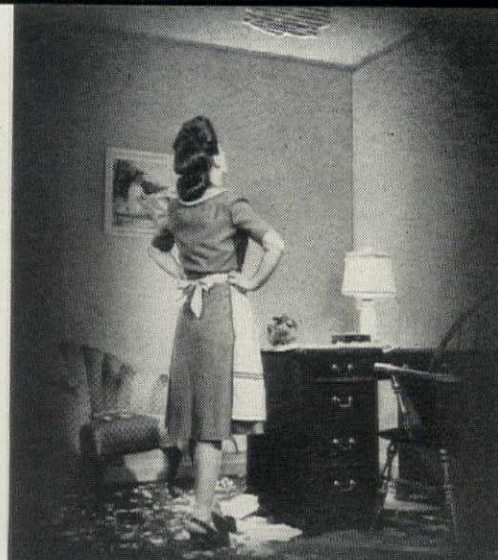
We agree that the fault with most houses, of recent years particularly, lies in an effort to conserve space. This was carried to an extreme and actually did away with essential storage space. . . .

(Continued on page 36)





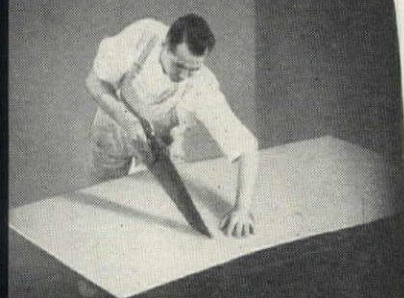
**For the Walls and Ceilings of the Home the Johnsons Are Waiting to Buy.**



**For Covering the Cracked Ceilings That Must Be Repaired in Mrs. Smith's Home.**



**For Charming Tile Effects Mrs. Thompson Wants in Her Kitchen and Bathroom.**



**For the 1001 Uses of durable Upson Panels in Homes, Farms, Stores and Factories.**

**LONG-BILT PANELS**—approximately  $\frac{1}{2}$ " thick—for new construction.  
**VER-KRAK PANELS**— $\frac{1}{4}$ " thick—covering cracked plaster. **UPSON**  
**PROCESSED BOARD**— $\frac{3}{16}$ " thick—for miscellaneous uses. **DUBL-THIK**  
**RE TILE**—for kitchen and bath.

on Quality Products Are Easily Identified  
 By The Famous Blue-Center

No "blue sky" promises!

But this much can be said about what is coming in Upson Panels.

For peacetime requirements, the building industry can well look to Upson Panels for better fulfillment of many job requirements in new construction and repair.

As a result of heavy war demands involving many millions of feet, and the necessity for great speed in emergency construction, building techniques have advanced at an accelerated pace.

Upson research, responsible for many important developments in the past, has again stepped ahead.

Postwar plans, laid by the same management which has guided The Upson Company for 32 years, are based upon continuing high standards of quality, adherence to a 100% dealer policy and national advertising to maintain consumer acceptance.

Dealers, builders and architects who are analyzing and planning their own postwar future will find skilled assistance in the counsel of our representatives. The Upson Company, Lockport, New York.

# UPSON

**SPECIALISTS IN PANEL BOARDS**



## LETTERS

(Continued from page 34)

But even closets made to measure fall short of their purpose unless outfitted with the right sort of fixtures.

Bedroom wardrobes of good design... soon become a jumble of confusion in spite of built-in drawers and shelves, for the simple reason that closets are a place to hang things, and the traditional wood pole, single hooks on the wall, and hat shelves that accumulate dust in no time, are totally inadequate.

We have seen batteries of hall cabinets that suggest the last word in modern design and efficiency, consisting of drawers that accumulate an assortment of rubbers and galoshes in a heap with their mud and wet, mittens and scarfs, school books and hats; individual lockers with old fashioned single hooks for coats, umbrellas, etc., and overhead cupboards which receive a variety of forgotten paraphernalia.

E. A. Rood, Jr.

*Knap & Vogt Mfg. Co.  
Grand Rapids, Mich.*

### MINIMUM OWNER STANDARDS

Forum:

... I should like to see the FHA limit its Title II to the point that it can embrace such operations of Title VI as are designed for re-sale and not for rental housing. I am of the opinion that Title II with its 90 per cent loans on properties of \$6,000 and under, and 80 to 90 per cent loans on properties of from \$6,000 to \$10,000, and 80 per cent loans on properties of from \$10,000 to \$16,000 is sufficient to embrace all the home ownership financing problems.

I think they could revive and revise their 207 and 210 operations and make them workable if they were determined to appraise income properties in a reasonable manner and with a view to making sound loans. The principal objection to 207 operations was the requirement that a representative of the Federal Housing Administration be on the managing Board of Directors. I think the most important matter in their determinations should be to have strong owners operating such projects, assuming that the projects have been completed under the FHA's very fine minimum construction standards.

I am afraid that if weak owners or operators are the mortgagors behind these rental projects, it is conceivable that in times of stress we would find the FHA coming into ownership and being competing factors in postwar housing.

FRED L. AIKEN

*Scott Mortgage Co.  
Pittsburgh, Pa.*

(Continued on page 136)

## A LETTER FROM THE PUBLISHER

Dear Reader:

The most self-effacing people who "work" for THE FORUM are its advertisers. You know them merely as the Blotz Corp. or the Schmaltz Co. or Push-a-Wall, Inc. To us they are not merely corporate bodies, but flesh and blood people who each month appraise this magazine as critically as any subscriber.

Does it surprise you to know that it takes 1,200 yearly subscribers to match our income from just one, regular full-page advertiser?

Fortunately for you and our 36,141 other subscribers, THE FORUM currently carries a satisfactory volume of advertising—nothing like the whooping issues of the booming '20s—but pretty good.

Fact is that for ten years in a row THE FORUM has been selected by the manufacturers, and their advertising agencies, as their favorite magazine in the Building field. One reason is that when they take the trouble to ask important building professionals which magazine they prefer, you—or at least most of you—invariably give the right answer. So in effect you become partners in this enterprise by contributing to its success in more ways than one. THE FORUM's staff appreciates that and tries to send you a monthly dividend by progressively improving the magazine. Incidentally, we have some plans for this fall and next year which we suspect will excite you as much as they do us. Forgive us if we keep this civilian secret just a little longer.

Now let's talk a bit more about those wise and popular people—THE FORUM advertisers. Thousands of the executives and the workers in these companies are off to the war. For example, here is a picture of a

Navy lieutenant who is neglecting his plumbing business for the most important job that needs doing. None of us will begrudge him a few hours respite from the front line, particularly as he is apparently



chaperoned by one of those irreplaceable camera fiends.

Most of those in these companies who remain behind are exclusively busy with war work. But in almost every organization a few top men have been detached for postwar planning. Research goes on. Laboratories are working day and night. Designers are over their boards and building mock-ups. Others are making detailed plans for reconversion so that products for civilian building can come into the market without delay when normal construction is again authorized.

This is neither assumption nor guess-work. FORUM representatives are constantly in the field maintaining contact with these producers. And more and more producers recognize that FORUM editors are in daily touch with the most progressive building professionals. They have formed the habit of coming to our headquarters in New York to discuss their postwar product development programs.

Thus FORUM editors act as catalyst—interpret to the producers the advanced ideas of those in turn dependent on the factories for the realization of their ideas.

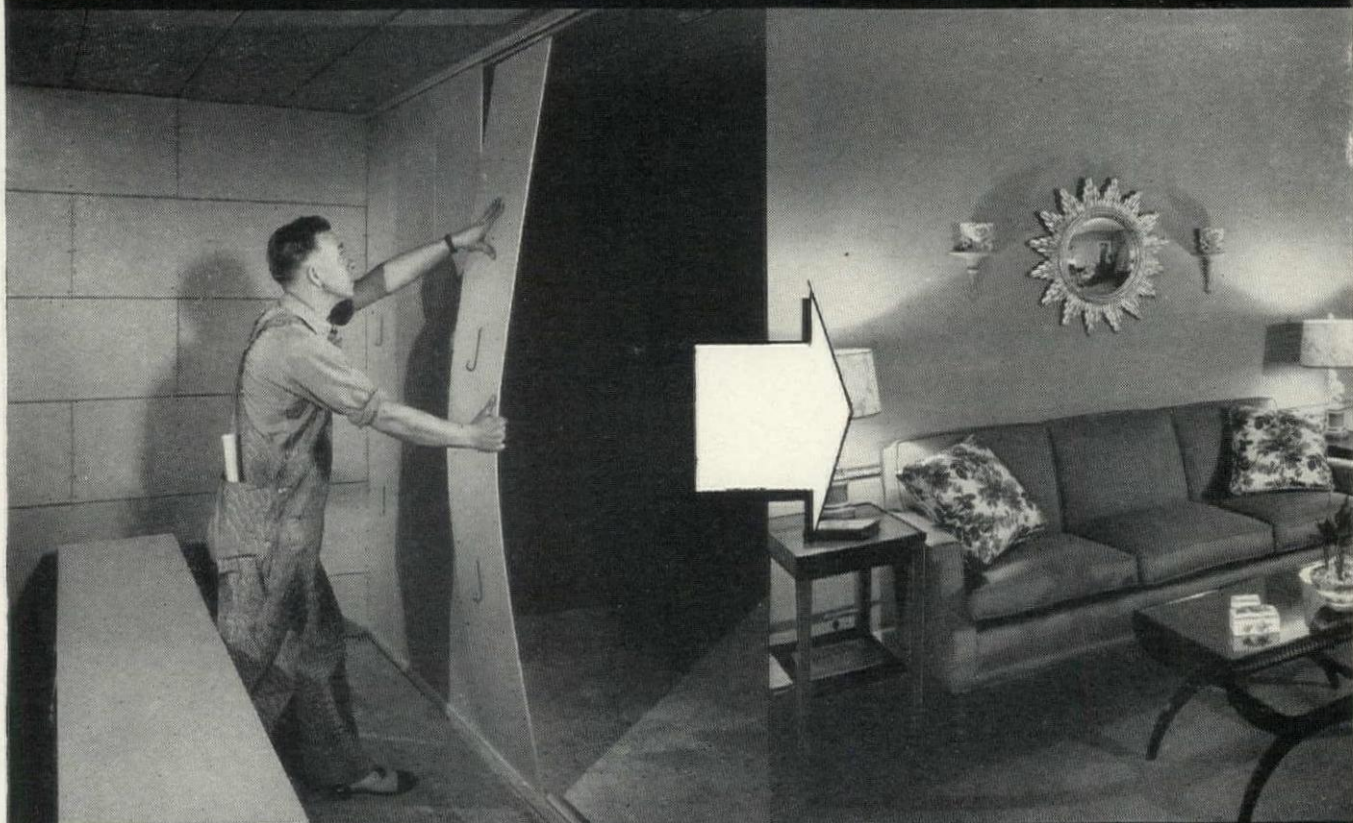
Here is one more demonstration of the interdependence of all elements in the Building field. Just as THE FORUM cannot exist without advertising, neither, we believe, could those who design, erect and finance building do their job as efficiently and as easily without the information which FORUM advertising pages bring to them each month.

Building has learned a lot of new things in the war. Many new products have been tested under extreme conditions. And many standard products have found new uses.

Through the advertising pages of THE FORUM, these stories are trickling through. By the time building gets going again, the new techniques, and the new models and the new materials will be familiar stories to FORUM readers, who, more than any other magazine audience in America, will control our postwar building destiny. FORUM advertisers will be with you all the way. H.M.



# New STUDLESS PARTITIONS



## 2" SOLID ROCKLATH\* AND PLASTER

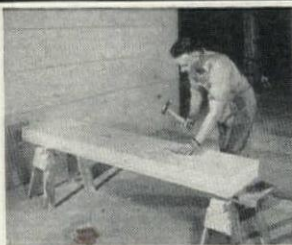
Proving again that "Necessity is the Mother of Invention"—U.S.-G Engineers developed this new Studless Partition—that saves lumber, metal, time and space... meets the need for speed. Light wood or metal runners—a few nails—plus Rocklath\* and Red Top\* Plaster... that's all the material there is to these new studless partitions.

As a matter of fact these new 2" partitions fill an emergency need so well that they promise to find a place in all coming building requirements. The pictures at the right tell a story of progress. Get the latest literature and be prepared with all the details. An attractive folder is yours for the asking.

\*Trademarks Reg. U. S. Pat. Off.



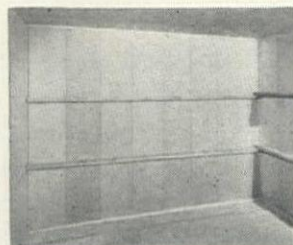
*First, floor and ceiling runners are nailed securely in place.*



*Then drive Rocklath Bracing Clips at third points as shown.*



*Next, spring Rocklath plaster base into ceiling runner groove.*



*For temporary bracing, straight 2 x 4s are attached with clips.*



*Both sides are plastered with scratch coat and allowed to set.*



*Then brown coat plaster is applied—followed by finish coat.*

### FIREPROOF GYPSUM

The World's most widely used Mineral for making Fireproof Wall and Ceiling Materials.



### UNITED STATES GYPSUM

300 WEST ADAMS STREET, CHICAGO, ILL.

*This famous trademark identifies products of the United States Gypsum Company—where for 40 years research has developed better, safer building materials.*

PLASTER • LIME • KEENE'S CEMENT • STUCCO • LATH





# IDEAS,

**Not Billions of Dollars, Always Have Been  
and Always Will Be, the Prime Essen-  
tial in Providing Gainful Employment**

The entire Zurn Organization has its vision fixed upon the requirements of the structures of tomorrow. Zurn is developing and perfecting devices which will offer the utmost of engineered protection for human health in modern structures. In this field of highly specialized engineering and product development, ideas are of paramount importance.



*Now available upon request: "A New Era For Building is Only Marking Time", a presentation of some influences which may affect the planning of construction in the immediate future.*

Form No. 44-50

**J. A. ZURN MFG. CO. \* ERIE, PA., U.S.A.**



**BUILDING • PLUMBING DRAINAGE PRODUCTS**



# Swartwout **AIRMOVER** gives you wholesale air movement in factory buildings

Unique combination of ventilating efficiency  
and architectural adaptability

Some of the most difficult heat removal problems in industrial buildings now are being handled by Swartwout AIRMOVER installations. Large or small roof areas can be opened for efficient forceful air movement supplied by Swartwout's engineered ventilation by Natural methods. AIRMOVER is only 32" high; is easily installed; can be custom built to meet special conditions. Let Swartwout help you figure your needs.

Photograph is of the Kaiser Fontana steel mill, open hearth building. Other buildings also equipped with AIRMOVER are plate, merchant and alloy mills, ingot mold foundry and sinter building.

THE SWARTWOUT COMPANY  
18511 Euclid Avenue, Cleveland 12, Ohio

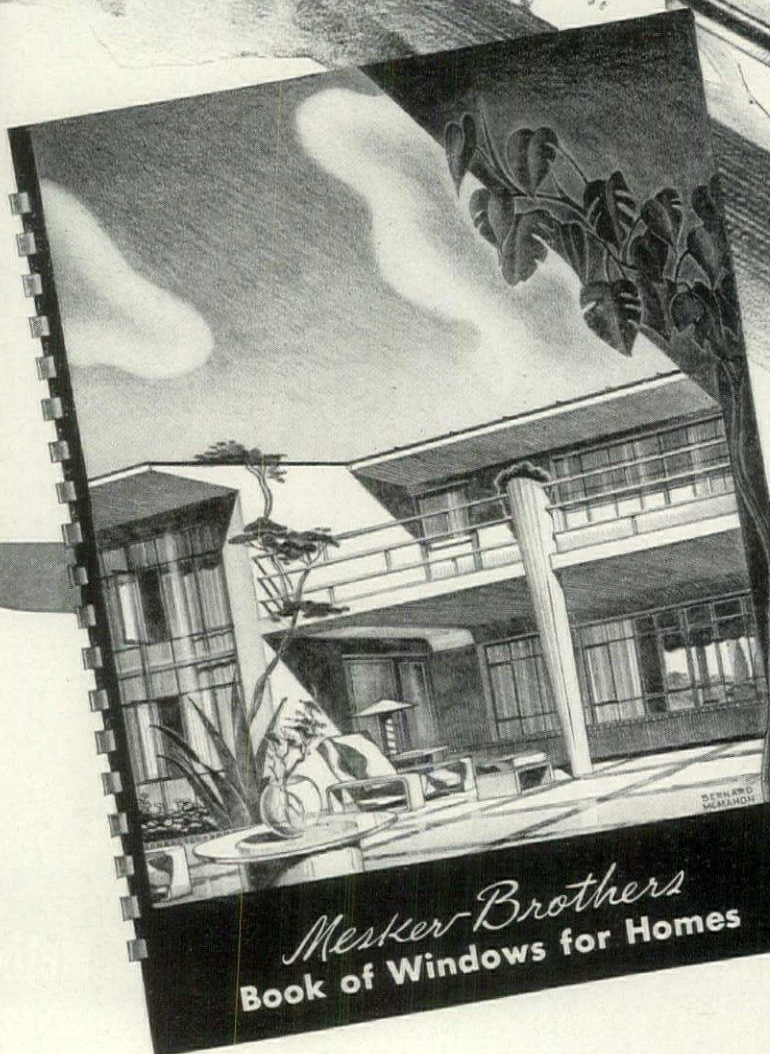
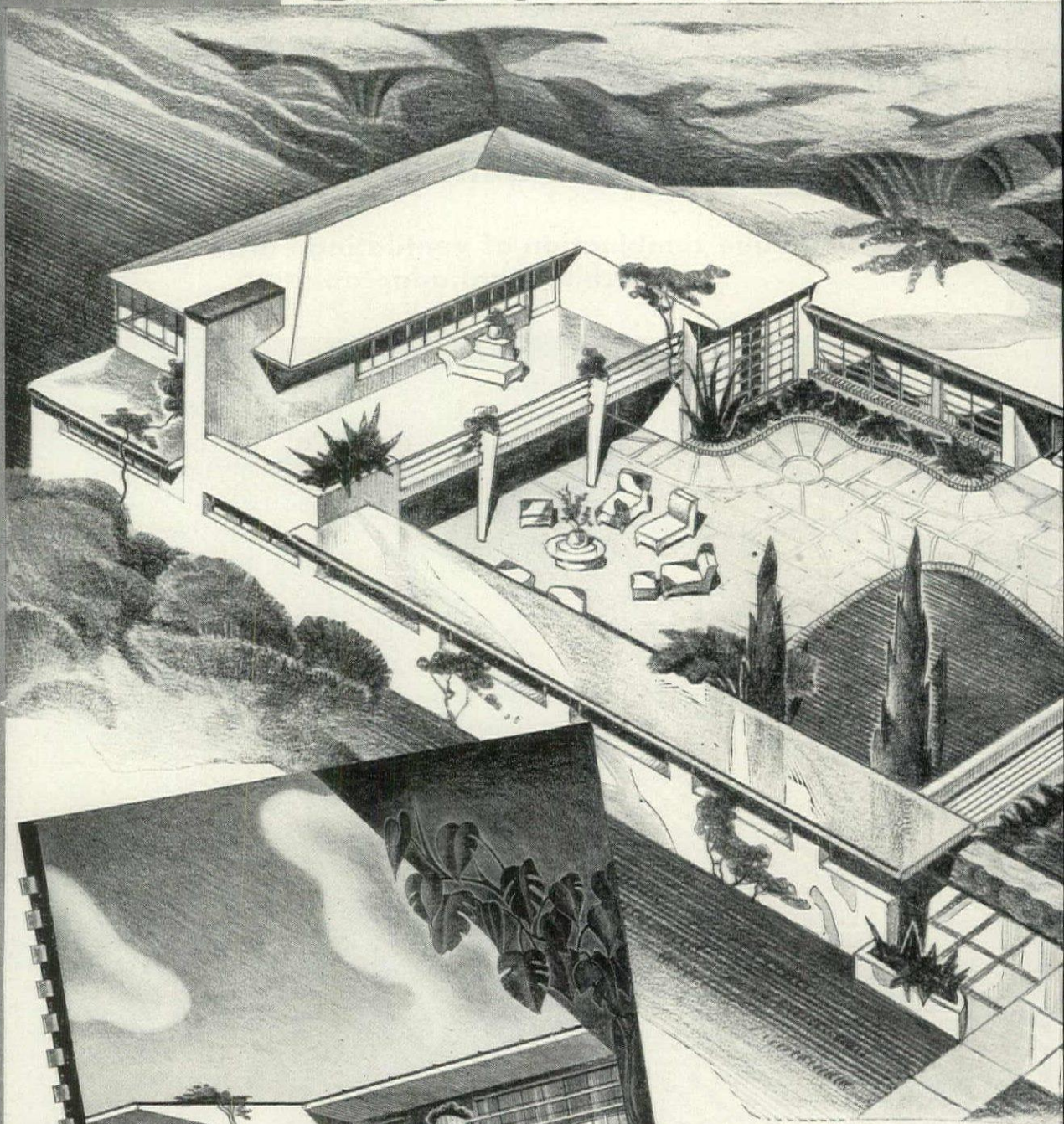
# Swartwout

Specialists in Air Movement by *Natural* Methods





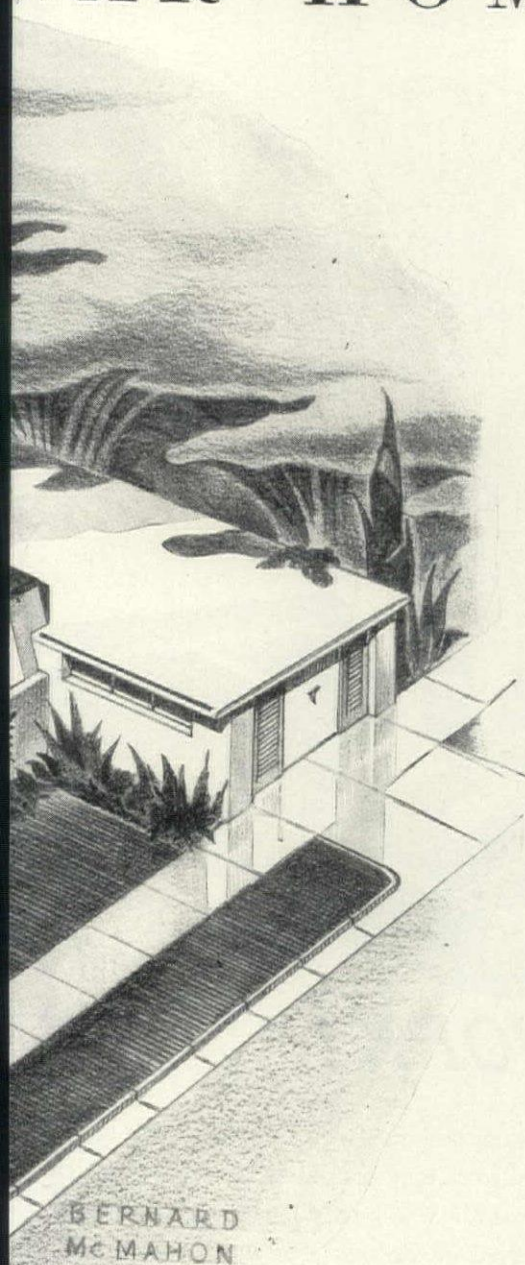
# DESIGNING A POST



★ STEEL SASH "MERIT-METER"																
POINT NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SWORN BASIC FACTS USED ARE FROM 1940 SWEETS CATALOG	Aluminum Sash, 1 1/2" deep	Aluminum Sash, 2 1/2" deep	Aluminum Sash, 3 1/2" deep	Aluminum Sash, 4 1/2" deep	Aluminum Sash, 5 1/2" deep	Aluminum Sash, 6 1/2" deep	Aluminum Sash, 7 1/2" deep	Aluminum Sash, 8 1/2" deep	Aluminum Sash, 9 1/2" deep	Aluminum Sash, 10 1/2" deep	Aluminum Sash, 11 1/2" deep	Aluminum Sash, 12 1/2" deep	Aluminum Sash, 13 1/2" deep	Aluminum Sash, 14 1/2" deep	Aluminum Sash, 15 1/2" deep	Aluminum Sash, 16 1/2" deep
MESKER	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SASH-A	YES	YES	YES	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
SASH-B	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
SASH-C	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
SASH-D	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
SASH-E	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES



# WAR HOME?



... then send for Mesker Brothers' Book of Windows for Homes! Unlike average "catalogs", written largely from the manufacturer's point of view, the Mesker Book of Windows for Homes is written *by an architect for architects*. It is filled with illustrations and information on trends in innumerable types of houses. It contains many valuable architectural renderings and helpful new ideas on window treatments. Most important, *ALL* the standard type windows shown in the Mesker Book of Windows for Homes you can definitely work into your plans *today*... with the assurance of *getting* them as soon as we resume manufacturing. Since paper shortage limits quantities, requests will be filled in the order in which they are received. That is why we urge you to order your copy today by mailing the coupon NOW. There is no obligation.

ore the war, Mesker's quality supremacy proved by this Steel Sash Merit Meter, ed on sworn facts from Sweets Catalog, wartime's precision experience will assure only as fine post-war Mesker Windows, much finer. And you can depend on that!

## MAIL THIS COUPON TODAY

MESKER BROTHERS, Dept. F-64, 426 S. 7th St., St. Louis (2) Mo.  
Without cost or obligation, mail me your Book of Windows for Homes.

Architect \_\_\_\_\_

Address \_\_\_\_\_  
(give Street Number or P. O. Box No.)

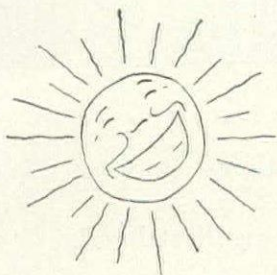
City \_\_\_\_\_ State \_\_\_\_\_

AF 64

Manpower shortages prohibit establishing a permanent mailing list. Please write for each book as it is announced.

**HOME WINDOWS**





**TO PLAN MORE  
WINDOWS FOR  
THEIR "DREAM HOMES"**

## ***WATCH WOODWORK!***

**H**OME builders of tomorrow want more windows . . . to bring light and cheer into homes . . . to increase the apparent size of small rooms . . . to add beauty and interest to both interiors and exteriors.

And because those windows must be weathertight—made especially to conserve heat and to keep out chilly drafts—wood is an ideal material. Stock windows of durable, toxic-treated Ponderosa Pine will more than ever be in demand. For such windows are pre-fit and pre-assembled...easy to install...economical to maintain...adaptable to all

types of design. Today, as we approach peace, Ponderosa Pine continues the research which has made wood so outstanding a building material in the past. For a practical view of the postwar building future, *watch woodwork!*

★ ★ ★

### **FREE—THIS GUIDE TO POSTWAR PLANNING**

Containing scores of suggestions and ideas of windows, doors, frames and woodwork, this booklet, "The New Open House," is a helpful postwar planning guide. Mail the coupon for your copy—it is yours without cost or obligation.



***Ponderosa Pine***  
**WOODWORK**

**THE BEST IS YOURS . . . WITH PINE**

PONDEROSA PINE WOODWORK  
Dept. ZAF-6, 111 West Washington Street  
Chicago 2, Illinois

Please send me a free copy of "The New Open House."

Name.....

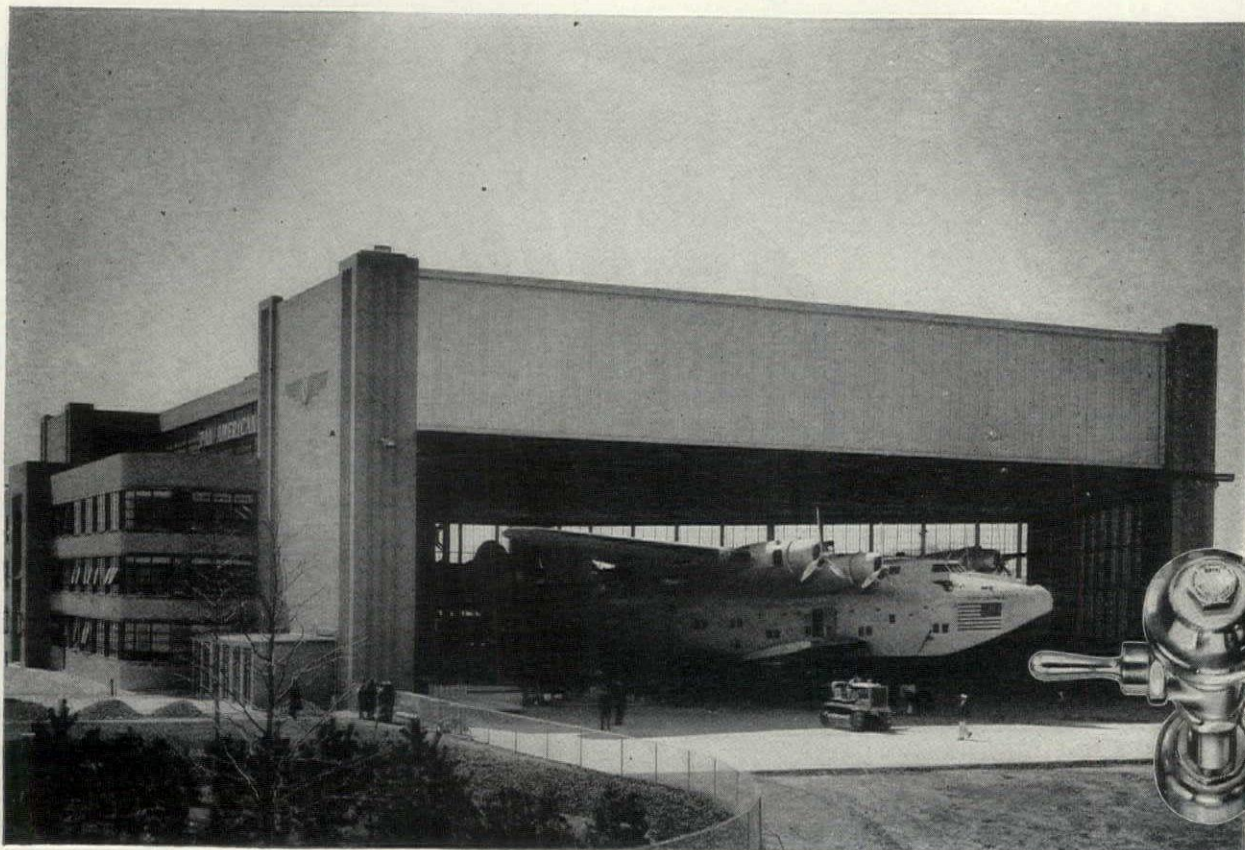
Address.....

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





## **PAN AMERICAN AIRWAYS— SLOAN EQUIPPED**



Sloan Flush Valves are installed in the Pan American World Airways' North Beach hangar at La Guardia Field and in their new office and hangar building at Miami—as well as in many of the buildings at Pan American's far flung overseas bases. Airway operators have long since learned there can be no compromise with safety or quality. Hence, their choice of Sloan Flush Valves—the brand which sells more than all other makes combined.

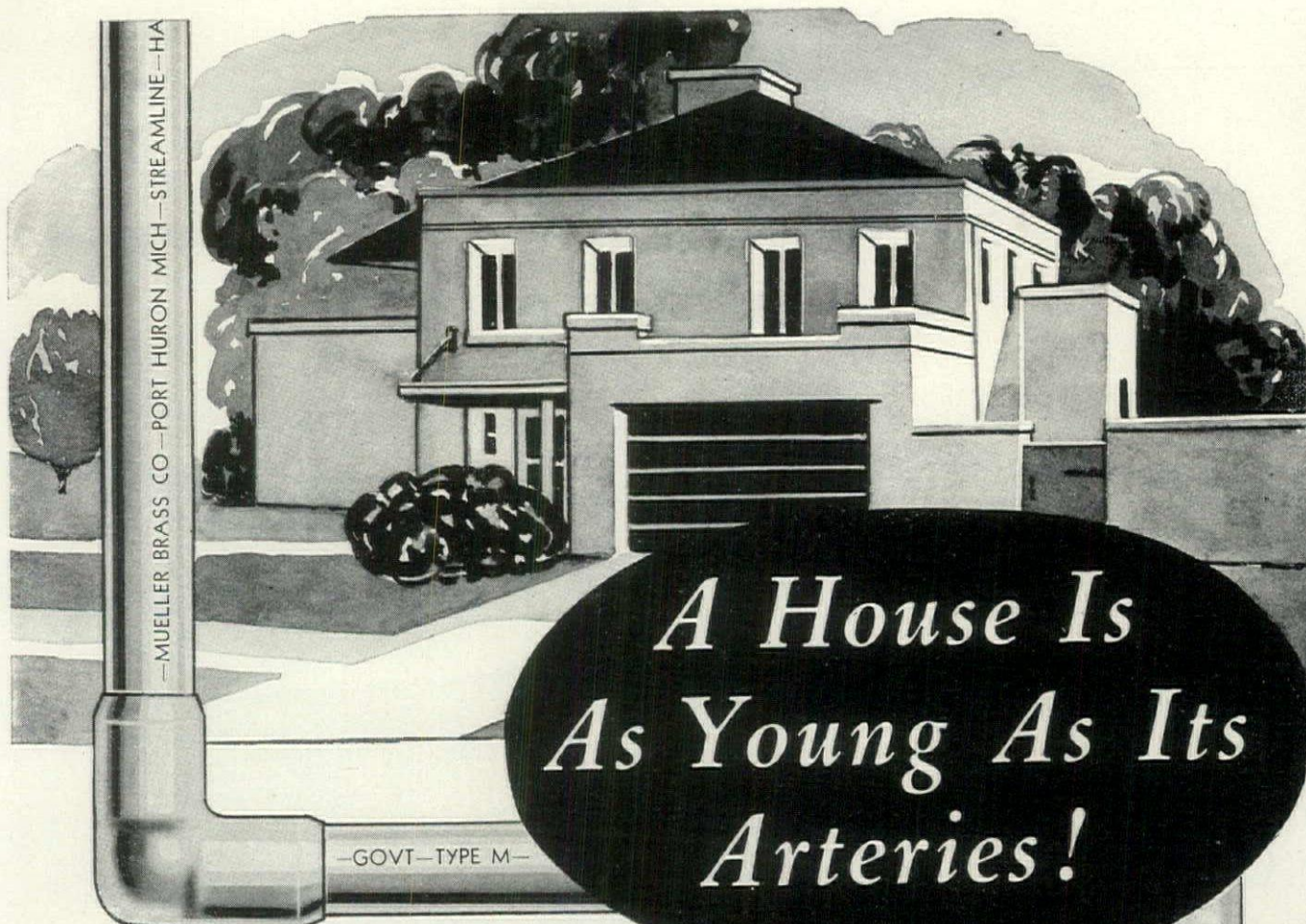


**SLOAN VALVE COMPANY**

4300 WEST LAKE STREET • CHICAGO, ILLINOIS

# **SLOAN** *Flush* **VALVES**





● Two residents may look alike, yet be actually as far apart as the poles in accomplishing the main reason for which they were built. ONE IS A HOME, while the other is "just another house." One contains the essentials for livability—for the promotion of convenience, comfort and continued efficiency, while the other does not. The real home has a reliable plumbing or heating piping system—the other has not. A building may be the last word in modern design with beautiful and modern bathroom and kitchen fixtures, but they are utterly inefficient if the arteries which supply them with hot and cold water are defective and unreliable.

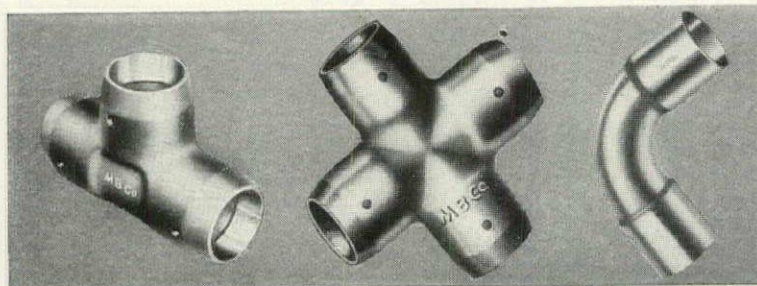
OF ALL THE SERVICE UNITS IN THE HOME NOTHING IS SO VITALLY IMPORTANT AS A RELIABLE PIPING SYSTEM—THESE ARE ITS ARTERIES—yet they are sometimes given the least consideration.

Equip the post-war home with the piping that is as modern as tomorrow—a STREAMLINE copper piping system that will be just as good on all the succeeding tomorrows as long as the building stands.

A STREAMLINE piping system cannot rust; it doesn't leak; it conducts hot water faster and with less heat loss by radiation than iron or steel pipe and—it costs but little more than rustable pipe, even in first cost—and over a period of years it costs a great deal less.

While you build the house, build your own reputation. Standardize on STREAMLINE for your post-war homes. It will pay you big dividends—it will help you move property faster.

HURON MICH—STREAMLINE—HARD—GOVT—TYPE M—



**STREAMLINE**  
PIPE AND FITTINGS DIVISION  
**MUELLER BRASS CO.**  
PORT HURON, MICHIGAN



YOU CAN

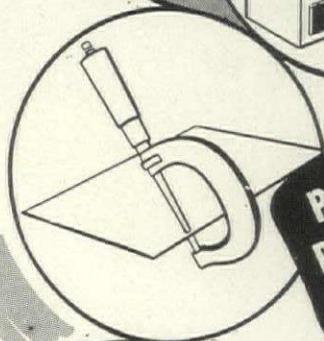
Expect More  
FROM

OIL-O-MATIC

EXPERIENCE



PRECISION  
PRODUCTION



LEADERSHIP



Experience is the priceless, indispensable factor that Oil-O-Matic will bring to the design and production of postwar automatic heating equipment. Experience that covers more than twenty pre-war years of world-wide leadership in the oil heating field. Experience that includes the additional know-how and skill acquired in special wartime assignments of the most exacting type. Experience that has thrice won the Army-Navy "E."

No oil heating laboratory can match Oil-O-Matic's more than twenty years of uninterrupted research. Oil-O-Matic engineers *know* the characteristics and heat potential of *all* fuels. They *know* the possibilities of the various heating systems—old and new. All of this knowledge, all of this experience is bound to show up in even greater efficiency and dependability, even more remarkable performance in the precision-built Oil-O-Matic products of tomorrow.

These Victory era Oil-O-Matic products will permit an even wider range of application. Their performance will merit the unstinted, continued confidence of architects everywhere. You can *expect more* from Oil-O-Matic.

THE BONDS YOU BUY TODAY  
ARE YOUR GUARANTEE OF A  
Better Tomorrow!

**WILLIAMS OIL-O-MATIC  
HEATING CORPORATION**

**BLOOMINGTON, ILLINOIS**



**WILLIAMS  
OIL-O-MATIC  
HEATING**





*Active  
America!*

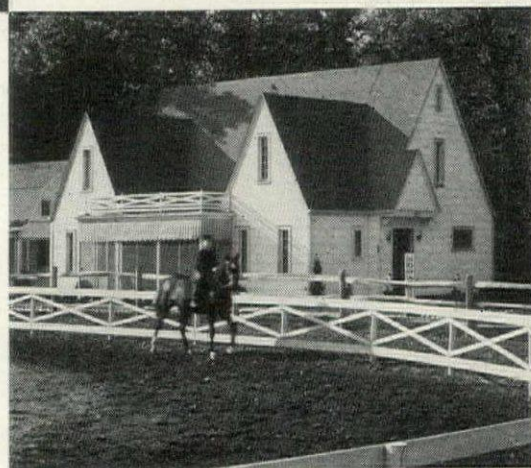
**.. WILL DEMAND MORE  
CABINET SHOWERS IN  
THE HOMES YOU PLAN  
FOR TOMORROW**

For golf and riding clubs, hotels and institutions, as well as homes, Weisways will be in big demand.

Shower bathing is the decided preference of active Americans as the healthful, *cleanly* way to bathe. Fulllest enjoyment of this modern bath is provided by leakproof Weisway Cabinet Showers, in which the bather may splash to his heart's content! Many thousands of new "converts" to shower bathing are now being made by Weisway Victory model installations in military establishments and war housing.

Exclusive Weisway features which won acceptance for these Cabinet Showers in homes of every size and price class, will again be available as soon as materials and manpower are released for civilian production. Foot-grip, no-slip porcelain receptor, precision manufacture and highest grade materials, are among Weisway quality features.

To put greater livability into homes you plan, remember *Weisway provides a complete, self-contained, additional bath in a 3-foot square, or less.* Henry Weis Mfg. Co., Inc., 602 Oak St., Elkhart, Indiana. (Est. 1876)



*Weisway* CABINET SHOWERS





## why you should specify KIMSUL\* Insulation



**1 It stops heat or cold!** KIMSUL blanket is one of the most remarkable heat and cold stoppers ever developed. Thermal efficiency: 0.27 Btu./hr./sq. ft./deg. F./in.



**2 Easy to install!** KIMSUL is easy to handle and install. Usually one man can do the job, making worthwhile savings in labor cost.



**3 Lasting protection!** KIMSUL is long-lived because of the materials from which it is made: wood fibers impregnated with asphalt.



**4 Economical!** Mass production makes KIMSUL's cost low. The exclusive compressed feature reduces storage, shipping and handling charges.



**5 Moisture-resistant!** KIMSUL blanket will float on water indefinitely, proof of its resistance to moisture infiltration through capillary action. Asphalt impregnation means lasting moisture resistance.



**6 Fire-resistant!** There is no insulation known that will make a wood frame structure fire-proof. But an insulation must not add to the possibility of a fire. KIMSUL meets this requirement because it is chemically treated to resist fire.



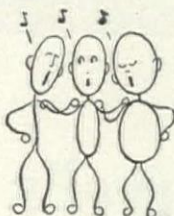
**7 Non-settling!** Once installed, KIMSUL does not sag, sift or settle. Rows of strong stitching, running the length of the blanket, hold it at the proper density.



**8 Light weight!** KIMSUL blanket is one of the lightest insulations known ... 1,000 square feet, Standard Thick, weighs only 128 pounds. Average density of KIMSUL, including asphalt-saturated cover paper, is only 1.45 lbs. per cu. ft. Thus, it is easy to handle and install ... adds negligible weight to structural load of building.



**9 Flexible!** KIMSUL fits in corners, tucks behind pipes, electrical wiring and other "tight spots" ... it is as flexible as a towel.



**10 3 thicknesses—4 standard widths!** KIMSUL blanket comes in Commercial Thick (nominally ½ inch), Standard Thick (nominally 1 inch) and Double Thick (nominally 2 inches) ... giving you choice of thicknesses to fit specific needs. Each thickness is available in four standard widths: 16 in., 20 in., 24 in., and 48 in. Also furnished on special orders in wider sizes to fit unusual requirements.



**11 Resists vermin, insects, fungus!** The materials of which KIMSUL is made—principally wood fiber and asphalt—do not offer any subsistence to insects or vermin. A chemical treatment makes KIMSUL resistant to mold and fungus growth.



### LOOK AT KIMSUL!

KIMSUL blanket is soft and flexible ... free from dust or harsh, irritating ingredients ... unusually easy to handle and install. Made of chemically treated wood fibers, impregnated with asphalt, KIMSUL is one of the best "heat-stoppers" known. Faced with a tough, water-proof covering, KIMSUL blanket resists rough handling ... gives an installation of outstanding neatness.



KIMBERLY-CLARK CORPORATION  
Building Insulation Division  
Neenah, Wisconsin

AF-644

- ☐ Please send me my FREE COPY of the new illustrated book "Save Man-Hours and Man-Power on Every Job".  
☐ Also have a KIMSUL representative call.

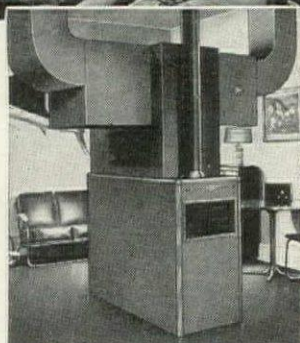
Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
☐ Architect ☐ Contractor ☐ Builder

\*KIMSUL (Trade-Mark) means Kimberly-Clark Insulation



Each room in our home has been transformed into a haven of delightful comfort. Windows are ever-closed, shutting out all outside jangling noises --- and my wife assures me the drapes and furniture will last much longer.

ing appetites have been



Another reason why

## Servel's New *All-Year* Gas Air Conditioner

is the next essential for the home of tomorrow

Year-round comfort indoors—no matter what the weather outside—is naturally the most important blessing bestowed by Servel's New *All-Year* Gas Air Conditioner. But there are additional reasons why users call it "The next essential for the home of tomorrow."

Besides supplying cooled, dehumidified air in summer, and warmed, moistened air in winter, the Servel *All-Year* Gas Air Conditioner makes homes quieter, healthier, cleaner. The "ever-closed windows" afford extra privacy, reduce danger from damage due to sudden summer storms. The removal of pollen particles, as well as dust, from the filtered air supplied by this system, affords

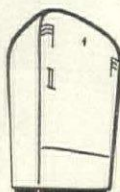
welcome new relief for asthma and hay fever sufferers.

So you can be sure your clients will want Servel's New *All-Year* Gas Air Conditioner in their post-war homes—and places of business, too. And you'll be able to give it to them. For it's been tested, proved, and acclaimed in more than 300 test installations all over the country. Mass production will begin just as soon as material and capacity are released from war work.

Write today for complete information on Servel's New *All-Year* Gas Air Conditioner, "The next essential for the home of tomorrow." Address Servel, Inc., Evansville 20, Indiana.

**SERVEL GAS REFRIGERATORS** are standard equipment in the nation's finest apartment houses

**SERVEL**



**Inc.**

*America's Leading Makers of Modern Gas Appliances*





**Stainless**—for consumer preference  
**Strip**—for volume production

In postwar homes, refurbished for better peacetime living, the beauty, strength and practicality of stainless steel will be widely engaged. New stainless products will be available—at lower cost—reflecting the production economies of Superior Stainless Strip Steel . . . furnished in long coils, of controlled composition, to your exact specifications.

**SUPERIOR STEEL CORPORATION**  
CARNEGIE, PA.

COPYRIGHT 1944, SUPERIOR STEEL CORPORATION

**Superior**  
STAINLESS STRIP STEEL



U. S. BULLETIN ★ JUNE

# EQUIPMENT CHECK-UP NEEDED NOW

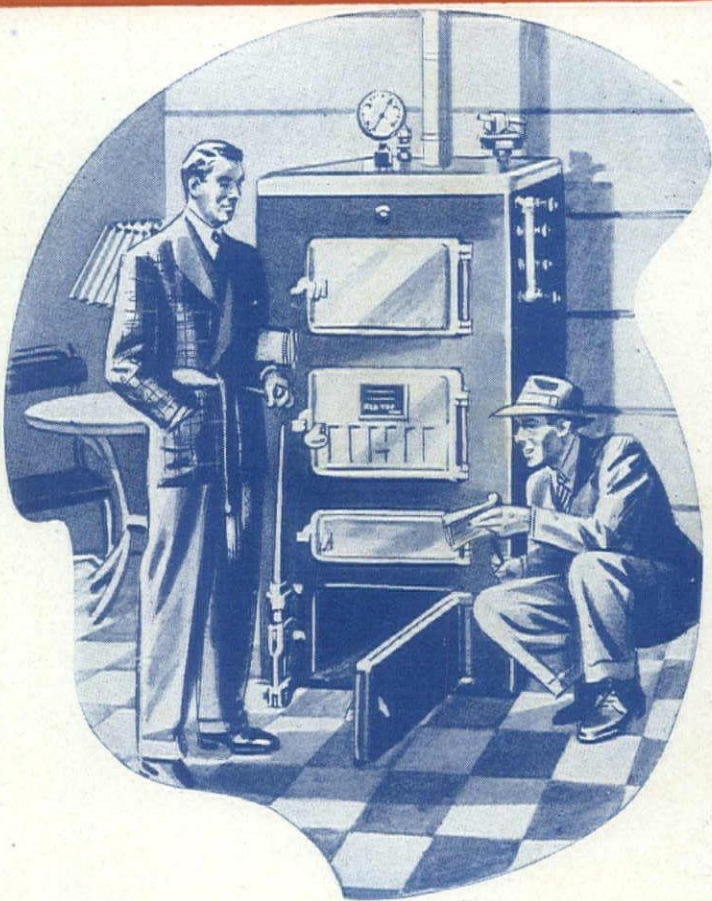
## To Meet Tighter Fuel Restrictions Expected Next Fall

Unless a miracle happens, within the next two or three months, consumers can expect still further cuts in amount of fuel available next season. This applies to both coal and oil.

The heating industry has been called upon to co-operate in every possible way with the National Fuel Conservation Program.

This means that all heating equipment should be checked over during the summer months and put in most efficient operating condition. Right now, U. S. replacement parts are available for all necessary repairs.

The tighter the fuel situation becomes, the more will users realize the advantages and economies of "Radiant Warmth" . . . and the efficiency of U. S. heating systems which insure MAXIMUM COMFORT with MINIMUM FUEL CONSUMPTION.



★ *UNITED STATES RADIATOR CORPORATION*  
AND  
★ **PACIFIC STEEL BOILER DIVISION**

**Detroit, Michigan · Branches and Sales Offices in Principal Cities**

## Manufacturing Plants At:

Member The Institute of Boiler and Radiator Manufacturers • Member of Steel Heating Boiler Institute



2 Veterans who  
are Helping...

# WIN THE WAR AGAINST WEATHER!



Since the Pilgrims landed, Pure White Lead has been the architect's ally in protecting American homes. Many a staunch old Colonial dwelling . . . designed with skill, protected with this honest material . . . has beaten off the attacks of the elements year in and year out — and still stands a monument to that veteran alliance.

So today, when even temporary buildings and barracks must stand up to the enemy elements, it is not surprising to find the Architect and Pure White Lead teamed up as usual.

And today the Architect recognizes in Dutch Boy, pure white lead at its stubborn best. Experience has shown him it makes paint that not only hugs tight and lasts long but doesn't crack and scale. Paint that not only does its work well but saves his customers the expense of burning and scraping when repaint time finally rolls around.

Thus, when an Architect specifies Dutch Boy Pure White Lead, he has a two-fold reason why it is his "First choice for making things LAST!"

\* \* \*

Today, Dutch Boy is available not only in the long-familiar PASTE form but also as the new ready-to-use Dutch Boy Pure White Lead PAINT. This comes in two special forms: (1) Exterior Primer for a first coat with extra sealing, hiding and covering power and (2) Outside White for an unusually durable finishing coat or for general painting. Together they set a standard for two-coat protection—even on new wood!



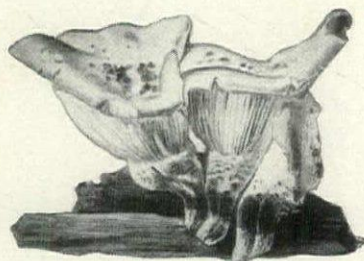
PASTE OR PAINT

NATIONAL LEAD COMPANY New York, Buffalo, Chicago, Cincinnati, Cleveland, St. Louis, San Francisco; Boston (National-Boston Lead Co.); Pittsburgh (National Lead & Oil Co. of Penna.); Philadelphia (John T. Lewis & Bros. Co.).

Specify

**DUTCH BOY PURE WHITE LEAD**





## HOW YOU CAN AVOID LENTINUS LEPIDEUS

Lentinus Lepideus is one of nature's milder-looking organisms. He's a wood-decaying fungus. Under his docile hide he harbors a savage hunger. He stuffs himself on wood to grow, in a very short time, from a microscopically small, wind-wafted spore into several pounds of parasitic giant . . . if he's given his own way. But "CZC" kills spores . . . resists development of decay.

Lepideus and his fellow fungous growths can't flourish on wood if it's pressure-impregnated with DuPont Chromated Zinc Chloride.

Decay resistance is only one of many advantages "CZC" offers. "CZC"-treated wood also *retards* fire. It repels termites. It is odorless, clean to handle, and paintable.

In addition to these modern advantages, wood treated with "CZC"

retains its ease of fabrication, natural beauty and many other age-old advantages which you have always associated with wood.

Specify "CZC"-treated wood for long service and low maintenance cost. E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Wilmington, Delaware.

**Invest in Victory—Buy War Bonds**

# DU PONT CZC

CHROMATED ZINC CHLORIDE

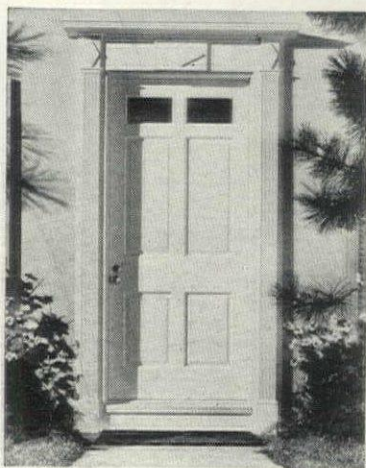
**Makes Wood Resist Decay—Repel Termites—Retard Fire**



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

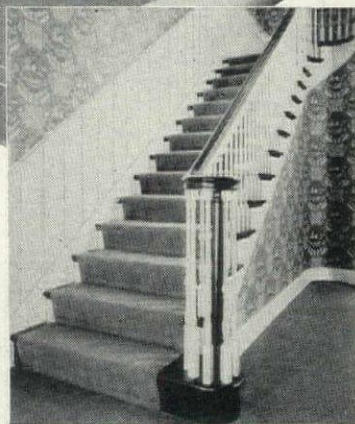


# Here's the Woodwork to Fit That Post-War Plan!



For a home large or small—for masonry, brick or wood construction—this new Curtis entrance provides dignity and charm—at low cost.

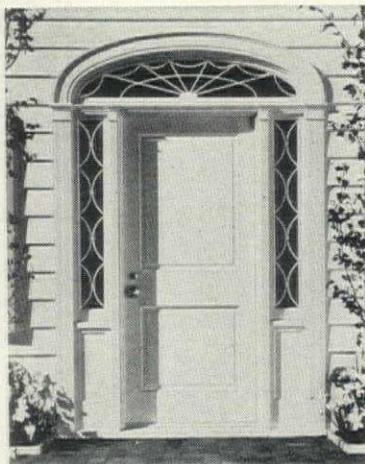
When those post-war home plans start coming off your boards again . . . here's the woodwork to fit them! It's Curtis stock architectural woodwork—in tune with today's trends. Authentic in design—yet low or moderate in cost! Here are just a few of the many styles in the complete Curtis Woodwork line, and there will be many new ones from outstanding architects.



Curtis stairways are made of stock parts. You are assured of correct architectural designing and sturdy Curtis craftsmanship throughout. Several style selections.

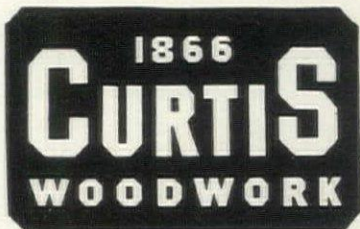
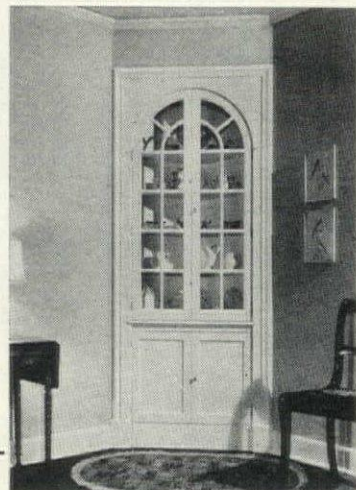


The warmth and friendliness of Ponderosa Pine is given perfect expression in this Curtis stock mantel—one of many Curtis designs for post-war housing.



Designed by a famous architect, this Curtis entrance presents stock woodwork at its best. Yet this is only one of the many authentically styled entrances by Curtis for homes of all sizes and types.

Curtis offers a complete line of beautifully styled built-in china cabinets for the small house where space is at a premium—or for larger, more pretentious homes as well.



Famous names in architecture helped design the line of STOCK Curtis Woodwork. You can put the results of this talent in the homes you build or remodel. And you can do it at a cost usually much less than that of special-made woodwork!

Curtis Companies Service Bureau,  
Dept. A.F.—6W Curtis Building  
Clinton, Iowa  
Gentlemen:

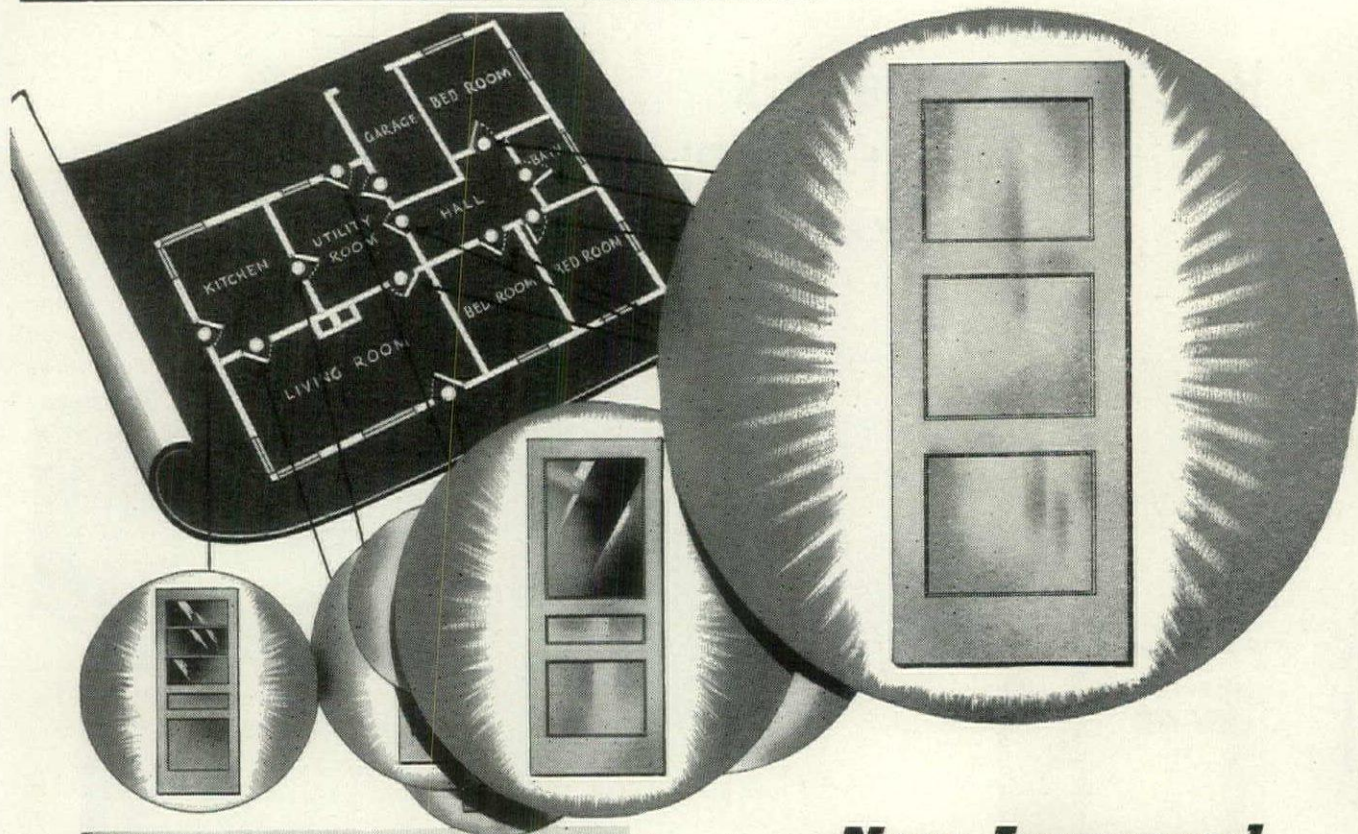
Please send me literature on Curtis Stock Architectural Woodwork and Silentite Windows.

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





## FACTRI-FIT

A NEW LINE OF DOUGLAS FIR INTERIOR DOORS OFFERING THESE ADVANTAGES:

1—Every door is grade-marked—easy to order, specify and supply. Ends all guess-work and confusion.

2—FACTRI-FIT doors are pre-fit, trimmed ready to hang. Slow, laborious trimming and fitting are eliminated.

3—FACTRI-FIT doors are scuff-stripped too, for protection in handling and shipping. Added assurance that every door will reach the job **READY TO HANG.**

FACTRI-FIT doors may be ordered completely machined at the mill—gained and mortised or bored by high speed precision tools. Savings on the job more than offset the slight added cost of FACTRI-FIT features.



\*Now available only for war needs and other essential building.

**FIR DOOR INSTITUTE**  
Tacoma Building  
Tacoma 2, Washington

## FIR DOOR INSTITUTE

Tacoma 2, Washington

## New, Improved DOUGLAS FIR DOORS\*

feature basic three panel designs for every type of post-war building

In post-war homes—and in other building—you can specify Douglas Fir interior doors with complete assurance that owner and builder alike will approve your choice.

There are three sound reasons why this is true.

**1** Douglas Fir doors are naturally durable, beautiful and architecturally correct, assuring your client a lifetime of service and satisfaction.

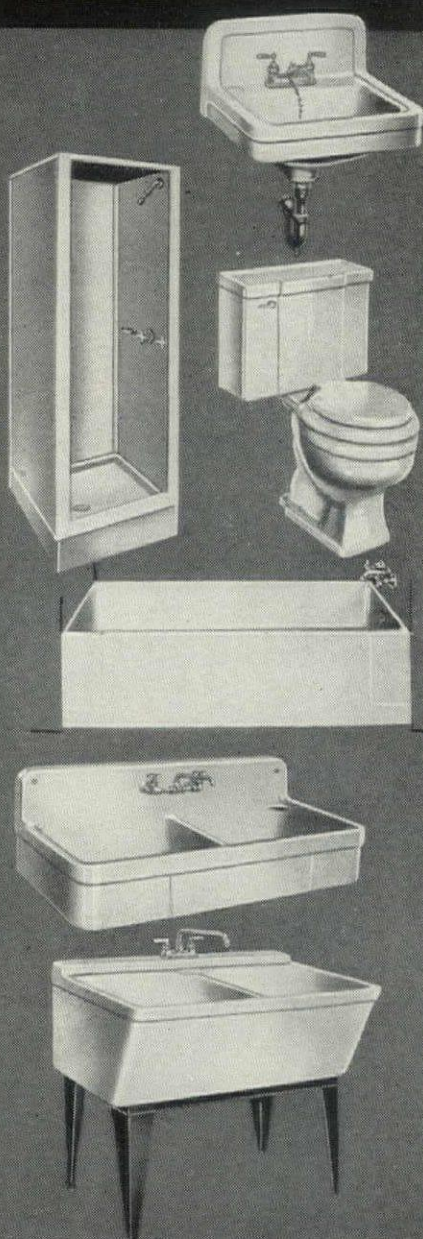
**2** Modern 3-panel designs are featured in the Douglas Fir line of interior doors—designs that make these fine doors adaptable to every home and all types of buildings.

**3** The new FACTRI-FIT line offers Douglas Fir interior doors pre-fit at the mill—trimmed and ready to hang. FACTRI-FIT doors save time on the job; because the sizing is done by precision machines, correct fit is assured.

Specify Douglas Fir Doors in your post-war planning. Write for catalog showing complete series of Douglas Fir interior doors, TRU-FIT entrance doors, and new specialty items.



# plumbing for today... plumbing for tomorrow



The fixtures shown here are available for today's construction needs

For the homes you are building today, Crane has developed a line of high quality fixtures made largely of non-critical materials. It includes bathtubs, sinks, water closets, lavatories and laundry trays.

For homes you are planning for tomorrow, the Crane postwar line will include new plumbing fixtures designed to suit the taste of tomorrow's home owners. Already these fixtures are past the planning stage and will be in production as soon as war conditions permit their manufacture.

Right now, through colorful national advertising, Crane is helping stimulate a desire for postwar homes. Your customers are being urged to start their planning today for their future home. An attractive portfolio filled with suggestions for bathrooms and kitchens is being sent to thousands of these home owners of tomorrow.

Be sure to include modern Crane plumbing fixtures in the bathrooms and kitchens of the homes you are planning. Prospects will recognize the high quality of your homes when the plumbing is Crane.

CRANE CO: 836 S. Michigan Ave., Chicago 5, Ill.



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Improvements in teaching methods are the result of common sense evolution. Our armed forces eagerly utilized the audio-visual aids that progressive educators had found so effective. Our schools, in turn, are learning valuable lessons from the gigantic U.S. film training program. The inevitable result will be—better teaching! ★ Today—all Ampro projectors go into the war program. But after D-Day—AMPRO will use its added skill to aid the evolutionary changes in teaching methods ★ School architects are urged to write for latest Ampro Catalog of 16mm. silent and sound projectors.

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# America's MAIN STREET will "dress up" after the war



ONE of the first things many merchants will want to do when building materials become available is to modernize their store fronts.

You'll find porcelain enamel ideal for this work. It creates a smart, colorful appearance that attracts people to stores, restaurants, theaters and other places. And this attractive light-weight facing material is quickly and firmly installed.

## HAS MANY GOOD POINTS

Since porcelain enamel does not fade, rust or wear off, and is easy to clean, its up-keep cost is low. A wide range of colors permits practically any color scheme

desired. Remember, too, that porcelain enamel is not fragile. It can withstand all but the severest of abuse.

For lasting satisfaction to your clients, specify that the porcelain enamel be fused on ARMCO Enameling Iron — for years the most widely used base metal for this exacting purpose. The American Rolling Mill Company, 1331 Curtis Street, Middletown, Ohio.

FOR EXPORT: THE ARMCO INTERNATIONAL CORPORATION



*HELP FINISH THE FIGHT — WITH WAR BONDS*



**HERE  
IT IS!**

## THE NEW **GLASS UNIT** FOR WINDOW INSULATION

THERMOPANE is a revolutionary new and patented windowpane with permanent, built-in insulation. It is a factory-built transparent glass insulating unit for homes and other buildings . . . a development of Libbey·Owens·Ford Research that will accelerate the incorporation of larger windows and Daylight Engineering in the homes of tomorrow.

THERMOPANE is made of two panes of glass, separated by an insulating layer of air, and sealed around the edges at the factory with a patented metal-to-glass bond. It's installed in a modified single sash just like a single pane of glass, but it provides double-glass insulation. The homeowner has no extra glass to put up and take down, no extra glass to keep clean.

But most important, the age-old cold weather problem of larger windows is now eliminated. Thus the homes of tomorrow can be designed and built with windows that flood the interior with daylight, that open every room to the beauty of the out-of-doors. For a descriptive booklet, write Libbey·Owens·Ford Glass Company, 964 Nicholas Building, Toledo 3, Ohio.

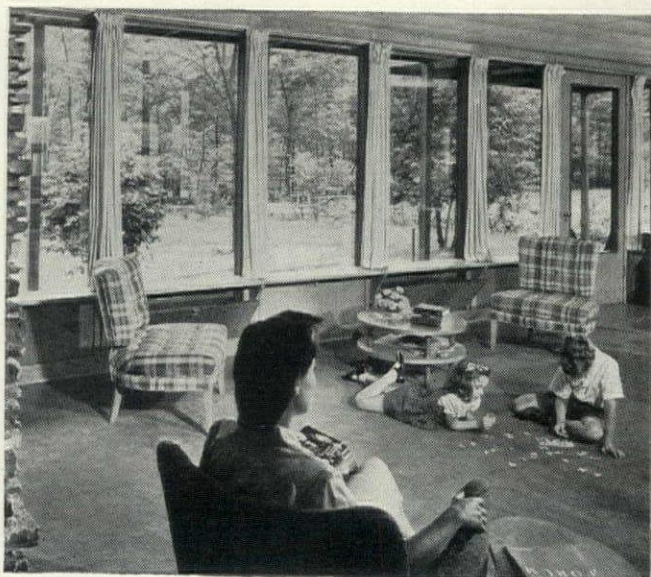


**LIBBEY·OWENS·FORD**  
*a Great Name in* **GLASS**



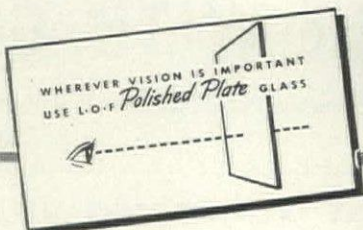
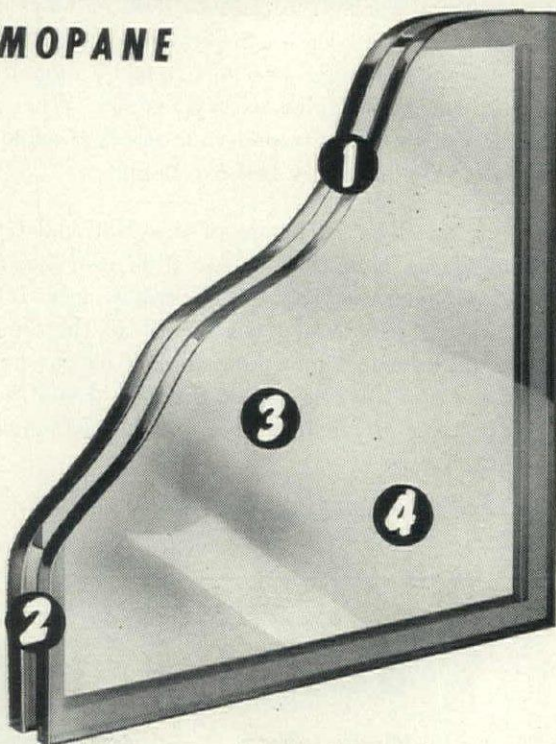
# Thermopane

with the **BONDERMETIC SEAL**



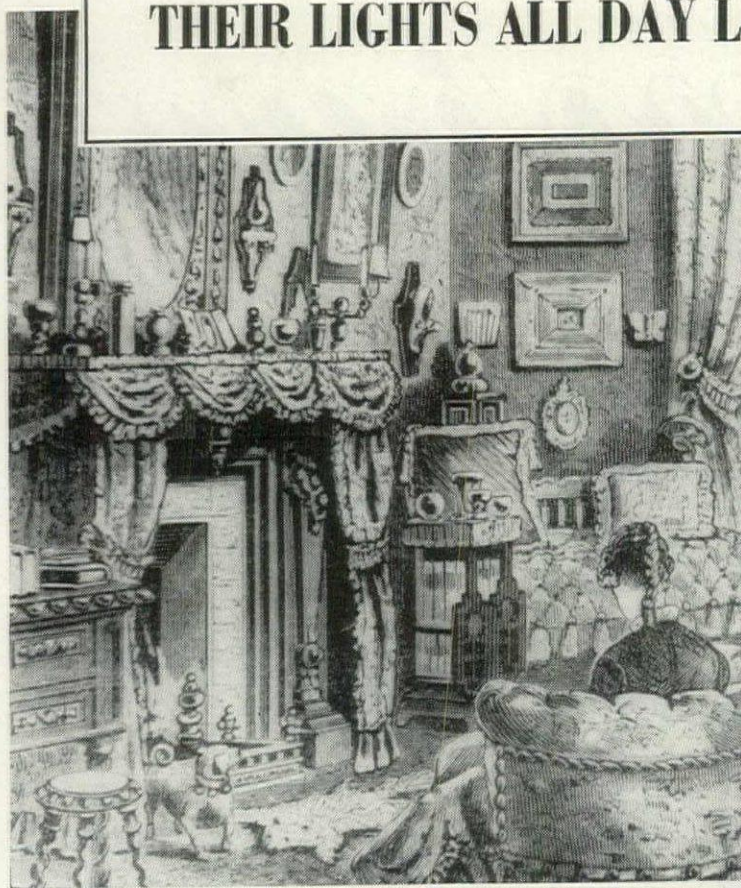
## 4 IMPORTANT FEATURES OF THERMOPANE

- 1 INSULATING AIR SPACE.** The air inside the Thermopane units is scientifically cleaned, dried and hermetically sealed. This layer of air gives Thermopane its high insulating efficiency.
- 2 BONDERMETIC SEAL.** This remarkable metal-to-glass seal permanently bonds the two panes of glass into a single unit. Strong and weatherproof, it seals the insulating air space from dirt and moisture.
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- 4 ONLY TWO SURFACES TO CLEAN.** The inner glass surfaces are specially cleaned at the factory . . . always stay clean.





## NO WONDER THEY HAD TO BURN THEIR LIGHTS ALL DAY LONG!



*Courtesy Bettman Archives*

**R**OOMS decorated in the late 1800's always look as if there had been a conspiracy to make them just as stuffy and gloomy as possible. In fact a room like this was tops in style fifty or sixty years ago! What a contrast to the gay, bright, modern interiors possible today with Gold Bond Sunflex DeLux Paint!

Actually the light reflection of this National Gypsum product is so high that to use it is just like adding windows! Yet there isn't the trace of a glare. It comes in a full assortment of pastels with all the true color values preserved. There is no film of oil to cloud the tones or cause them to yellow with age. Even the most delicate tints are definite and full bodied, highly resistant to fading.

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## THE MONTH IN BUILDING . . . NEWS

New York's Housing Week makes slum clearance everybody's business (page 60-61) . . . Henry Kaiser launches his first factory-built house model (page 62) . . . Housing loans for veterans snarl in Congress (page 118) . . . Brewster "stay-in" spotlights \$5,000,000 ghost town (this page).

## PRE-INVASION MONTH

In the pre-invasion month of May the Army made housing news by stepping up production of heavy artillery. Ordnance plants, first to get into production and first to slow down, swung into schedules increased as much as 500 per cent for some types of weapons. Busy wheeling portables out of ordnance producing areas, the National Housing Agency made a quick reverse.

Cutting back Corsair production, the Navy made housing news of another kind. The "stay in" protest against contract termination staged by 3,300 United Automobile Workers at Johnsville, Pa. focused attention on what UAW called the "most luxurious ghost town of World War II." Everybody agreed that the \$5,000,000 permanent project for workers at the Brewster Aeronautical plant is one of the best-built, best-looking war housing jobs the government has turned out. But, with room for 1,200 families, the elaborate community so far has only 160 tenants.

The Federal Public Housing Authority, which finished construction in March, could see not more than 300 tenants in sight, said 900 units would be padlocked. The National Association of Home Builders was horrified to discover "on reliable authority" that refrigerators and ranges would be shut up in the stand-by units, but regional FPHA officials denied that houses not expected to be rented this summer were so equipped. The Brewster UAW local contended that the housing community, which included stores and a sewage and water plant, was not needed at any time, called it the "paternalistic" brain-child of the Navy-installed plant president who preceded Henry Kaiser. FPHA also promptly tossed the ghost town to the Navy for explanation, said the Navy had over-ruled its strong protests against permanent building.

**Tag Ends.** Slicing \$45,000,000, earmarked for hurry-up housing for Naval personnel, from the National Housing Agency's current bid for more Lanham Act funds, the Budget Bureau said NHA might ask Congress for only

\$15,000,000, enough to cover about 4,800 temporary units.

By summer's end, operative builders would have put up another 18,000 houses, finished their part of the war housing job. The \$100,000,000 extension of FHA's Title VI insurance authority now before Congress would last through September; after that, only a go-ahead for some nonwar construction could keep housebuilders in business.

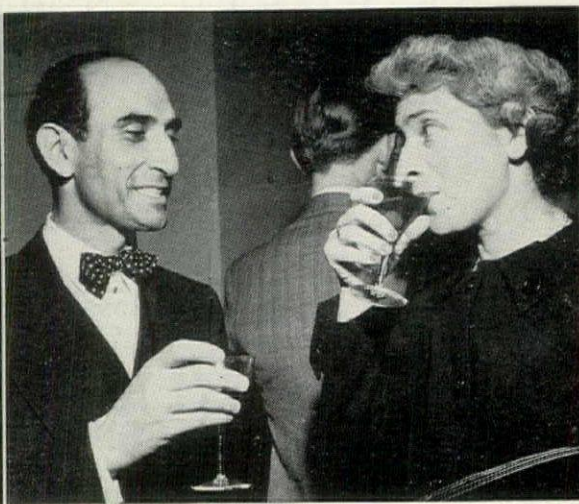
Reporters dropping in at a Lanham Committee session picked up the hopeful notion that nonwar housing would soon be underway, pinned their stories on NHA counsel Leon Keyserling. Few had understood that \$10,000 prize-winner\* Keyserling, asking the committee to OK use of Lanham Act funds for processing nonwar housing priorities, was talking only about "hardship" cases.

**Beginnings.** Next to D-Day, Britishers talked most about the all-steel house with which the government planned to supply a half-million heroes. U. S. Steel silently pondered its prefab plans, and Henry J. Kaiser went to work on his first model of an "individualized" house designed for factory building. In New York, Metropolitan Life took title to 135 properties in the 18-block site it has chosen for Stuyvesant Town. Since its contract with the city is already signed, Met was not much worried about the law passed by the City Council which would ban racial discrimination in any future projects of this kind.

In Washington, choleric Congressman Frederick Smith (Rep., Ohio), to whom slum clearance and Communism are regrettably synonymous, put on a show for the National Assoc. of Home Builders. Said he: "Karl Marx would smile in his grave if he could be apprised" of present public housing schemes. The Congressman might like to try the plastic ultimate advertised by New York's Gimbel Bros.—an all-plastic ouija board, all yours for \$1.69 and washable.

\*Keyserling won second place in the Pabst Postwar Employment Awards. Another award went to Leo Grebler, Federal Home Loan Bank Administration; 10 out of 17 winners were employees of federal agencies.





**HOUSING WEEK** chairman Loula Lasker, Council head Harold Buttenheim greet Producers' Whitlock. Sklar, who gets Edward Weinfeld's congratulations.

**COUNCILMAN** Stanley houser Maxwell Trett

### EVERYBODY'S BUSINESS

On the notion that housing is everybody's business, New York's vigilant Citizens Housing Council set aside a week in May to make it easy for everybody to look into the matter. With vacancies in moderate-priced housing shrinking to zero, with a half-million of the city's families living in homes "unfit for a community of civilized human beings", there was plenty for New Yorkers to think about. And from displays in midtown store windows to deep-thought meetings all over Manhattan, there was plenty during Housing Week to help New Yorkers think.

Whether at the "farewell-to-slums" block parties at public housing projects, the housing film shown at all Loew's Theaters, or the specialists' panel probe at the Museum of Modern Art, the story was the same: Postwar housing need would be enormous. To meet it, private enterprise would have to build for more than the 50 per cent of the population it now serves; public housing must be supplied for all the rest; basic neighborhood planning must tie both parts of the rehousing job into a sound future for the city.

Looking back over 10 years of work, the New York City Housing Authority could point to 50,000 slum units demolished, rehousing for 17,000 families at monthly rents averaging \$5 a room, and postwar plans that would take care of another 17,000. At this rate, as the Council dismally observed, all underhoused New Yorkers could look forward to decent homes by the year 2110. But while spread of housing opinion was as wide as usual on every other point, there was one firm agreement: New York and the nation could not wait 166 years for good citizens.

**Swat at Planners.** In addition to the substantial dent which it certainly made in public consciousness, Housing Week also supplied a number of New York's more articulate citizens with a welcome opportunity to take a verbal poke at the city's much-touted billion dollar bagful of postwar works (see pages 87-89). City Councilman Stanley M. Isaacs was the most outspoken. "Apparently," he mourned, "we have a city planning commission today which is willing to pass on projects at a high rate of speed, but which is not willing to study first the future of the city and what the broad underlying pattern should be."

Unimpressed was Isaacs by the lavish display of postwar works at the planning commission's ambitious Park Ave. exhibit, which he said represents "a huge number of costly individual structures with no attempt to combine buildings, no effort at neighborhood planning." The city, he thought, could never afford to carry through much of the program. Functional combination of public buildings "would mean enormous savings in construction, enormous savings in annual maintenance costs."

**Democratic Planning.** Long-range viewer Joseph Hudnut, dean of Harvard's School of Design, saw New York's plan-

### FIFTH FREEDOM

Britain's Holliday, Belgium's Fonck, Russia's Yakovlev (l. to r.) told a Citizens' Housing Council meeting how their countries are working to achieve freedom from slum living.



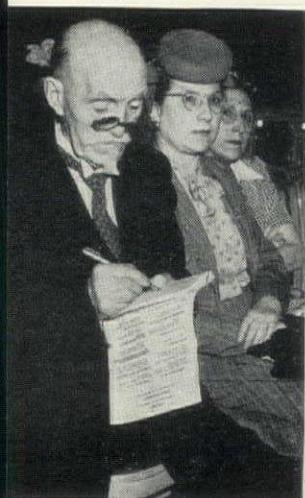
Said Anatole A. Yakovlev, member of the Soviet Consulate in New York: "Our aim is to bring to the village all the conveniences of the modern city and to enrich the city with those of the village."

Charles M. Fonck, executive director of the Belgian Commission for the Study of Postwar Problems: "Local low-cost housing associations provide a system whereby the Belgian laborer owns his own home."

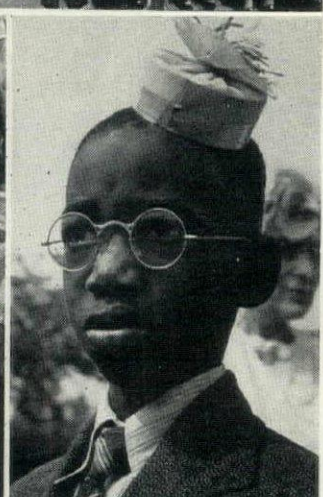
"We don't have the worst slums in the world—only the most publicized," said L. G. Holliday, British vice-consul in New York. "The aim of the government after the last war as announced by Mr. Lloyd George was to provide homes for heroes. Unfortunately, with many of the homes you had to be a hero to live in them. The chief present aim is to provide sound, comfortable, attractive homes."



erhoused half-million.



ION meeting attendee Bronx  
owner Honoré Jaxon.



**HARLEM RIVER HOUSES** turn out to hear the Rev. Adam Powell, who may be New York's first Negro representative in Congress (upper left). Tenants proudly display healthy children born in project.

ning problem in broader terms:

"We know that autocrats can plan, that Tammany hall can plan. But three things are necessary for democratic planning:

►Discontent: the people must be made to feel the burden, the cost; they must know the meaning of disorder; they must know the city is badly planned. For this you need an agitator.

►Faith in the democratic process. Very few people in New York City do really believe in it. Democracy is not just the rule of the majority, it is a kind of ethical conduct that must be implemented. You can't get democratic planning from Washington—in the end its processes are paternal. You won't get democratic planning from big industry, which wants chiefly to spend money on improvements. You won't get democratic planning from bankers or from the Metropolitan Life Insurance Company or from your exotic Commissioner of Parks.

►Planning instruments: laws, institutions, and men able to use these instruments in the public interest. You've got to have politicians.

"In New York City you have agitators and propagandists and politicians—and therefore some day you may have a democratic plan."

**Out of Harlem's Ghetto?** Sparked by the fiery rhetoric of the Rev. Adam Powell, whom Harlem may choose as the first Negro to represent New York in Congress, a Saturday afternoon gathering at Harlem River Houses pointed up the urgency of the Negro's stake in tomorrow's housing solution. Powell's powerful voice echoed beyond the Harlem meeting. It was the voice of the Negro "tired of knocking at the back door of economic opportunity, tired of being studied by commissions, tired of politicians riding to fame on his back, tired of paying 20 per cent more for rent and for food than his fellow Americans." Said the ablest spokesman Harlem has boasted in many a day: "We know that from river to park we are living in a ghetto. We are fighting to get through and someday we will. Meantime, let's make this the cleanest ghetto that man's inhumanity ever forced man to live in."

That Harlem River residents had already reached the latter goal was clear with an award from the United Tenants League recognizing the project as first in the city in "maintaining the cleanliness and beauty of buildings and grounds."

**Doctrines and Doctrinaires.** Professionals had their own field-day at the Citizens

Housing Council meeting, held in the unslum-like Cosmopolitan Club. A crowded program stretched through a long afternoon and evening, left even the most vocal winded. Back of the platform abstractions was concrete reality: the 100,000 New Yorkers who would sleep that night in windowless rooms, the 500,000 families who live in old-law tenements, the naked evidence of Manhattan's need. These were the hard facts that would ultimately test the solutions earnestly offered, earnestly opposed by housing thinkers.

Chairman of Philadelphia's Housing Authority, Roland R. Randall, one diligent worker in the real-estate vineyards who believes in public housing, saw it as a "beachhead from which to attack the devastation of blight."

National Association of Housing Officials' Hugh Pomeroy urged retention of the right of eminent domain. "The public must retain the right to redesign neighborhoods as they become obsolete."

Realist Lee F. Johnson, National Public Housing Conference crusader, reminded that there is no cheap way to accomplish slum-clearance, but saw one clear choice: "Shall it be done at the expense of the taxpayer for the benefit of a few property owners in the form of publicly supported profits, or



shall it be done at public expense at cost, for the benefit of those who are rehoused from the slums?"

Producers' Council president, Douglas Whitlock, looked at the whole housing question through apparently non-shatterable rosy spectacles, thoughtfully provided some months ago by the PC market analysis committee. "Many advocates of government-built dwellings for the needy," he said, "overlook the fact that the problem of providing housing for this segment of the population will by no means be as great as it has been made to look." Full postwar employment, forecast by "competent sources," would mean that "there will be comparatively fewer families unable to pay adequate rentals."

New York real-estate dealer James Felt urged aids that would harness the resources of the little builder back of the rehousing job. "With four square miles—20 per cent of Manhattan—designated by the planning commission for rebuilding, it is obvious that public housing can cover only a small sector."

Edward Weinfeld, formerly New York State's commissioner of housing, thought it was time to give some close attention to the housing no-man's land of the white-collar, middle-income groups. Full use of state credit was Weinfeld's answer. "If the state loaned its funds both to private housing corporations and to housing authorities at the same rate of interest at which it borrows, the result would be a rent differential of \$2 a month per room."

## KAISER CHALLENGE

Henry J. Kaiser's first challenge to the conventional housebuilding industry will go up in Portland, Ore. early in June. Convinced that housing demand in 194X will give the factory-built house its first real chance, Kaiser is



EDGAR KAISER

putting his production engineers to work on analysis of an experimental model. This means that he is in round one of the conquest of the mass-produced house—the design job. Next two rounds, according to his own outline: production engineering and mass selling.

Kaiser, whose confidence in a postwar world bursting with production miracles is equalled only by his interest in having a hand in a half-dozen of them, is seeking no standardized, "crackerbox" housing product. Factory

production of such a minimum house, he is quick to point out, holds few problems, but building individualized houses on an assembly line is quite another, tougher matter. Kaiser is aiming at perhaps 50 different types of panels adapted to repetitive manufacture, which will be joined together according to a variety of floor plans. Variation of color and exterior finish will also help to give houses a custom-built look.

Although Kaiser says he has been thinking seriously about producing a prefab house "only for about a month", his interest in housing got a big push ahead from the model postwar community designed around the Richmond, Calif. yards by manager Clay Bedford. Like other big industrialists before him, Kaiser was lured by the notion of building a dream city, and Bedford went to work on a factory-built house that would fit into the scheme. Kaiser's son, Edgar, took a look at Bedford's plans, contended he could do better. A firm believer in competition—"We did the same thing in shipbuilding and got good results"—Kaiser set Edgar and Bedford against each other. First to build an experimental model, Edgar is leading in round one.

## DISH WASHING'S END

Restive William Bushnell Stout has dedicated his life to the notion that there is a better way of doing practically everything. Inventor Stout, first to demonstrate that it is better to build a plane in metal than in wood, early to preach the industrialized house, has recently given some attention to the homely chore of doing the dishes. In the portable, fold-up house which many Americans may live in tomorrow it will be possible to wash dishes merely by folding up the dinner table.

Tomorrow's table will be a mirror in the wall, fold down at mealtime. "The dishes," Stout said, "are built right into the table. When you're through eating, just flip the table back into the wall. Press a button and soap and water turns on inside the wall and washes the table and the built-in dishes all at once. The garbage tumbles down a hole into an incinerator."

There is already a model of this housewife's dream, and Stout says the design will be incorporated in the \$3,000, expansible house which Palace Corp. expects to sell by the thousands in the postwar market. Postwar buyers can also look forward to a Stout-designed sleeping machine, probably born of the inventor's reluctance to waste



STOUT: a riotous imagination

eight hours in sleep. In this cupboard bed, the sleeper will need neither pyjamas or covers, will get an ultra-violet bath. Electrical devices will automatically adjust temperature and air of the sleeping cabinet to changes in the sleeper's body. Fully refreshed after three hours sleep, the user will salvage a lot of extra time for living, may choose to spend it in driving around in the \$1,750 metal-plastic sky-car, with which Stout also expects to provide him. "In these days," Stout advises, "you can't afford not to let your imagination run riot."

## U. S. STEEL (cont'd)

U. S. Steel, with a becoming corporate caution, is making no booming promises about the factory-built house which it expects to present to the postwar world (see ARCH. FORUM, May, '44). But Building men, long alert to what big capital might mean for the industrialized house, were convinced that the firm's recent acquisition of a "substantial" interest in Gunnison Housing Corp., largest of U. S. prefabers, is anything but a dubious research gamble.

U. S. Steel has, of course, long flirted with the factory-built house and put a panel-built steel house on the market in 1939, which found its major market in the quick-building programs of the Army and Navy. While the Corp. had a good deal of faith in this house and is undeniably impressed by the British government's confidence in a steel prefab solution (see pp. 90-96), it is now engaged in the interesting feat of bending over backwards to convince anybody concerned that the house which may emerge from its current undertaking will not inevitably be an all-steel house, may not even be a half-steel house.

This frame of mind is welcome to prefabricator Foster Gunnison, who has long preached that a prefab house must be more than a gleam in a material manufacturer's eye to become an industrial-



ized house. Determined to rise as far as possible above the research handicap of a point of view geared firmly to its basic product, the Corp. is careful to make clear that steel will be used in any house it backs only where steel can meet design, utility and cost requirements better than any other material. Since the steel industry may face, according to the American Iron and Steel Institute, a one-third curtailment in output in the postwar period, it is natural enough for the Corp. to hope that steel's rating on all these requirements will be high.

While U. S. Steel is also interested in a wide market for steel kitchen units, it denies earnestly that it has any intention of invading the bathroom equipment field. But, as the British government's model house demonstrates, an integrated all-steel combination bath-kitchen unit is a long step indeed towards the house that can be completely built in one factory.

Inquiries from all parts of the world about its 1939 panel-built house bolster the Corporation's confidence in the possibilities of an export market. If, happily, the factory-built house should turn out to be in large part steel, the Corp. reminds that small maintenance cost, safety from fire hazard would be selling points as good in the Russian steppes and Chinese plains as in U. S. rural districts. A world-wide network of factories to produce such houses is well within U. S. Steel's potentialities.

## CONSUMER'S VOICE

Demand for homes is running ahead of consumer demand for durable goods and appliances, according to the Office of Civilian Requirements' third nationwide survey. One out of every ten families interviewed by Census Bureau tabulators said they were ready to buy or build a new home as soon as materials are available. OCR estimates that its spot-check, which covered 4,500 families selected as representative, points to an immediate postwar demand for 819,000 houses. This would run close to the record year of 1925 when 935,000 houses were built.

Planning for home purchase showed small variation regionally, with demand in the South and West running only slightly ahead of demand in Northeast and North Central sections. Thirty-six per cent of the families anxious to own homes said they expect to pay from \$3,000-\$5,999 for them. Twenty per cent expect to get a house for under \$2,000.

Among eleven appliances covered, washing machines are now in greatest demand, with electric irons and mechanical refrigerators a close second and third. Next, in order of preference:

stoves, electric toasters, radios, sewing machines, vacuum cleaners.

## RUNAWAY MARKET

War workers will soon see an OWI movie with a new moral. "Skirmish on the Home Front" is the most direct way the government has yet found to advise the nation not to buy a home until after the war. For months Federal Home Loan Bank Commissioner John Fahey has solemnly warned mortgage lenders against inflated appraisals. For months federal economists have viewed with alarm the threatened runaway in real estate prices. But with plenty of money seeking investment, few lenders wanted to hear the government's good advice. Maybe, thought OWI, the consumer himself would listen. OWI's punchline: the older house now on the market will be outmoded by a postwar dream house.

There was little doubt that shortage of rental housing in crowded war centers was the key to the high tide of home sales. The National Association of Real Estate Boards, taking its 42nd look at the real estate market, estimated that 77 per cent of current sales are for the buyer's own use. Selling prices, NAREB said, are higher than a year ago in 88 per cent of the 376 cities covered by its survey. NAREB also found the most general shortage of dwelling space on record.

Present volume of home purchase may be the clue to the bearish outlook on postwar home building expressed by the local real estate boards participating in NAREB's survey. Muttering gloomily about the "wishful thinking" responsible for the "huge estimates of housing to be built in the postwar period", NAREB said its member boards set house production at an average of 300,000 annually for the first 10 postwar years—or one house for every 277 families.

## LOAN BOOST FOR HOME OWNERS

Determined to whittle some of the dead wood from our antiquated home mortgage system, the United States Savings and Loan League last month proposed a loan plan which it believes will go far to help Americans on the road to home ownership. Marking the most realistic look lenders have yet taken at some of the obvious bumps on this long road, the standard US Loan, if approved by member associations, will establish these new contract rights:

►After three years, the borrower may lapse payment for six months merely by giving notice of financial distress.

►He may prepay without penalty and have prepayment charged against any later lapse.

►If he moves, he can expect the lender

to assume responsibility for managing his property.

►His interest rate will automatically decrease by ½ per cent at least three times during the life of the loan.

►He will need no refinancing, since he can apply under his original note for additional advances to cover equipment, repairs, modernization.

►He may defer payment on a construction advance until he occupies the house, or for a maximum of six months.

Promising a major reshuffling of equipment financing practices, the plan for additional advances under the original mortgage would cover replacement of ranges, refrigerators, etc. As mortgagee, the loan association would be in the best possible position to pass on the credit risk involved.

Also to be incorporated in the US Loan are these features, already standard practice in some institutions: maximum percentage of loan to value; terms up to 20 years; interest charge on unpaid balance only; monthly budgeting of taxes and insurance; prompt commitment, closing and disbursement.

Playing its hunch that the operative builder will account for the biggest share of a big postwar business, the League hopes to extend him a special helping hand. No longer will the builder have to pay high prices for temporary financing. A lender using the US Loan plan will make a blanket mortgage on a large housing project, disburse funds as building proceeds, release individual homes from the mortgage when completed and sold. No payment on the loan will be required until the project is finished.

## NHA FUTURE

Senator Robert A. Taft (Rep., Ohio) has a lot of housing questions to which he would like to have answers. Senator

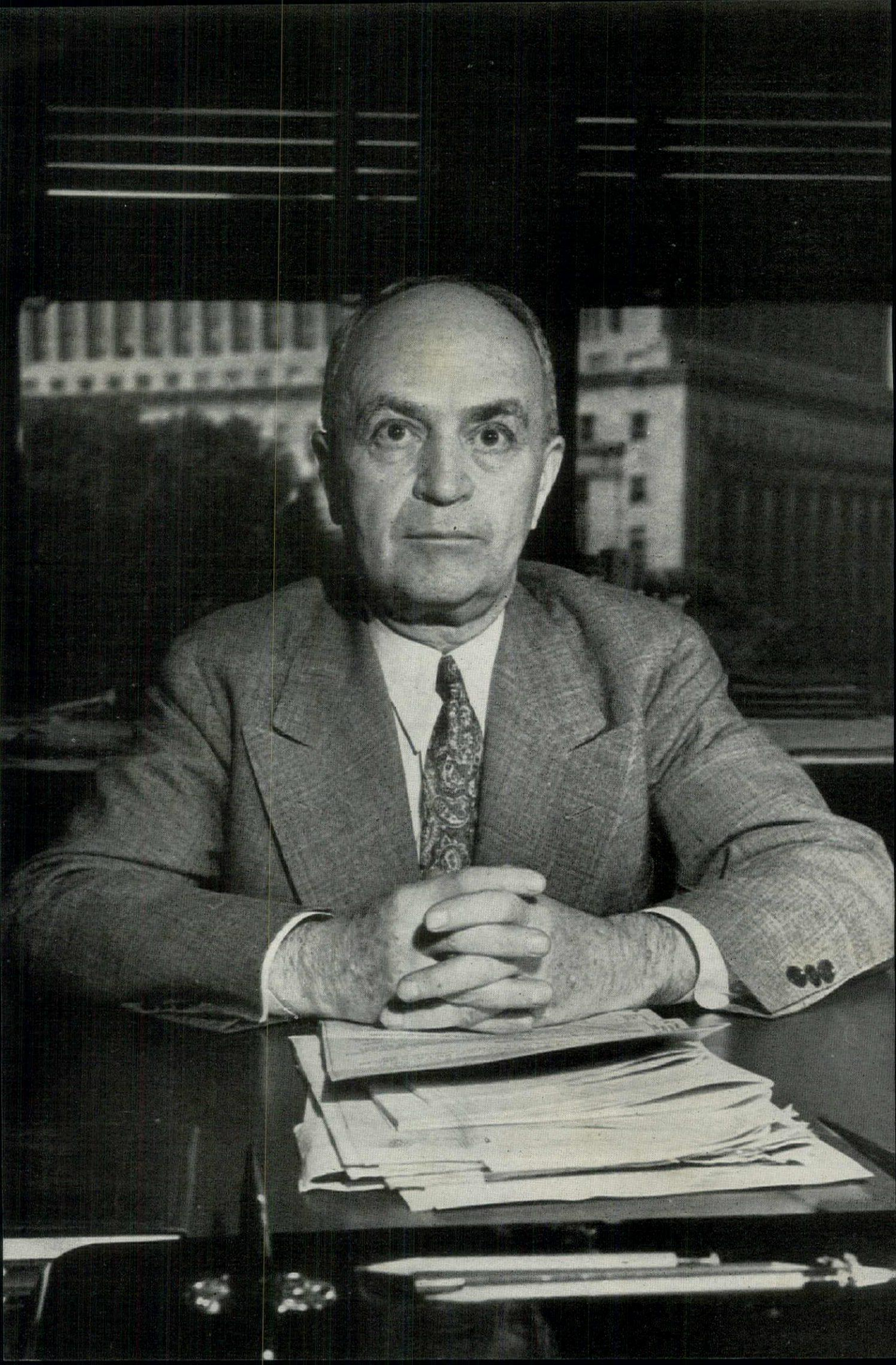
(Continued on page 114)

Charles Phelps Cushing



**Nobody can pick up** New York's new bus stop signs, installed by the police department. Reason: thieves had found lighter, waist-high signs handy for smashing shop windows.







# AN INTERVIEW WITH ABNER FERGUSON

Main hand at the helm of the Federal Housing Administration throughout the war housing program, Commissioner Abner Ferguson has had prime responsibility for giving U. S. housebuilders the support they needed to do the biggest, quickest job in history. Looking at the even greater postwar challenge, Mr. Ferguson answers THE FORUM's questions, giving his personal view of how FHA can help the industry reach the broadest possible market.

**1. Do you favor the retention of any part of the Title VI program, i. e., an accumulative 10 per cent down payment and firm commitments to builders, and if not, do you think a builder can achieve mass production and its economies if there is a return to Title II operative builder commitments?**

**FERGUSON:** I do not favor retention of any part of the Title VI program, and assuming that by "accumulative 10 per cent down payment" is meant the lease-option plan under which firm commitments are issued direct to builders, the adoption of that policy, I believe, could be justified only on the grounds of the present emergency. The accumulative 10 per cent down payment was adopted because of workers coming into a new locality who needed immediate shelter, but who had no accumulated funds with which to meet any equity requirements. After the war is over the majority of workers will have accumulated savings, which would render this emergency measure unnecessary.

The policy of firm commitments to builders was adopted as an inducement to lending institutions to speedily finance the production of needed war housing at a time when restrictions on materials, locations, prices and occupancy reduced their ability to evaluate the quality of the investment they were making. It cannot be justified in the postwar period when supply will be far below demand and when there will be ample funds, materials and labor to move as quickly as possible into large scale production.

As to the ability of the industry to achieve mass production through Title II financing, experience before wartime curtailments should be conclusive. From a low of 93,000 dwelling units built in 1933, construction activity moved at a gradually accelerated pace up to 715,000 dwelling units constructed in 1941. The vast majority of this volume of building under the FHA program was done by means of the conditional commitment. In that time builders increased their production of privately financed homes from 332,000 in 1937 to 619,000 in 1941, or practically double. It might be well to explain that a conditional commitment is a commitment to insure a mortgage secured by an eligible property provided the borrower meets FHA requirements of eligibility, including capacity to pay, has good moral character and a responsible attitude toward his obligations.

Throughout the ten year period an increasing amount of new construction was accomplished by mass production methods. Mass production does not in my opinion depend so much upon the manner of financing the individual house as it does upon substantial building companies and their own development of more efficient methods of operation.

**2. Do you think that low income groups can be successfully housed through a 207 instrument? Would you be willing to eliminate the requirement that a representative of FHA be on the managing board of directors?**

**FERGUSON:** This depends upon what is meant by "low income groups". Certainly the private builder cannot afford to build simply for the joy of building whether for rental or sale. He will only build for a profit, and for those income groups that cannot afford to pay an economic rent the private investor cannot and will not provide. There is, how-

ever, a large group of renters who can be provided for through some such instrument as Sec. 207.

I would be entirely willing to eliminate the requirement that an FHA representative be on the managing board of directors. I think the requirement for audit of the corporation's books would be sufficient for FHA purposes.

**3. Would it be possible for FHA together with the FHLBA to adequately control the supply of housing to prevent a glut of the market in any one area due to construction of new homes in postwar years, perhaps through the establishment of quotas, rigid builder requirements, etc.?**

**FERGUSON:** I do not think there should be any government controls beyond those voluntarily accepted under the mortgage insurance program. The best FHA control is the conditional commitment, whereby responsibility is upon the builder to construct only so many houses as he feels assured of selling, and the advice both the FHA and FHLBA can and do give to lenders and builders on the housing situation in local areas.

The conditional commitment permits healthy competition between builders to so locate, design and construct new properties that the home buying public will be afforded the best and most attractive house producible within the various price ranges of the market. The builder, in order to consummate mortgage financing, must produce a property for which there is a market and must compete with other builders progressively operating the same price field.



#### 4. To what extent can FHA be expected to operate in putting the brakes on a runaway market?

*FERGUSON:* Given the cooperation of lenders and builders the FHA can—as it does now—exert its influence in the market by means of valuations based on long-term use and by refusal to recognize increased construction costs or prices reflecting temporary or abnormal conditions, when it is obvious that cessation of wartime activities and resumption of

building will quickly shear off excessive costs and prices. A purchaser may be warranted in paying an inflated price to gain immediate occupancy, but he must understand that that portion of the price paid which represents purely temporary conditions must be reflected in his equity and cannot properly be regarded as a part of the long-term financing.

#### 5. Do you believe a 30 per cent price increase above 1940 levels in the first few years after the war will short-circuit a strong residential market?

*FERGUSON:* Offhand I would think that a 30 per cent increase over 1940 prices had already almost been reached. However, price increases of themselves do not short-circuit a market where there is demand to meet a specific need for which people are willing to pay high prices, particularly at a time when their incomes and savings are high.

But to state whether price increases will short-circuit a strong residential market seems to be reaching into the realm of prophecy which too many unknown factors would seem to preclude. Obviously, price levels which will prevail in the early postwar market will be the effects of the actions of supply, demand, and the purchasing power of money. There

is, fortunately, evidence that competent building organizations have been successful to date in maintaining either operating or skeleton organizations which could quickly be expanded to meet a postwar housing need. Many builders have made substantial strides in mass production technique. If the accumulated demand can be met quickly, the tendency of the price level to spiral will be retarded and, in some communities where war housing has been produced in substantial quantity and of permanent character, the movement toward higher prices may be reversed. This would be especially true if there were out-migration reversing the population increases of the war emergency period.

#### 6. What measures would you suggest to prevent FHA from becoming a football for pressure groups? Would you be willing to consult with an advisory group representing the public, builders, mortgage bankers, mortgage portfolio holders, architects, dealers, manufacturers and labor?

*FERGUSON:* I do not think such a council would be effective. It would probably develop into a spirited debating society. Every public agency—and private agencies, for that matter—is subject to influence by “pressure groups”. Whether or not the FHA would become a “football for pressure groups” depends in large measure upon the sound

character of its policies, the public support and understanding it inspires and the impartiality of its administration. We are now, and from the beginning have been in constant touch with all these groups. To receive them separately has been found to be far more satisfactory than I believe it would be to act with a council such as that proposed.

#### 7. Is any consideration now being given by FHA to such hedges against additional risk of a rising market as increased premiums and shortened amortization schedules?

*FERGUSON:* Shortened amortization schedules have always been taken care of through the underwriting processing of the individual case. FHA policy encourages the borrower to take the lowest ratio loan and shortest amortization period he can safely handle. The 80 and 90 per cent mortgages that may be insured represent the maximum ratio of loan to value. Many insured mortgages represent lower ratios than the maximum permitted by the law.

There is no consideration being given presently to increasing the amount of the insurance premium, and in my opinion there will be no increase in the immediate future. Since 1939 the FHA's income has been sufficient to pay all administrative expenses and over the period of FHA's operations we have accumulated over 78 million dollars in reserves in the mortgage insurance funds. Actuarial studies indicate that the present premium should prove adequate.

#### 8. Would a maintenance reserve established by home owners' monthly deposits be a step in the direction of protecting the home owner's investment?

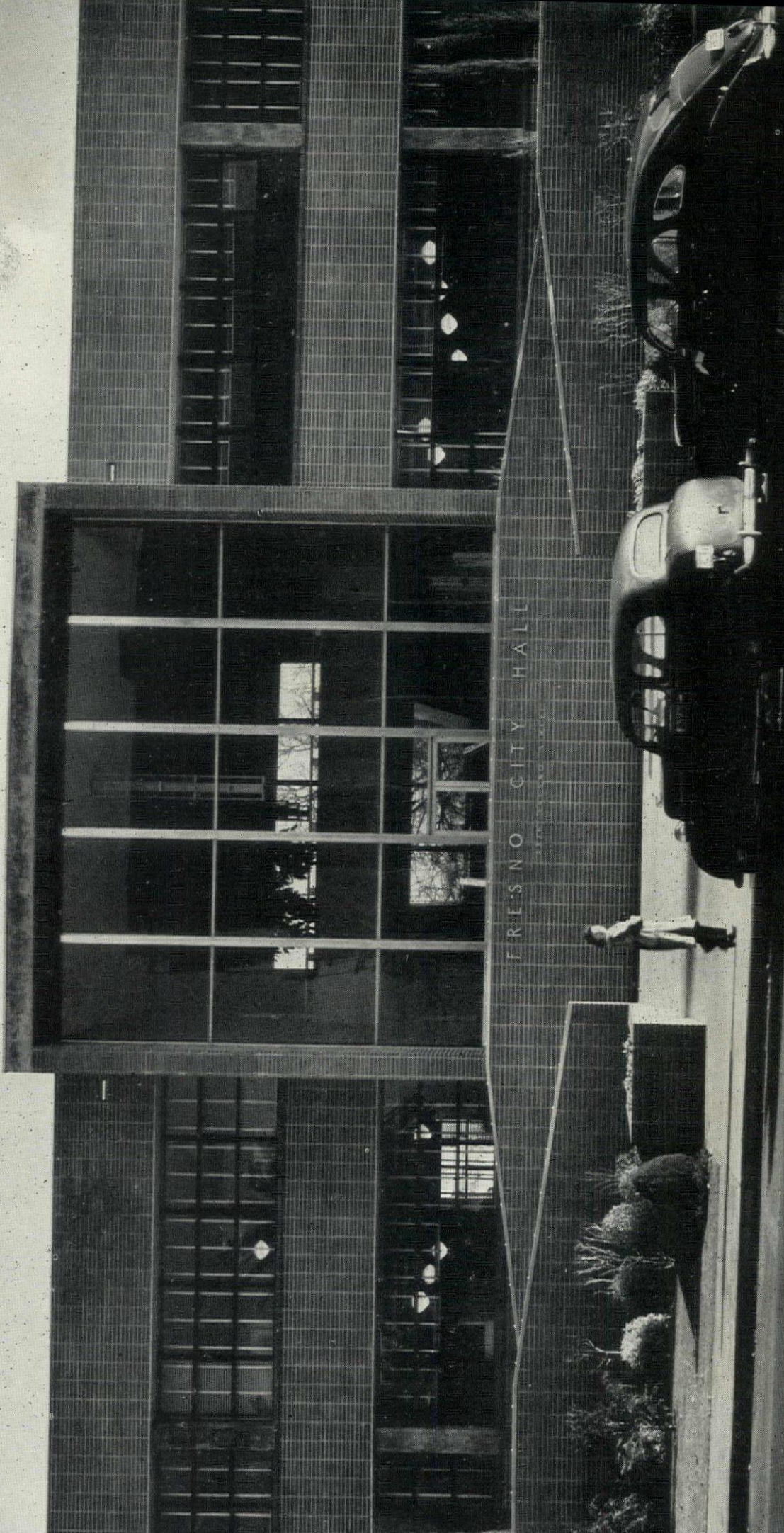
*FERGUSON:* On the subject of a maintenance reserve, I do not see how the FHA could make such a requirement. In the first place, I believe that the matter is partially taken care of under the present FHA insurance system in seeing that the borrower's income bears the proper relationship to the value of the property he is buying and to his monthly

payments. Beyond that I believe it would be impossible to establish what would be an equitable monthly reserve for maintenance taking into consideration such factors as differences in type of structure, the extent to which the individual home owner takes care of his property and repairs it with his own labor, etc.

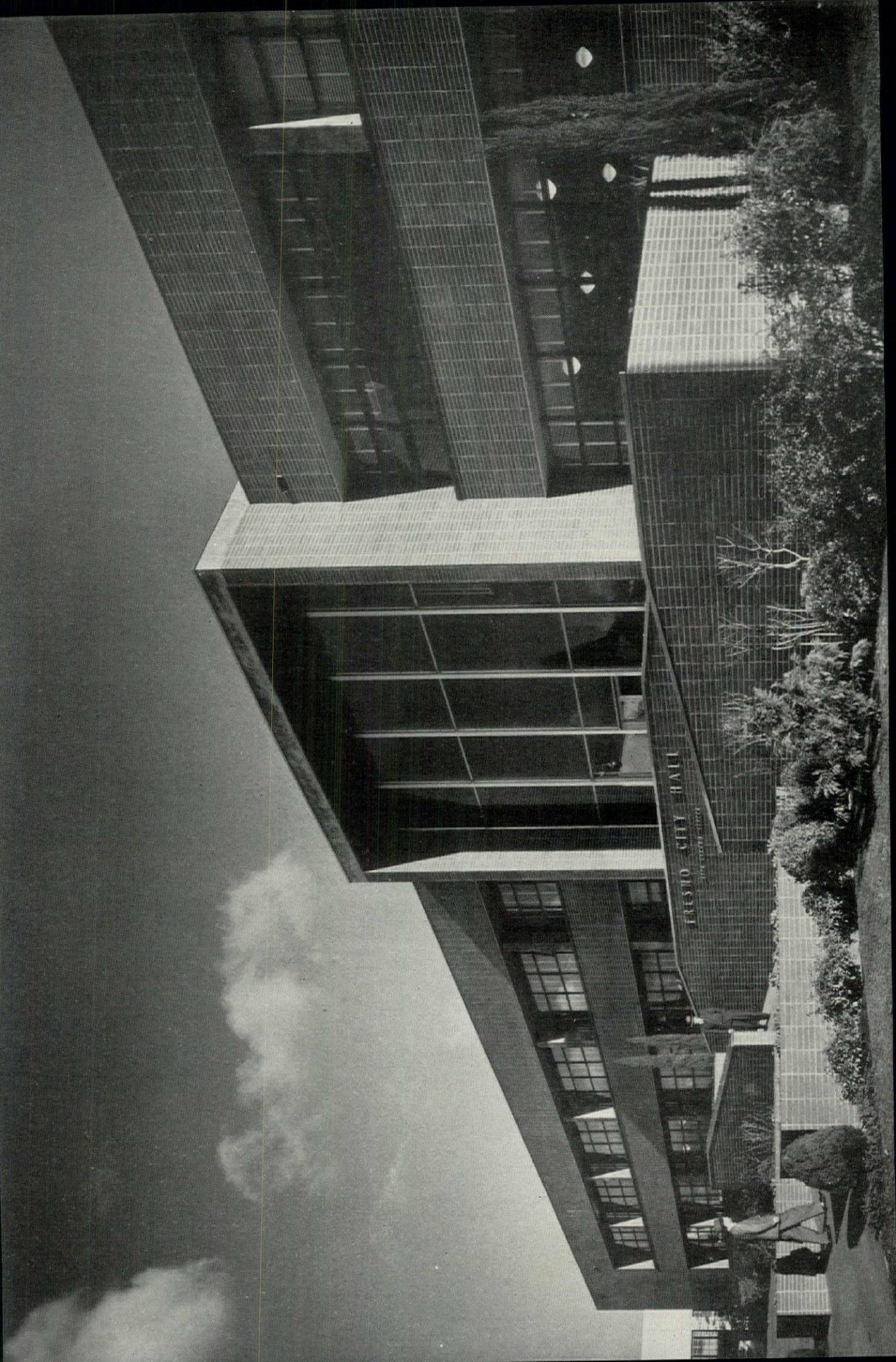


CITY HALL, FRESNO, CALIF. FRANKLIN & KUMP & ASSOCIATES, ARCHITECTS

Photos: Roger Sturtevant







FRESNO CITY HALL  
THE STREET STAGE



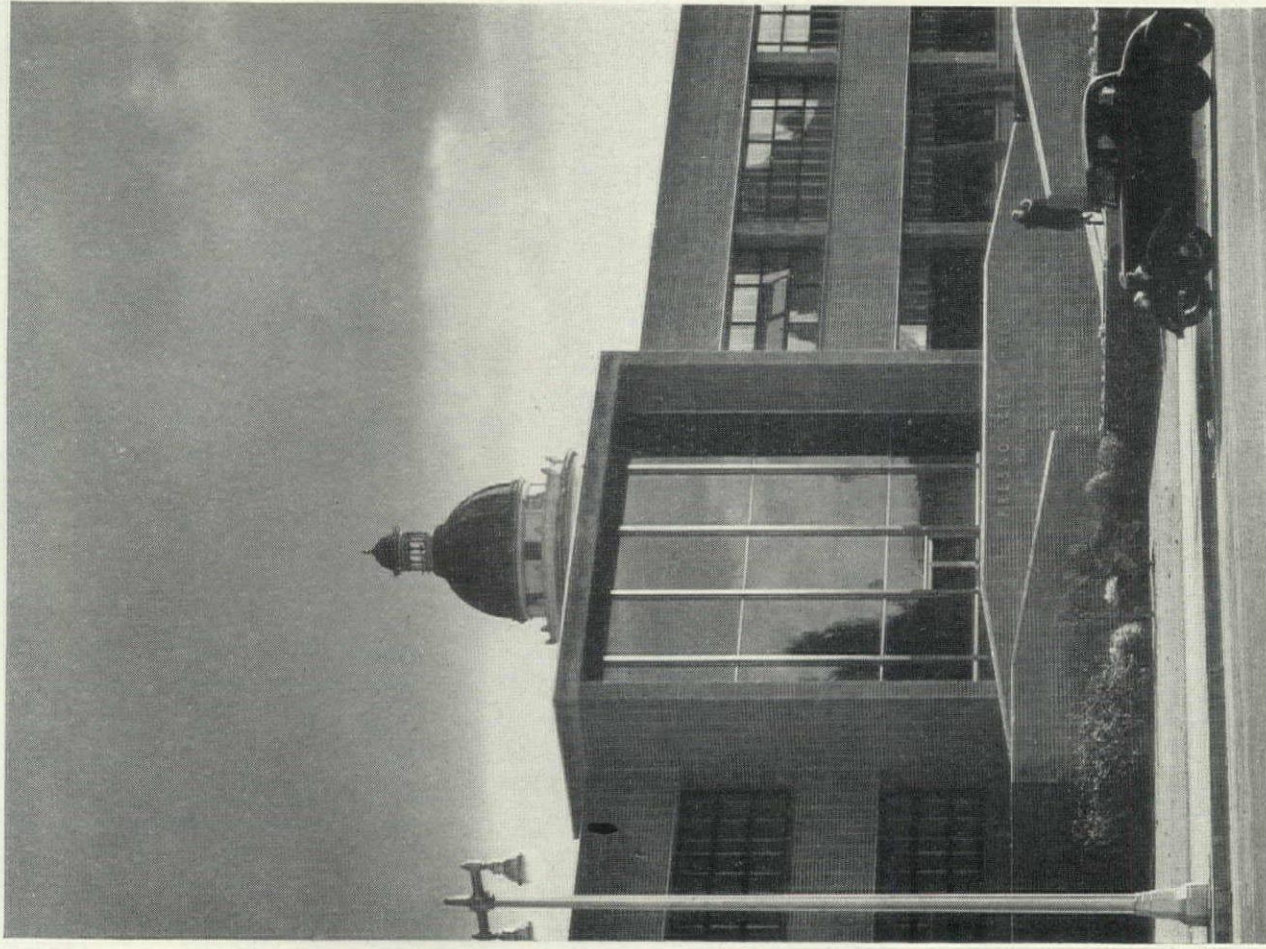
The new city hall at Fresno, Calif. is much more than just another good modern building. A total break with the usual massive and pedantic municipal architecture, it shows the way to public structures of beauty and utility. Although small and unpretentious it is a distinguished building.

An open two-story lobby is the core around which the structure is organized. Both inside and outside design are focused on this middle section, used wholly for public entrance. Wings extending from either side provide space for the city departments and offices. Realizing the benefits of symmetry to circulation and placement of the various departments, the architects were not seduced into an unbalanced scheme. However, since some functions demand more space than others, one wing has been made larger, thus avoiding the absolute symmetry of eclectic architecture.

Impressive ramps in the lobby care for circulation to the second story and form a composite part of the interior design. They take up more space than elevators, but cost less to install, and completely eliminate operating expenses. Ramps are also substituted for the usual steps at the lobby entrance. They appear only at the front since the rear entrance is at grade. Stairway entrances at the end of either wing afford a second type of circulation for employees at the spots farthest away from the public lobby.

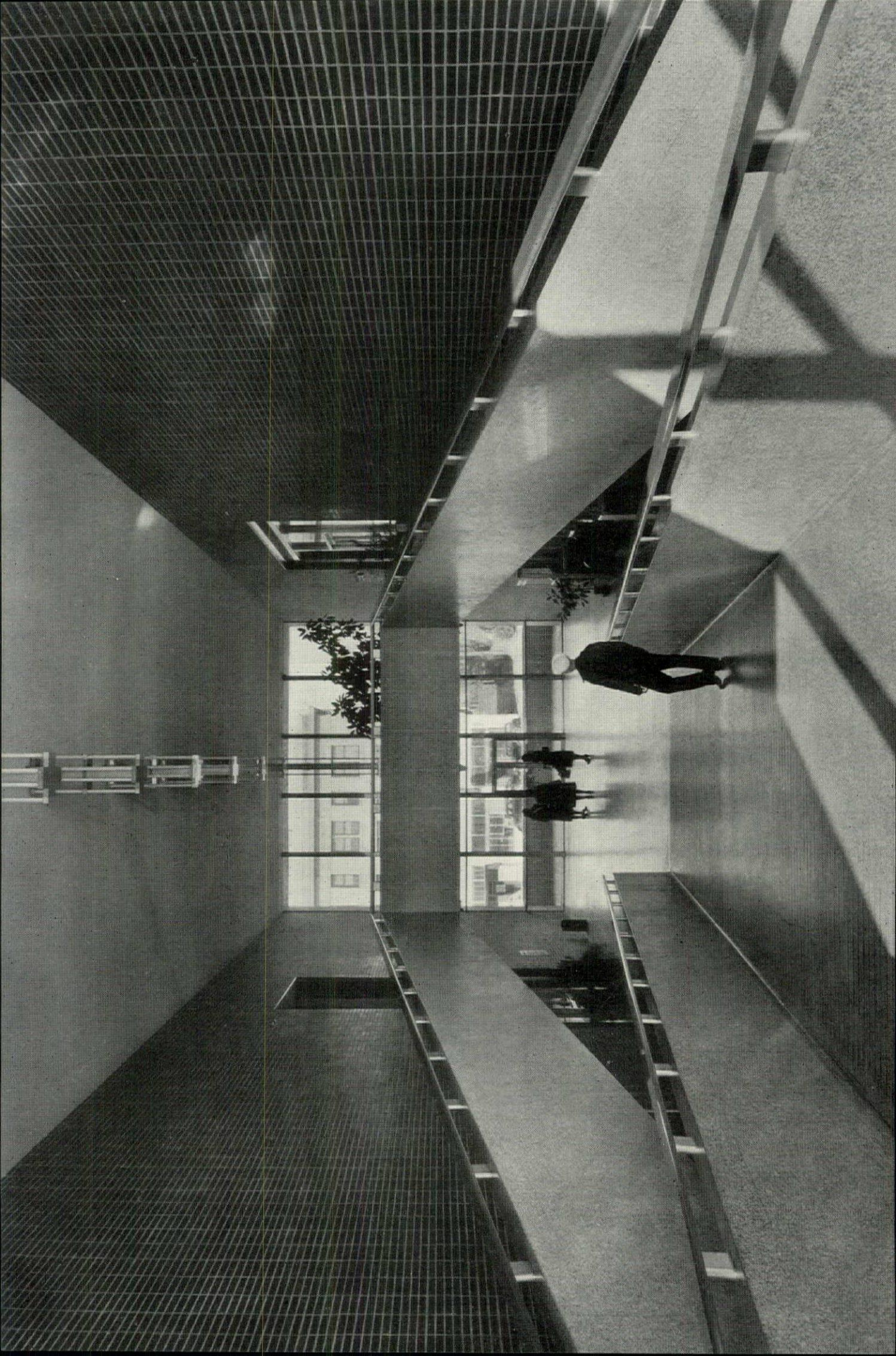
The main problems of the design were to provide office space for widely varying functions, and because of constantly shifting personnel, to make the space as flexible as possible. Actual department divisions therefore have fixed concrete walls. Within each department, walls consist of light wood panels finished in maple plywood and movable with minimum work and expense.

On the first floor the Finance Department fills up most of the right wing with its work space, private offices and vaults. The remaining small portion of the wing is assigned to the City Clerk. A dual department, Water and Waste Disposal share the left wing—a general work space, offices, and the drafting and machine rooms on the eastern exposure. The second floor houses Public Works in the left wing with private offices for commissioners, inspectors and engineers. The entire eastern exposure of this wing is devoted to a drafting room. A centrally located work space is illuminated by skylight and by windows facing south. Playgrounds and politics, including the Mayor's office, Council room, Civil Service, meeting and conference rooms, share the right wing.

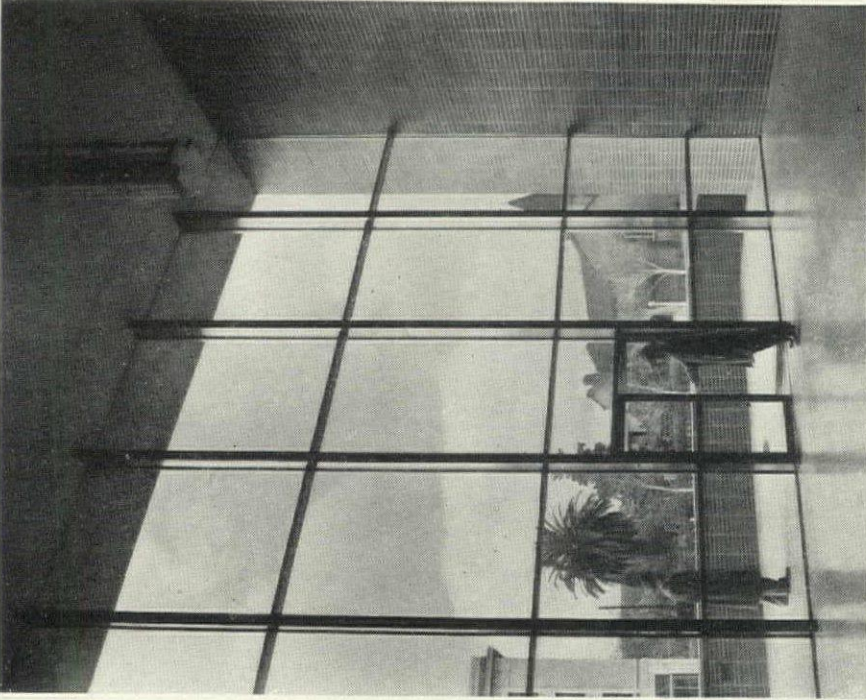


SUPERANNATED CUPOLA OF OLD CITY HALL POKES OUT ABOVE ITS SUCCESSOR





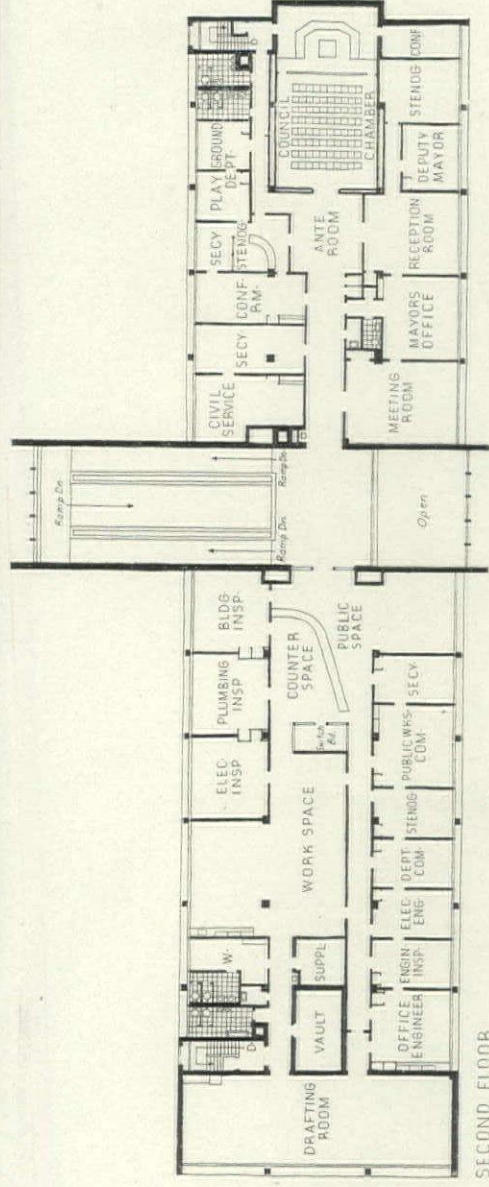




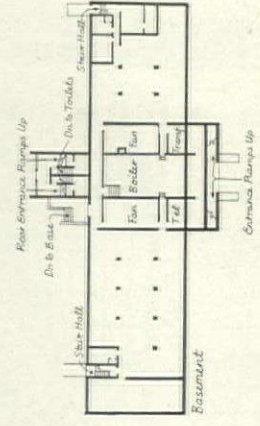
ENTRANCE IS CENTERED IN HUGE GLAZED PANEL

Looking down the ramp toward the glassed-in front entrance one sees that utility of structure and pleasing pattern are one and the same thing in a reasonably-designed building. Substitution of ramps for elevators adds immensely to the openness of the lobby.

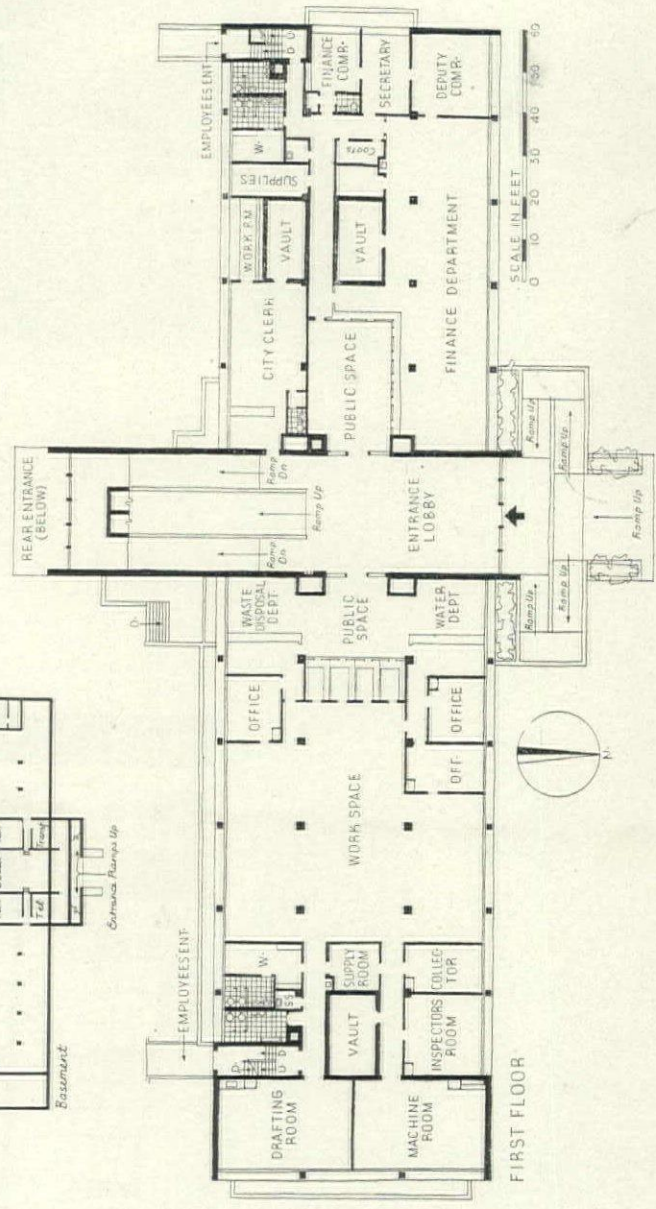
The lobby, and rooms directly off it on both first and second floors, are almost the only part of the building seen by the public. In these "public spaces", flanked by tellers' cages or long counters, citizens come to pay their bills and to get information. Near the rear entrance, stairways lead down to public restrooms below the ramp.



SECOND FLOOR

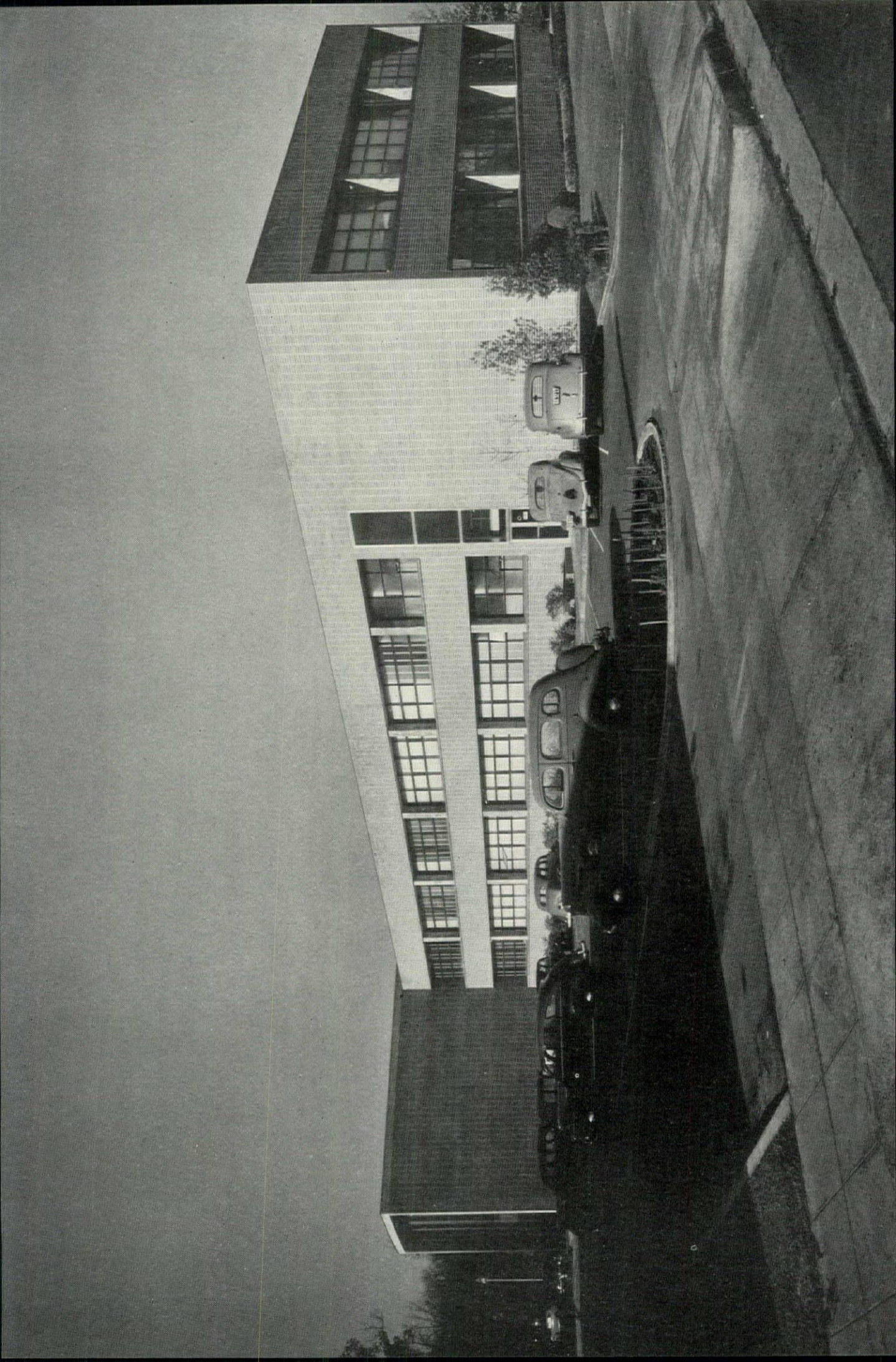


Basement

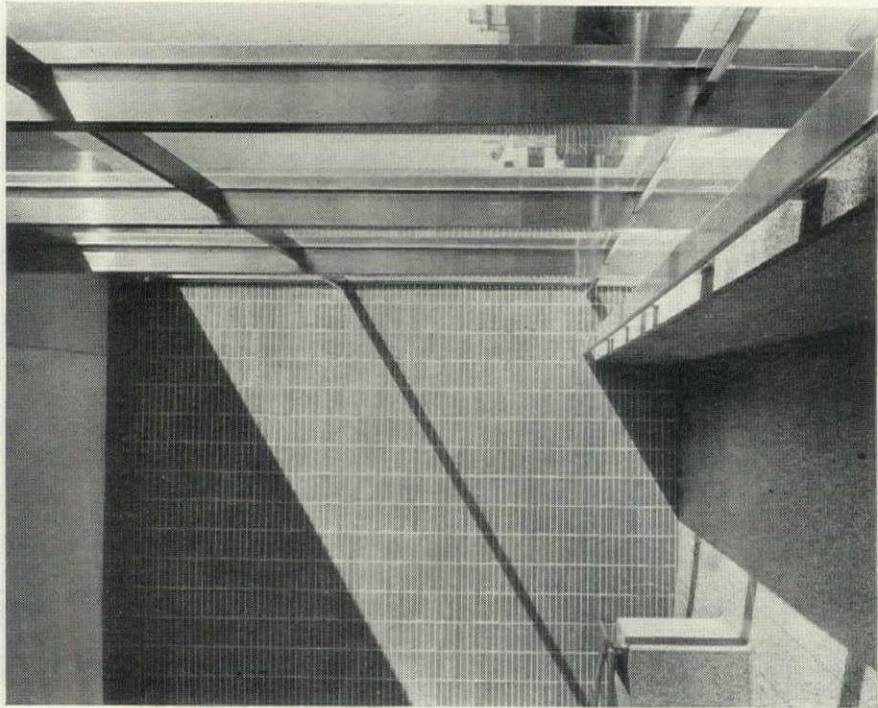


FIRST FLOOR



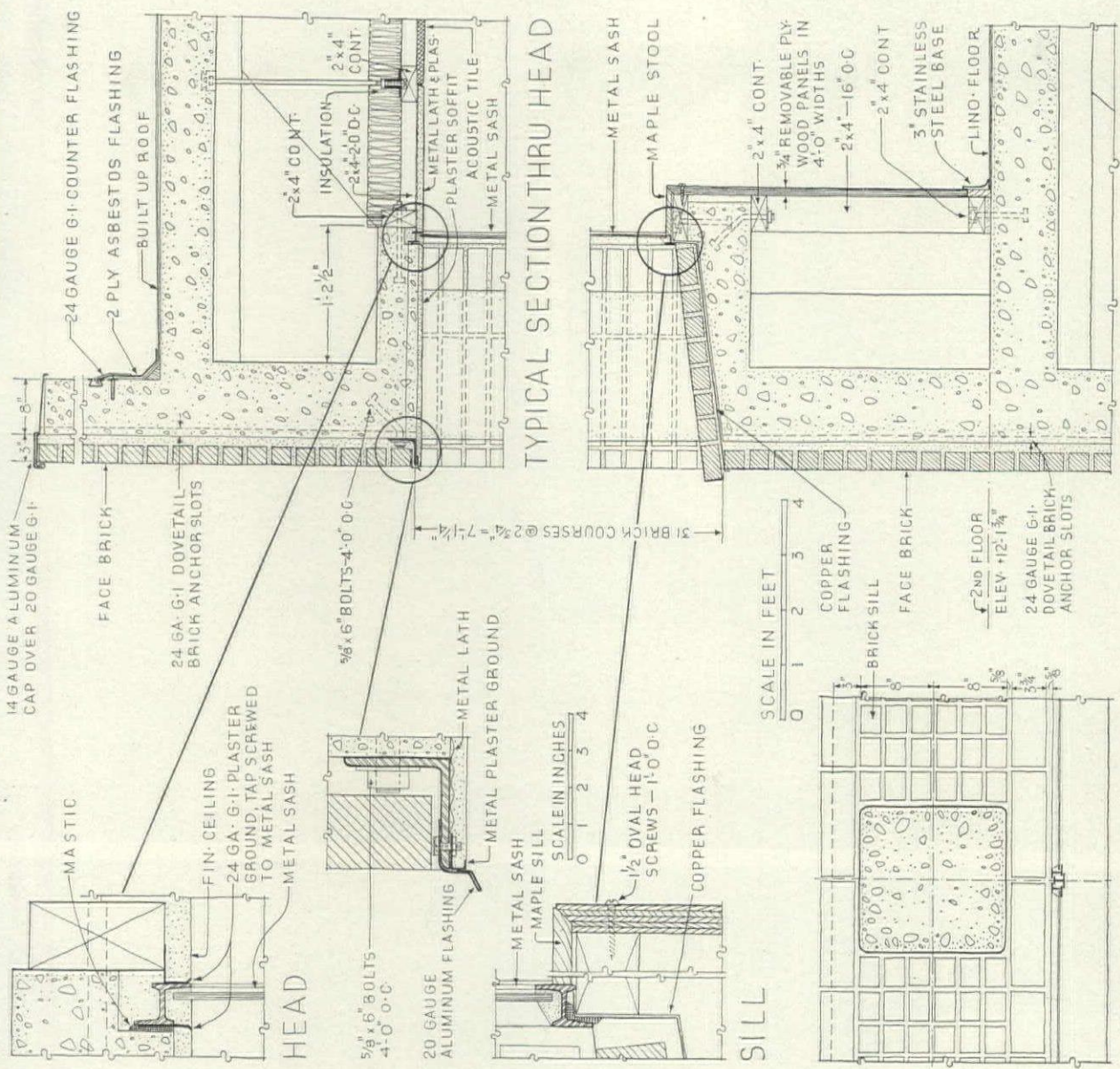






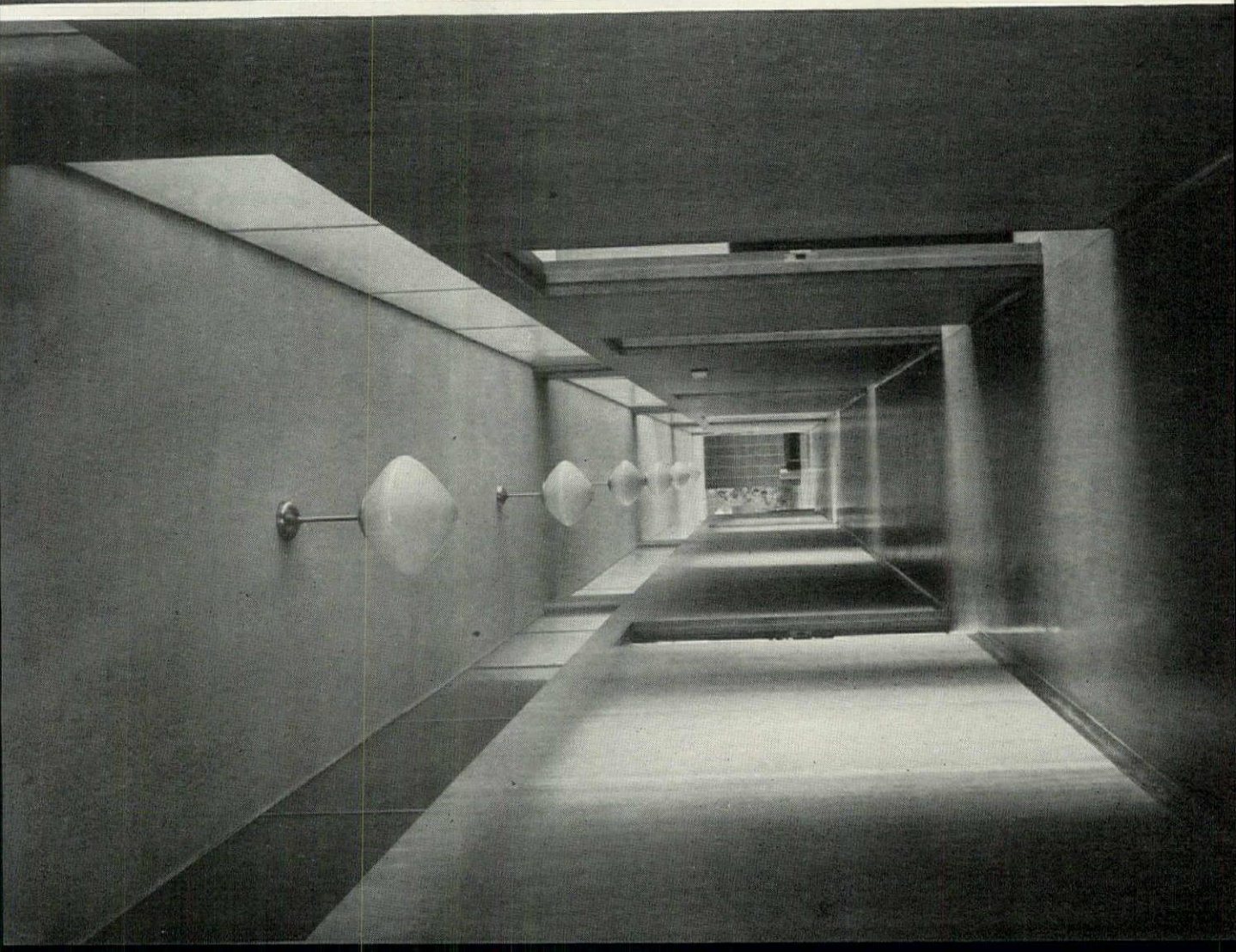
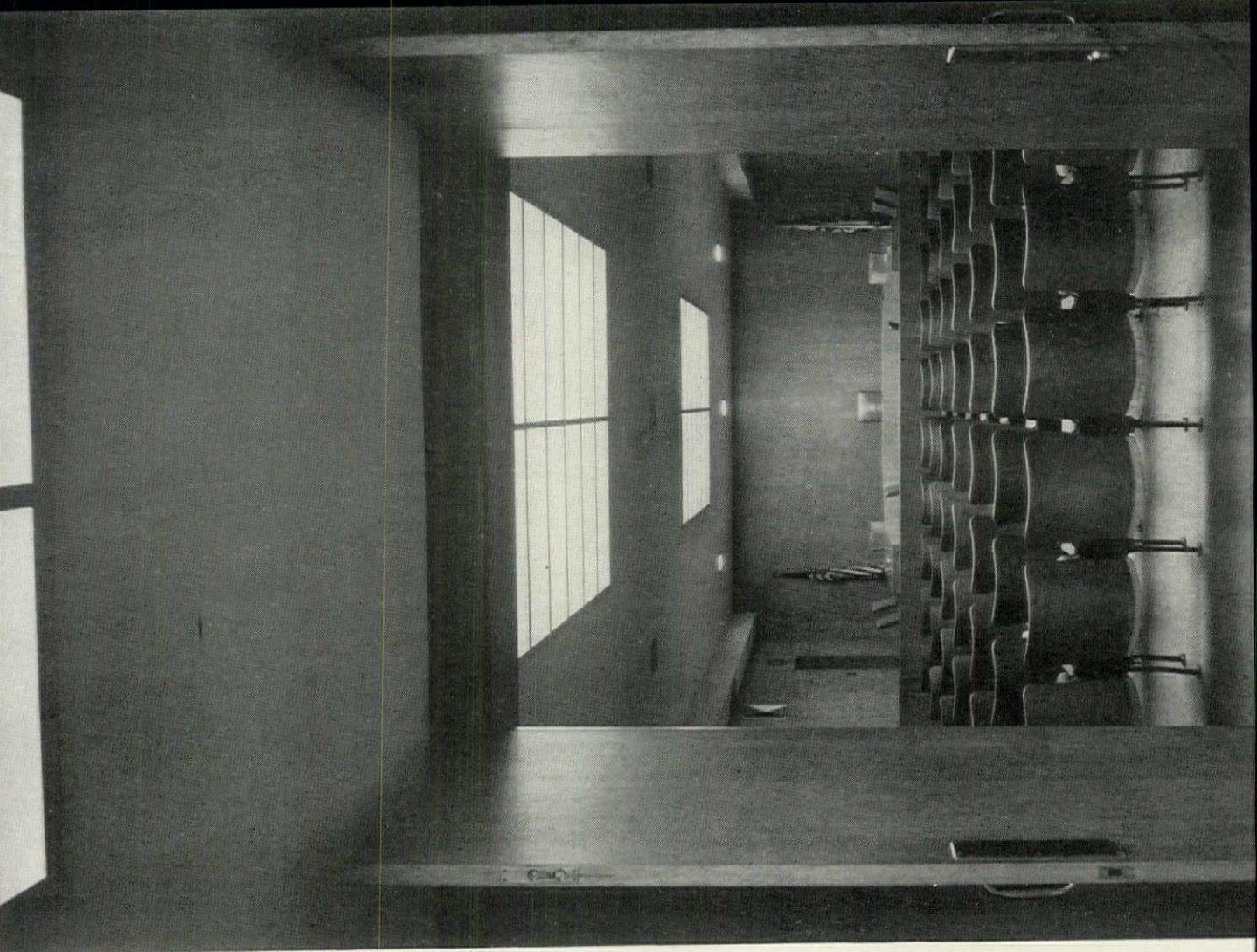
RAMP LANDING IS BUILT FREE OF GLAZED PANEL AT BACK

In order to create a perfectly smooth interior free from projections of all kinds, two features have been used. First, unusually wide windows are recessed to avoid interruption by structural columns. This produces a flat surface, but necessitates extra-deep sills and deep space under the sills. Second, a system of flat slab construction eliminates beams in the ceiling. Duct work and utility lines are made accessible at all points of the floor and ceiling area by a space roughly 2 ft. high between floors. With both walls and ceilings absolutely even in surface, partitions can be moved about at will, and office space adjusted to changing needs.

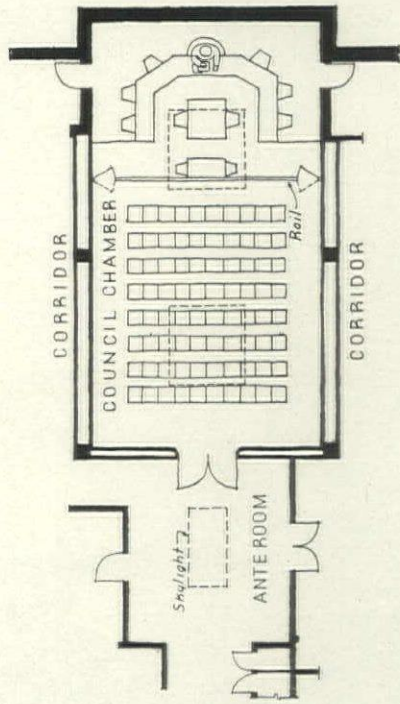


TYPICAL SECTION THRU HEAD  
SECTION THRU SILL, 2ND FLOOR  
PLAN AT COLUMNS





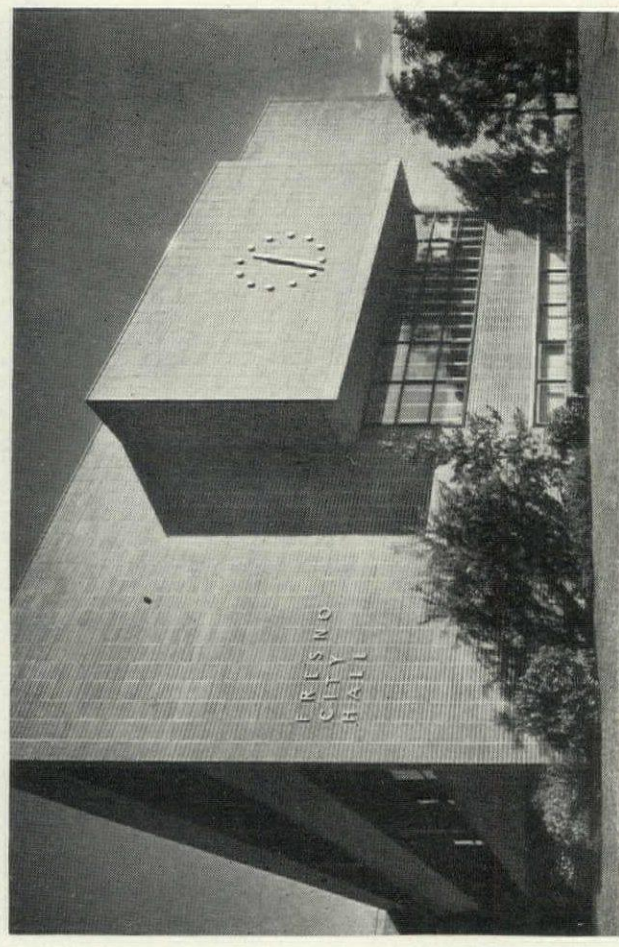
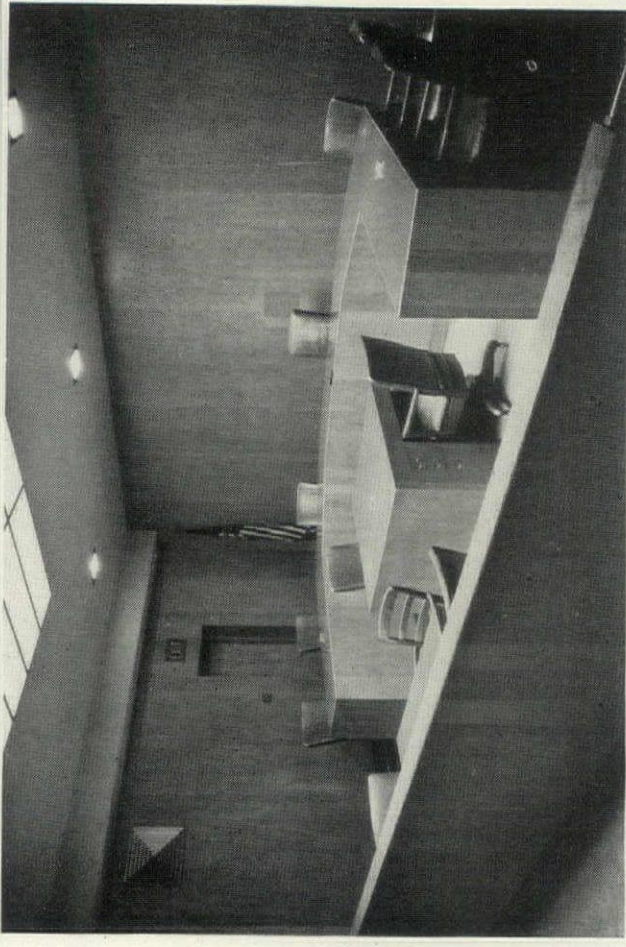




Careful use of natural light saves electricity and cuts operating expense. Space has been so worked out that there is very little inside corridor. Those hallways which have been used are of necessity buried in the middle of the building. But continuous glazed panels set atop the walls borrow light from outside rooms and eliminate electric lighting except at night.

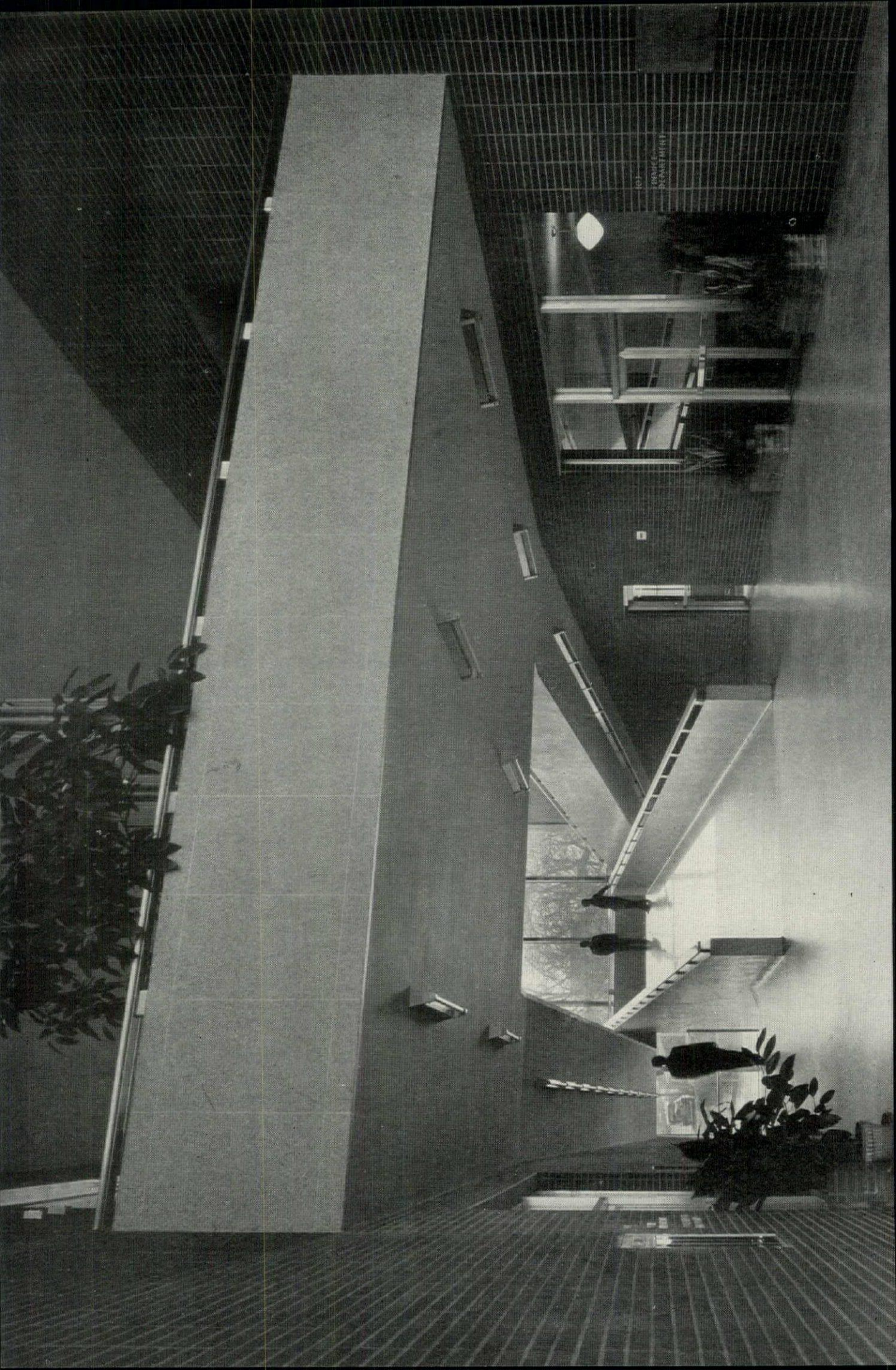
The council room on the top floor takes full advantage of skylight possibilities which the floor below cannot enjoy. This room has no windows and is projected to accommodate the Mayor's desk. Built into the design, the desk becomes a functional part of the room plan. Wood veneers are used to advantage on council room walls. Their smooth, unbroken surfaces are durable and easy to maintain.

The heating and cooling system for the whole building is laid out in three broad zones independently controlled—the lobby, the offices on the south wall and offices on the north. This equalizes differences in temperature which result from exposure variations at different points.



A CANTILEVERED PROJECTION ADDS EXTRA SPACE TO THE COUNCIL CHAMBER







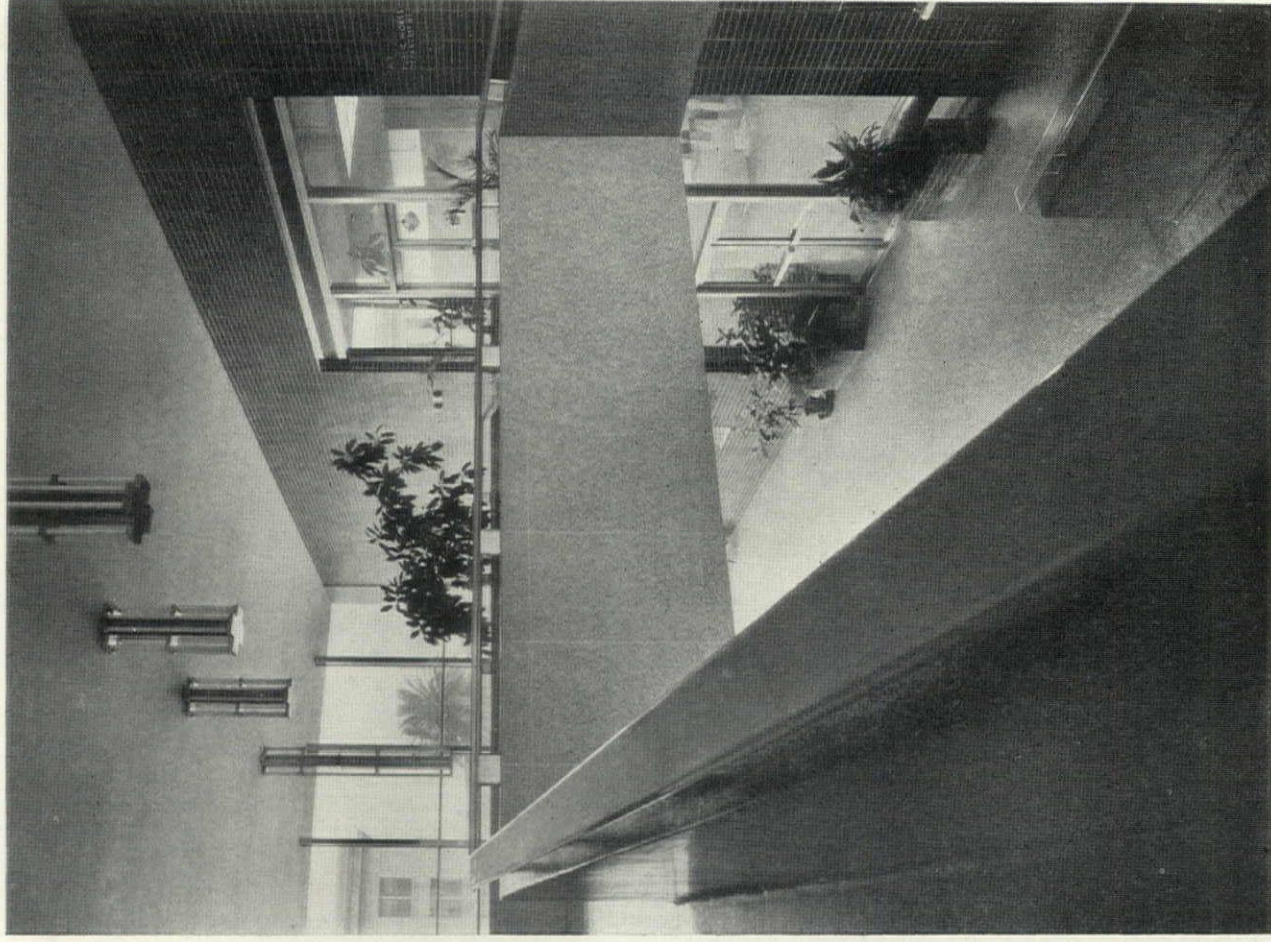
One of the most important factors in the city hall's construction is its basis in modular design. The square-end, hard-pressed brick is 11½ in. in actual length with a 12 in. nominal dimension. The brick height is not modular, but all horizontal dimensions are based on the 4 ft. module. Brick joints are aligned giving the walls a clean-cut modern effect which would have been lost with ordinary staggered joints.

Unity of design is achieved by using the same building materials throughout. Interior and exterior walls are made of the same red brick. Ramps, floors and parapets are all terrazzo. The ramp handrail is aluminum as is the trim of glass doorways. Specially designed vertical fluorescent fixtures on the lobby ceiling are extremely effective, but the horizontal ones under the ramp (also a special design) are unattractive and restlessly spattered about—a minor flaw in an otherwise outstanding structure.

#### CONSTRUCTION OUTLINE:

**STRUCTURE**—reinforced concrete columns; flat slab concrete floors; concrete walls faced with 2 in. x 11½ in. hard pressed red brick. Ceilings—acoustical tile. **ROOF**—built-up composition, Johns-Manville. **SHEET METAL WORK**: Flashing—asbestos, galvanized iron and copper. Ducts—galvanized iron. **INSULATION**: Second floor ceiling (except lobby)—Red Top insulating wool, U. S. Gypsum Co. Lobby ceiling—cork board, Armstrong Cork Co. **WINDOWS**: Sash—projecting steel, Ariston, Michel & Pfeiffer. Glass—plate and double strength, quality A. Skylights—Coolite, Mississippi Wire Glass Co. **RAMP**—terrazzo with separating strips, Lockstrip Mfg. Corp. **FLOOR COVERINGS**—linoleum, Armstrong Cork Co. Council chambers—carpet. Lobby and toilets—terrazzo. **WALL COVERINGS**—plywood. Interior partitions—light wood construction, maple plywood finish. **WOOD AND METAL TRIM**: Interior doors—flush wood. Exterior doors and lobby doors—aluminum. Mullions for lobby windows—16 gauge stainless steel, No. 4 finish, Rezilal, Crucible Steel Co. of America. **HARDWARE**—P. & F. Corbin, Oscar C. Rixson Co., Glynn-Johnson Corp. Vault doors—Mosler Safe Co. **COPINGS**: Exterior ramps—stainless steel; parapets—aluminum. Ramp handrail—aluminum. **PAINTS**: All plywood four coats—filler and stain, shellac, varnish and flat varnish. **LIGHTING FIXTURES**—General Electric Co. **PLUMBING FIXTURES**—Crane Co. Soil and vent pipes—cast iron over 2 in.; galvanized iron under 2 in. Hot and cold water pipes—galvanized steel. **HEATING**—steam and hot air system, cooling and filtering. Gas fired boiler—Pacific Steel Heating Boiler Div., U. S. Radiator Co. Grilles—Tuttle & Bailey. Thermostats—Johnson Service Co. Valves—Minneapolis-Honeywell Regulator Co. Pump—Nash Engineering Co.

GENERAL CONTRACTOR: L. H. HANSEN & SONS



VERTICAL FLUORESCENT FIXTURES ABOVE RAMPS SHED LIGHT ON ALL SIDES

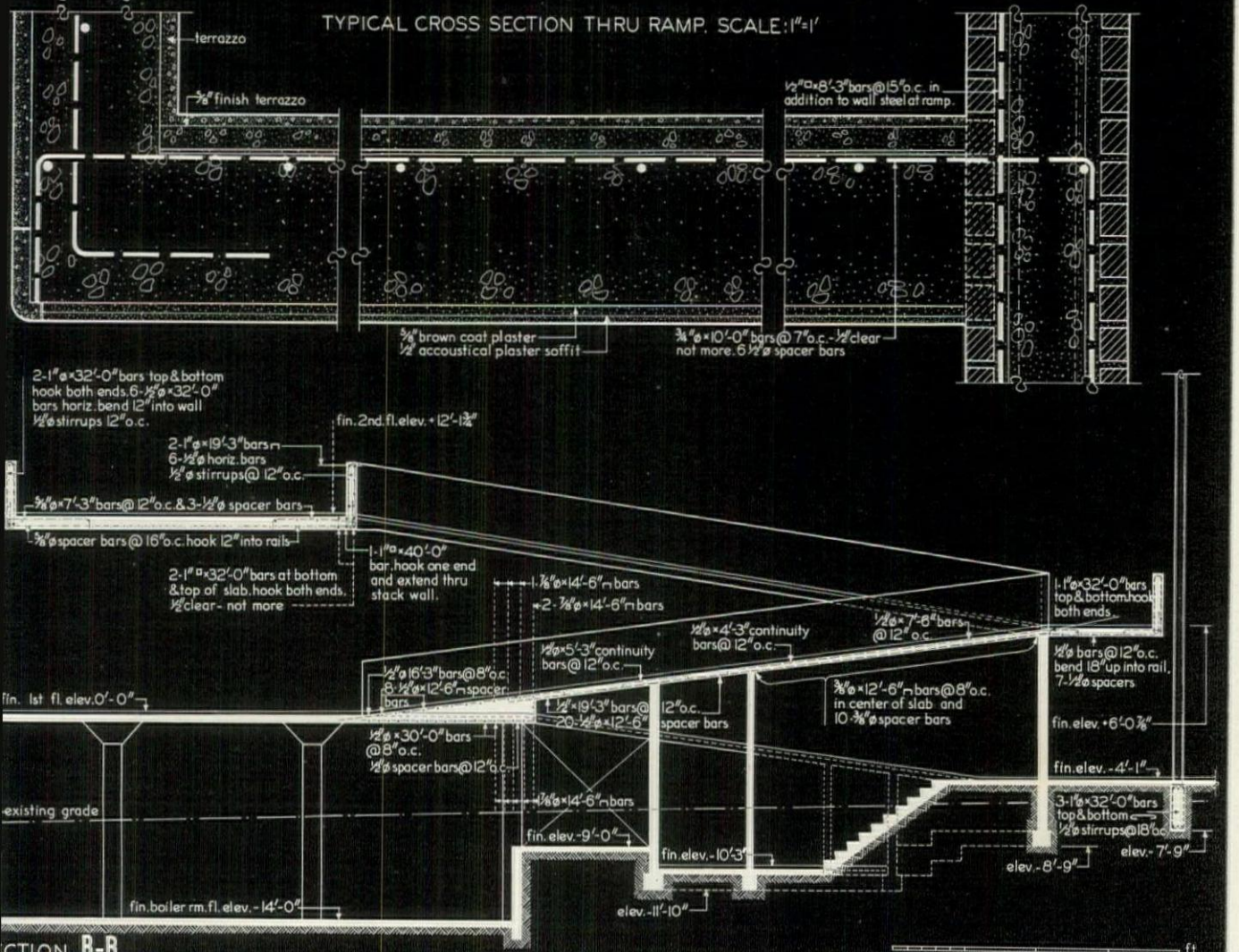
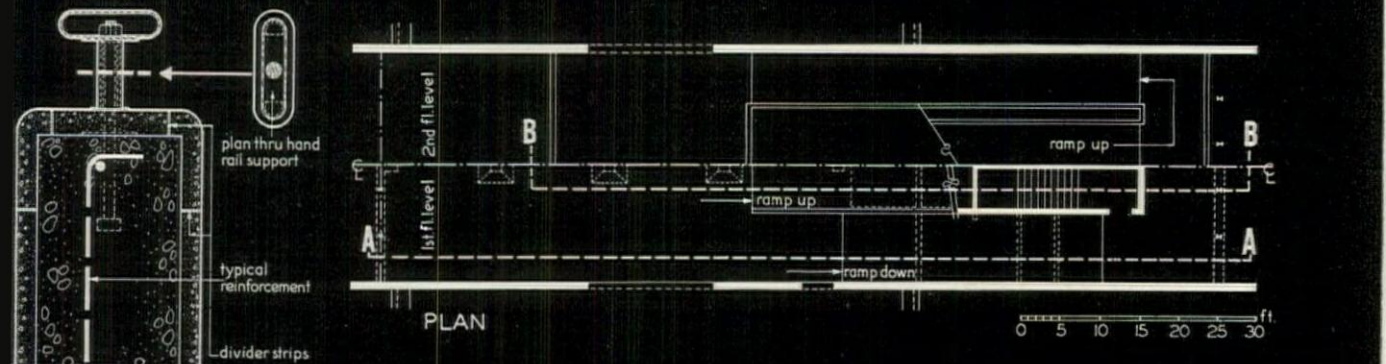
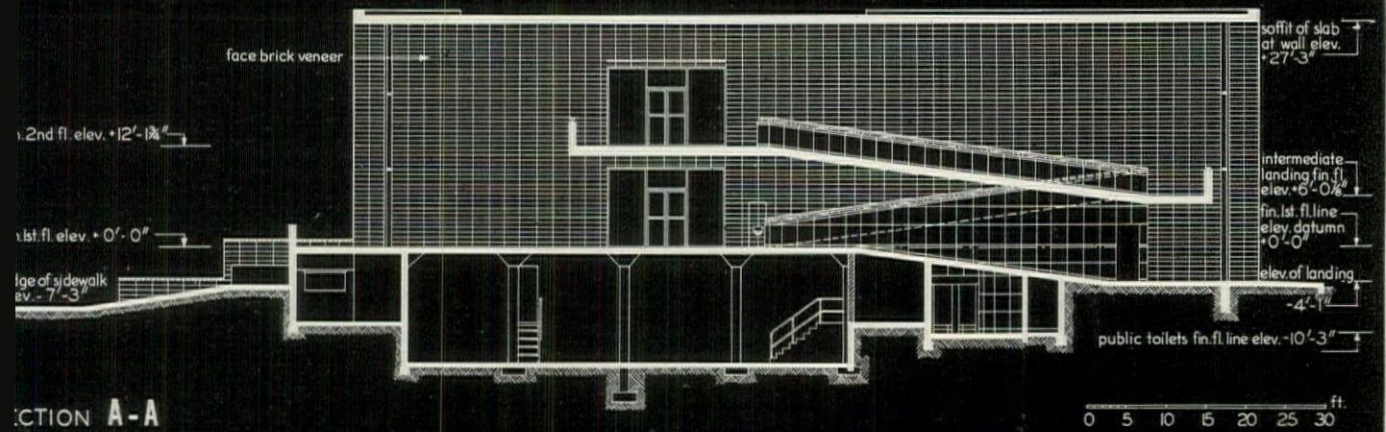


# PEDESTRIAN RAMPS

FRANKLIN & KUMP & ASSOCIATES, ARCHITECTS

## DESIGN DATA 18.

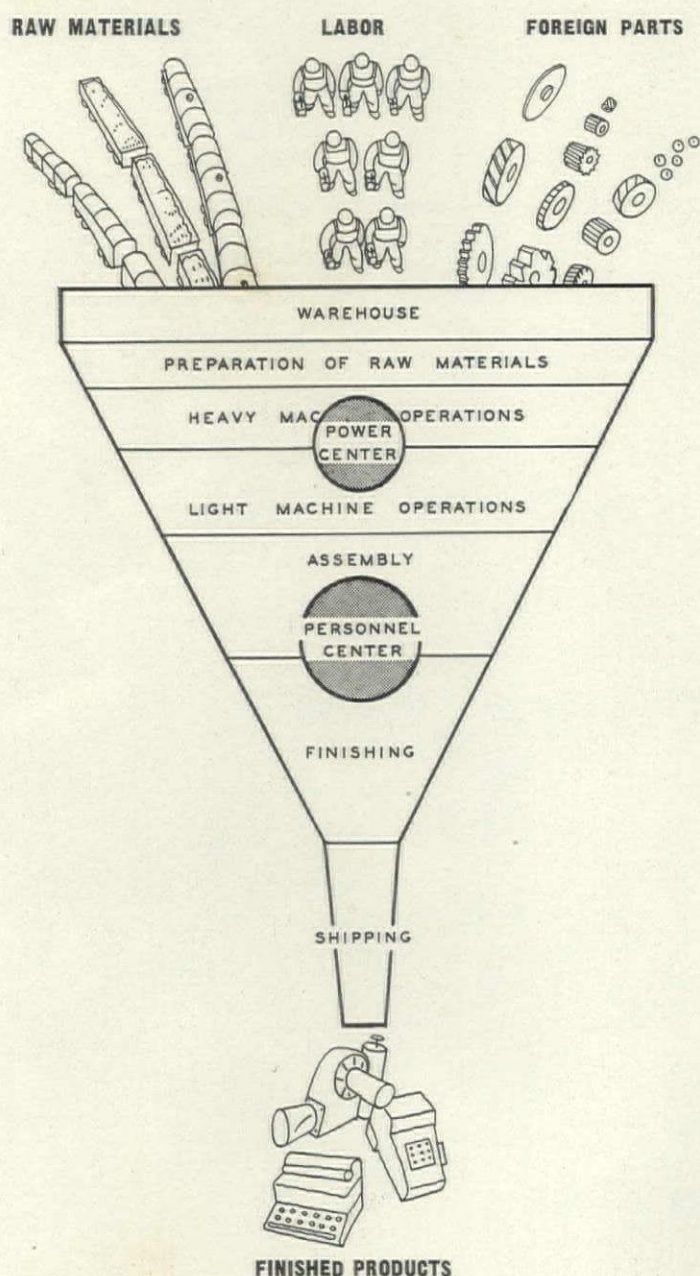
THE ARCHITECTURAL FORUM





# THE FACTORY OF THE FUTURE

A provocative and realistic approach to the postwar industrial plant, by Egon Gerner, Guy B. Panero and Harold Burson of the H. K. Ferguson Company.



The future of the U. S. industrial plant is a matter of wider interest than seemed likely a year ago. Despite the enormous increase in production facilities, many new plants are not well located for peacetime use, and others are unsuited for peacetime production. To these facts may be added several more: industrial decentralization continues; many prewar plants are completely obsolete by present day standards; women at work are apparently determined to remain so; and business has accepted the idea that sustained postwar prosperity depends greatly on realizing the full productive potential. It is becoming more and more evident that current advances in factory design, great as they are, are only a beginning.

This study marks the first time a major concern in the field has publicly let its hair down and said what it thinks. The H. K. Ferguson Company has 300 engineers, about 10,000 workmen in the field, and completed work totalling around \$175,000,000 for the past five years. When it indulges in crystal gazing it does so with wise and experienced eyes.

This picture presents a factory as clean as a hospital and a lot more attractive. It questions the very basis on which our mammoth war plants have been built. Most significantly, it recognizes the fact that just as the industrial plant changed our lives, so must life itself now change the factory. Its matter-of-fact acceptance of nurseries, solariums, recreational and health facilities marks a new social attitude on the part of both management and labor, an attitude that even social reformers would have considered Utopian a few years back. If this is the new hard-boiled realism—and no one could accuse the authors of being sentimental visionaries—so be it. Our cities, as well as our factories, could use a lot more of it.



## THE AIR VIEW

As travel by air becomes more common, it seems reasonable to predict that the appearance of buildings seen from above will take on more importance. To date, the "roof design" of the factory has been given no attention at all; for the manufacturer after the war, especially the manufacturer of consumer goods, there will be a distinct opportunity of presenting in a moment a vivid sales story whose impact could last a lifetime.

The air view, therefore, looms as an entirely new consideration in the approach to designing the manufacturing and assembly plant of the future. Existing factories (1, 2) considered on this basis, are unsatisfactory.

We are presenting here a fresh problem, not a solution. Just what is the best approach? Can isolated buildings be used? Do monitor or sawtooth roofs give the best impression? Or is there a new, untried layout best suited to do the split-second advertising job for potential customers traveling at 5,000 to 8,000 feet above the ground?

## NIGHT ARCHITECTURE

Like the air view, the night view is one which will have to be given more serious consideration in the factory of the future. We have already given negative thought to this problem in the construction of blackout war plants. There is a positive approach.

Factories are most profitable to management when they work on a 24-hour, round-the-clock basis. Only then can maximum output be utilized from each square foot of floor space.

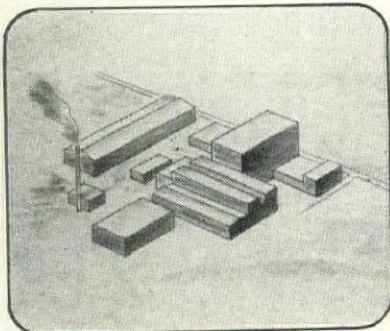
The appearance of a busy factory at night can have definite good-will and advertising value. A community will take pride in an attractive industrial development—it becomes the town's showplace rather than the local sweatshop.

Through proper treatment of lights and darks, the factory building, seen by night, has great possibilities. They extend to the air view (3) as well as those from the neighboring highways and railroads.

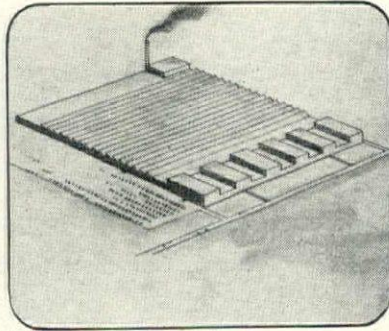
## THE HIGHWAY APPROACH

Even though much commercial and pleasure traffic is going to take to the air, the majority of people who work in factories will, in our time at least, continue to depend on the automobile.

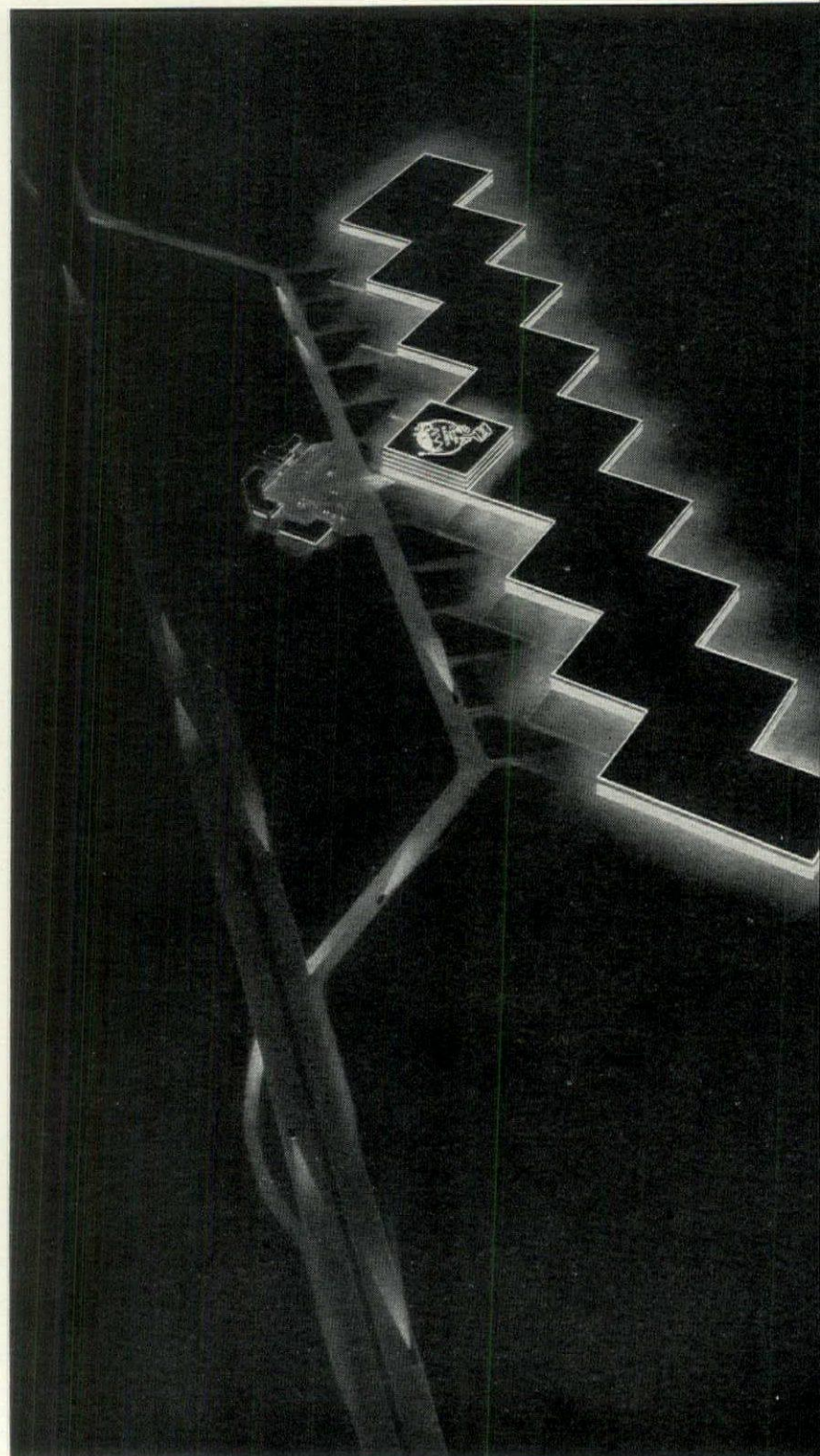
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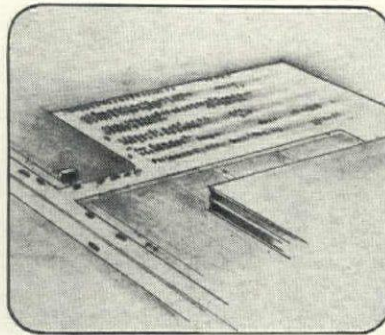
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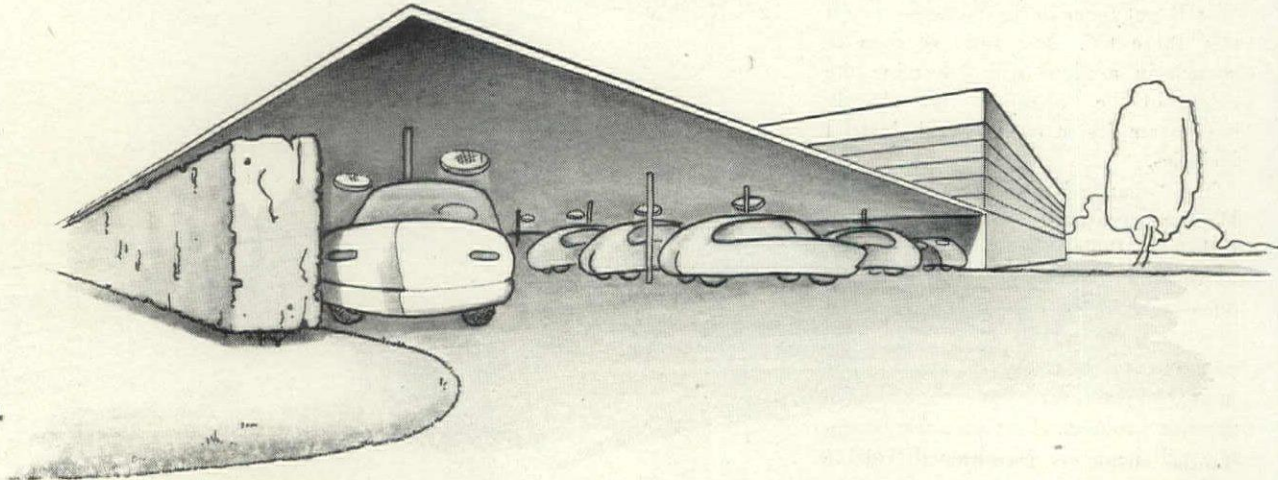


Nobody likes to spend time commuting. In many large war plants the traffic jams on the approach roads have wasted hours every week for the workers. A freeway system can eliminate this congestion.

Most plants now have one large area for parking (4) and it is not uncommon for employees to have to walk a mile in inclement weather to get to



4.



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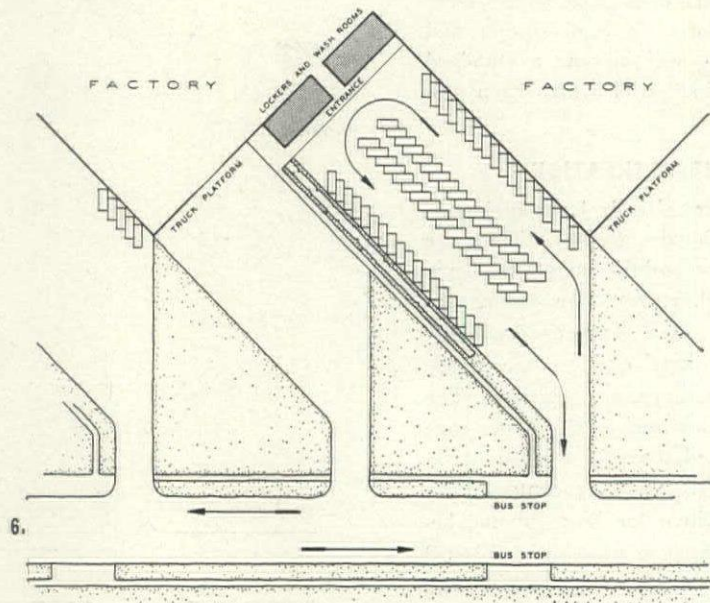
their cars. Workmen should be able to park close to their actual work locations (6,7) and the provision of covered parking space is not out of the question (5). The location of bus stops could be handled on the same basis of speed and convenience.

## PERSONNEL

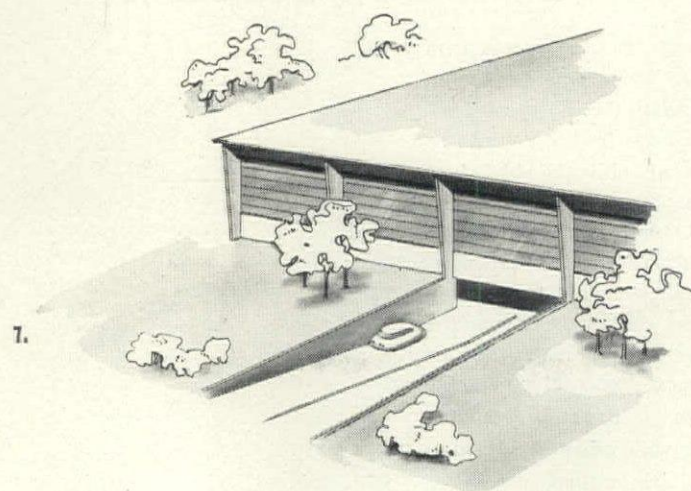
The time has come for us to make up our minds that the personnel department—representing extra consideration for the employee—is here to stay. It is, time, too, for us to realize the importance of employee morale and its value in dollars and cents to any management.

Industrial relations facilities have continued to increase since the early days of Samuel Compers. But never at such an accelerated pace as during the past several years when employers found they had to “sell” their jobs to prospective employees. Workmen go to plants where working conditions are better or where pay is markedly higher. Good workmen in the future will follow the same trend.

Factories in the past have too often presented the appearance of an armed camp (8). In wartime this is necessary for security reasons, but for the peacetime factory this forbidding appearance



6.



7.



is not necessary. Barbed wire fences, armed guards at entrance gates, and other practices taken from the prison system are hardly the proper psychological approach for creating a happy working community.

The appearance of the woman on the assembly line has done, and will continue to do more to offset these objectionable features than any other single influence. World War I put women in the offices—and they stayed. World War II put them in the factory—they'll stay there too. The ratio of men to women in a plant will determine the extent of the "niceties." We already have examples in our newer industrial facilities.

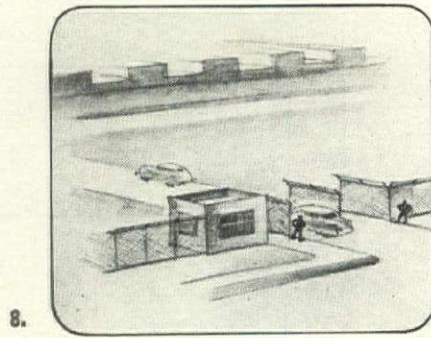
The "change house" is one of them. Men are unusually content to ride to and from their jobs in work clothes. In wartime, most women will also ride buses and street cars in slacks when they and the public know that it is patriotic to work in factories. The factory of the future, however, will have another problem. The patriotic incentive will be gone. Women will ride to and from work dressed as women—not factory workers. Modern shower and locker rooms will become a standard item in any industrial construction program.

### HEALTH AND RECREATION

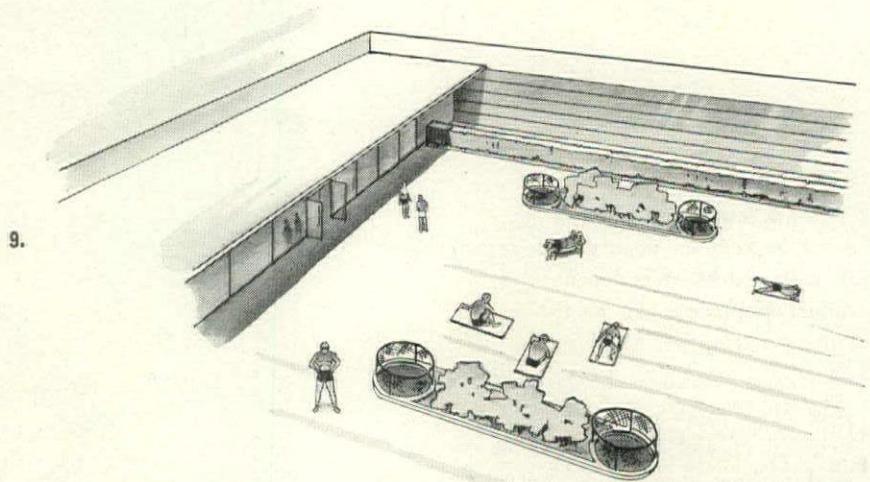
Health centers already have an important place in the factory. They are relatively new, and the current tendency is to expand, rather than reduce the services they offer. Nurseries and play areas for workers' children are in the offing. So, perhaps, are solariums. The example illustrated (9) shows one possible use of the roof over the parking area (5). Shopping centers (10) are another item for large plants, because many women who work will still be responsible for a household, and working hours conflict with downtown shopping hours.

Plant cafeterias are now excellent in many instances. To be fully successful, they must eliminate the more disagreeable aspects of mass feeding, and there must never be an objectionable show of paternalism.

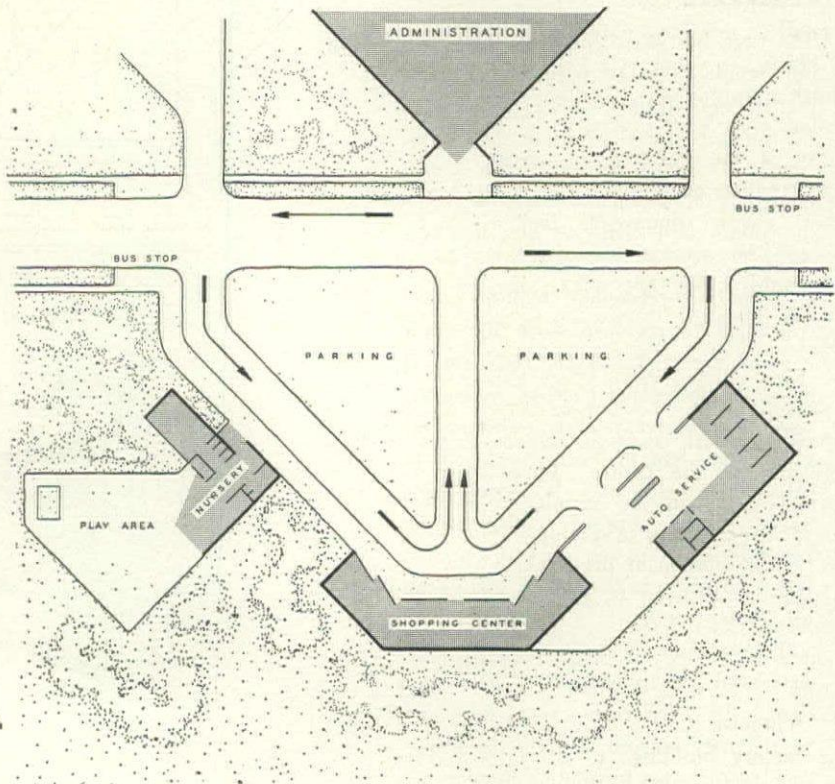
Some plants now have after-hour recreational facilities on the premises. Studies have indicated that the average workman prefers staying away from the factory after working hours. A possible solution is a recreation center near the residential area. It might be operated in cooperation with other local industries and with civic authorities.



8.

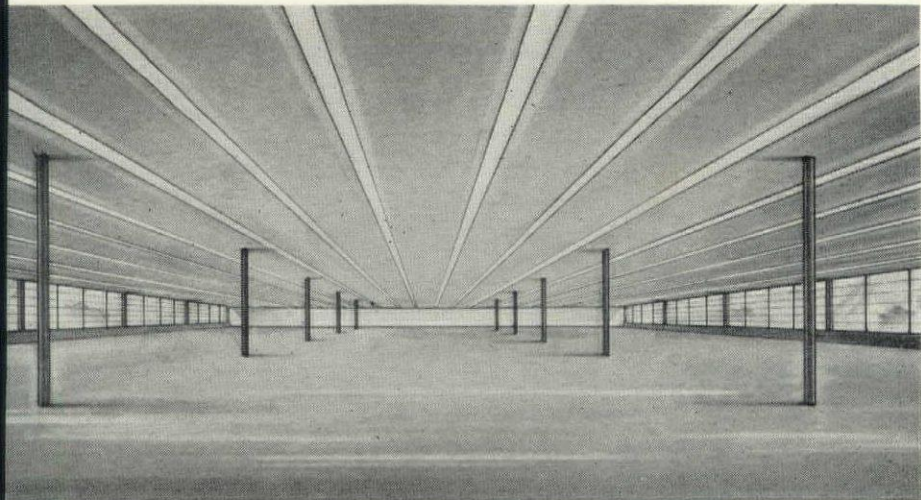


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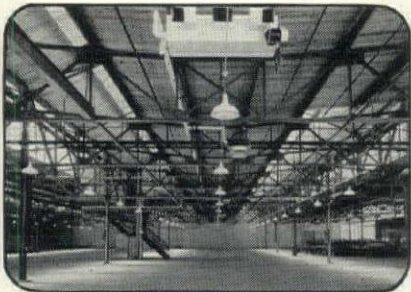


10.





11.



12.

INTERIOR TREATMENT

There are few factories whose interiors cannot be kept as clean as a hospital. To some extent this depends on the production process and on the quality of the maintenance, but design is also a factor.

The conventional open-truss ceiling (12) can be replaced with a flush surface (11). There is no reason why the maze of overhead pipes, wiring, etc. (13), cannot be installed in easy-to-service underfloor tunnels (14). Equally feasible and desirable is a system of concealed conveyors (15) for the disposal of materials with scrap value.

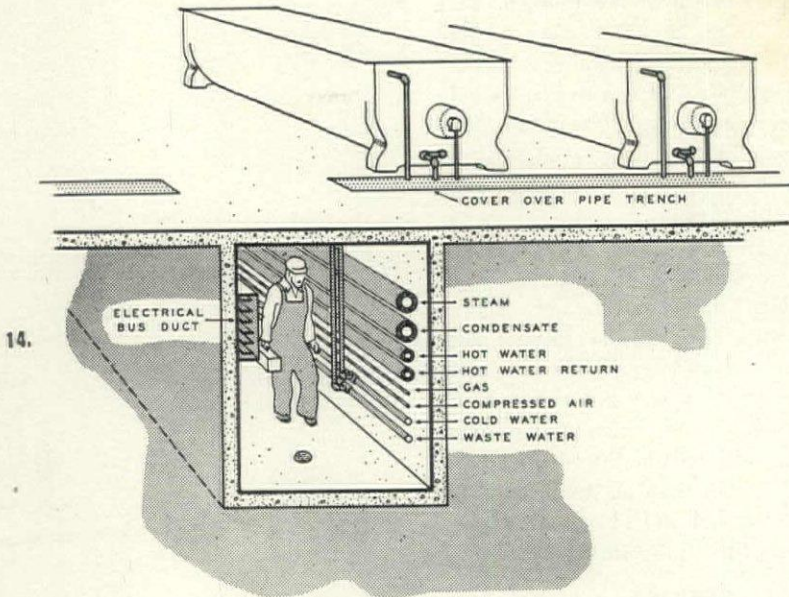
Lighting techniques will always furnish a topic for discussion in factory planning. Most controversial issue today is the question of retention or elimination of windows. In a few special cases, windowless factories are ideal: for average manufacturing and assembly, they are unnatural. Workmen complain of claustrophobia and productivity suffers.

Fluorescent lamps have been improved since their introduction and new types are being developed for the factory of the future. Flush ceiling units (11) can be supplemented by optical projectors supplying high-intensity illumination at the working plane. Lighting adjacent to windows will be controlled by photo-electric cells so that there is always a balance between natural and artificial illumination.

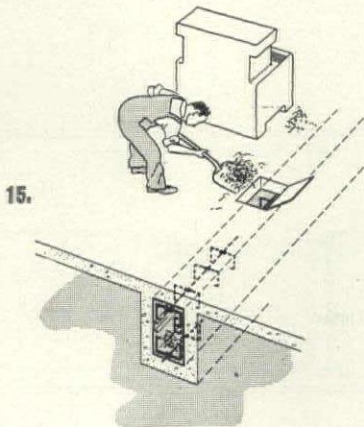
Windows have a twofold purpose in a factory building: to bring in light



13.



14.



15.



and air, and to provide an outlook for those inside. Window sash has been far from ideal. Light metals brought into mass production by the war might help, and the use of larger glass units would bring in more light and create a more pleasing appearance. The white-washed or smudged south and west walls are no solution for keeping out solar heat. Actinic glass is one material that should be looked into. Planning can also help.

The scheme shown in (16) is one simple way of approaching the problem of the west wall. The planting is not only a screen for the low afternoon sun, but an embellishment to the factory. Illustration (17) is a possible solution for the south wall. So is (18), which also has an acoustical function.

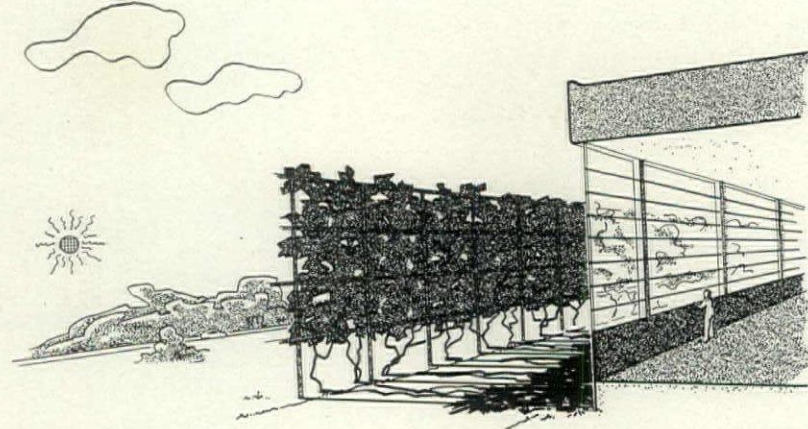
Noise is probably the greatest single distraction to workmen. Most of it is unnecessary. Sound-deflecting walls and windows (18) could help, especially if sound-absorbing material were used on the ceiling. Especially noisy operations can be isolated in sound-proof chambers, and foundations for such equipment as testing blocks and punch presses should be isolated.

Improvements in floor construction are in the offing, but for the present the best we can hope for is a resilient wood block over concrete. One or another of the new plastics may be adapted to provide an economical, durable and comfortable surface.

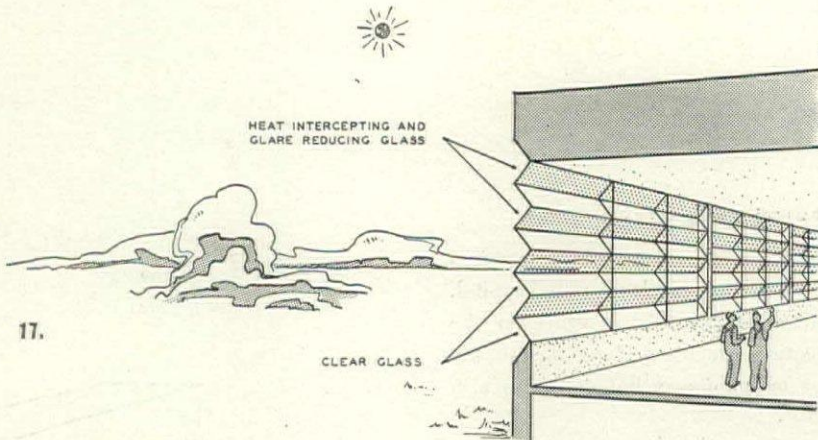
There are a score or more applications that will help achieve the "hospital clean" interior. Current experiments with color go far beyond the problem of safety, and they suggest ways to create a cheerier atmosphere. Since maintenance is an ever-present problem, color will be introduced in an integral, rather than an applied, form. Vitreous enamel and plastic sheets are only two of the possibilities.

**THERMAL STORAGE**

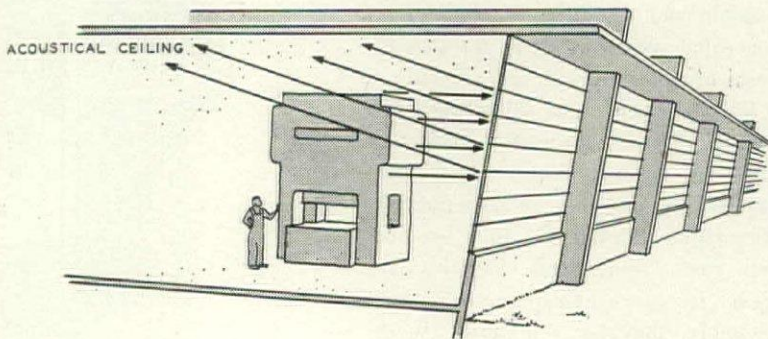
Smoke is a major nuisance in U. S. cities. The factory of the future will



16.

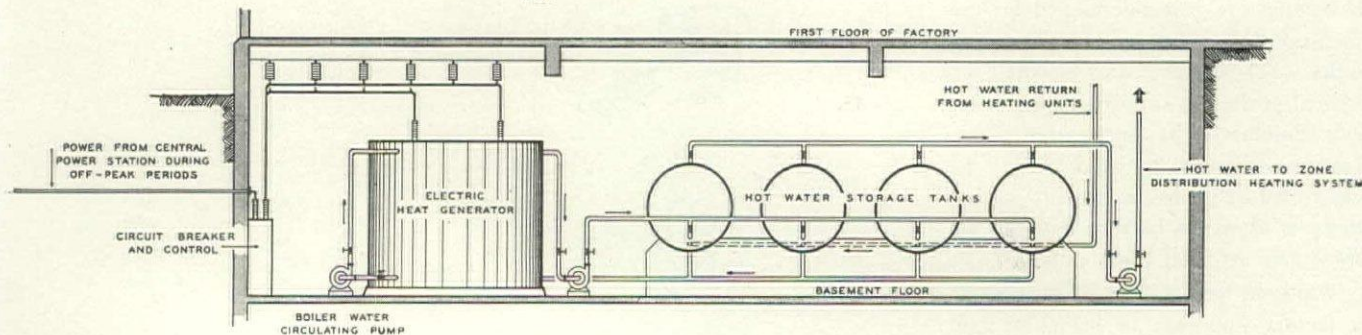


17.



18.

19.



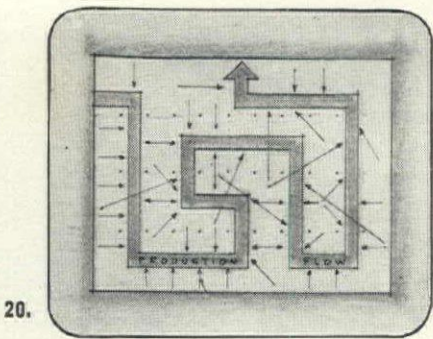


eliminate smoke because it will eliminate its boiler house, as we know it today. Thermal storage heating has been used successfully abroad. Essence of the scheme is an arrangement whereby the plant can buy power from the utilities at reduced prices during the hours when generators are operating on off-peak loads. Current is used to heat water that is stored in tanks (19), then circulated through the plant as needed.

LAYOUT

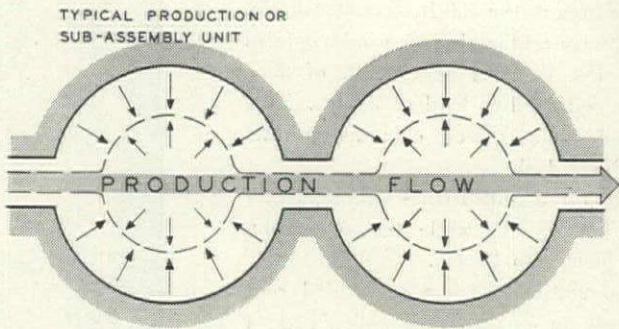
The "straight line production" principle has probably been the greatest single influence on the design of modern plant facilities. The principle itself is sound, but we have yet to exploit it to the utmost. Our great industrial buildings today are mammoth box-shaped objects hundreds, even thousands, of feet square. A person in the center of the plant loses all sight of the outside world; for him, during working hours, it may well not exist. More important, from a production viewpoint, a massive area has a tendency to interlace the process through the building, rather than carry it straight through as originally intended.

The factory of the future will be better adapted to an integrated correlation of sub-assembly units into the main line. There are many solutions: those on this page are only a few. The principle they represent is the use of relatively small units that fit naturally into a complete working pattern.



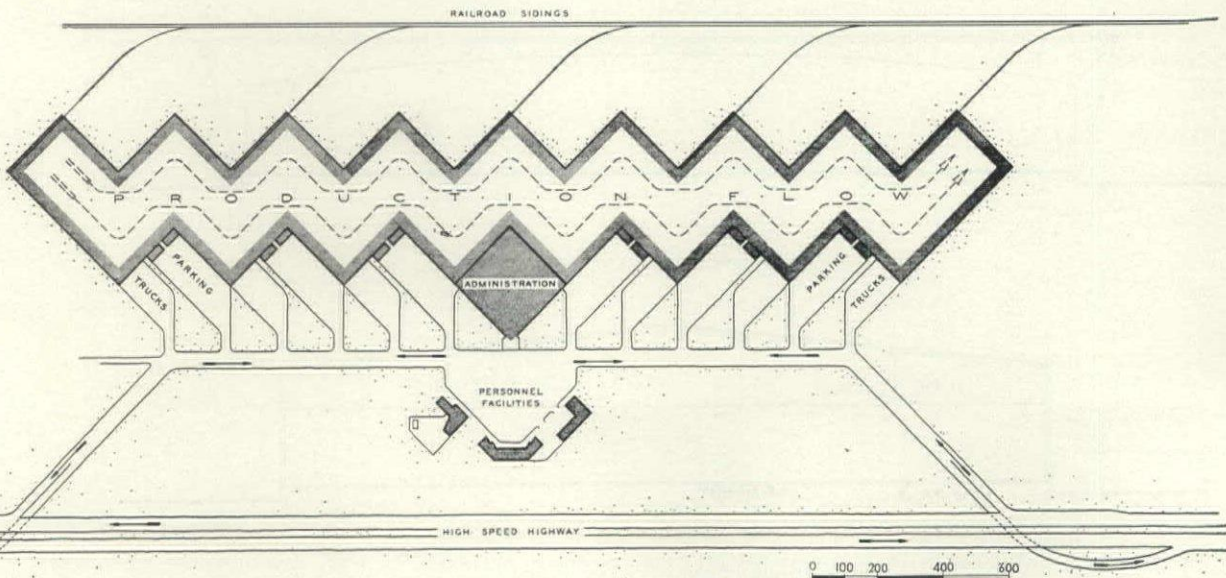
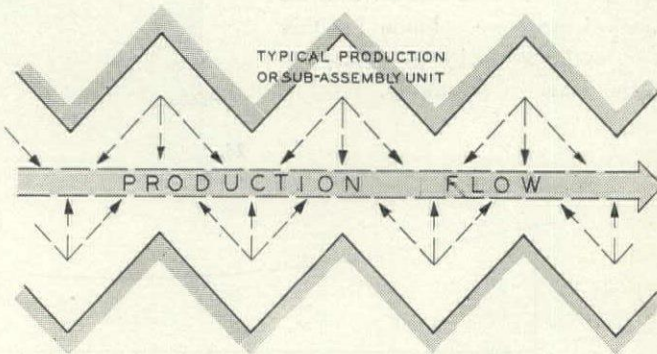
ORGANIZED FLOW

21.



ORGANIZED FLOW

22.





THE CIRCLE PLAN

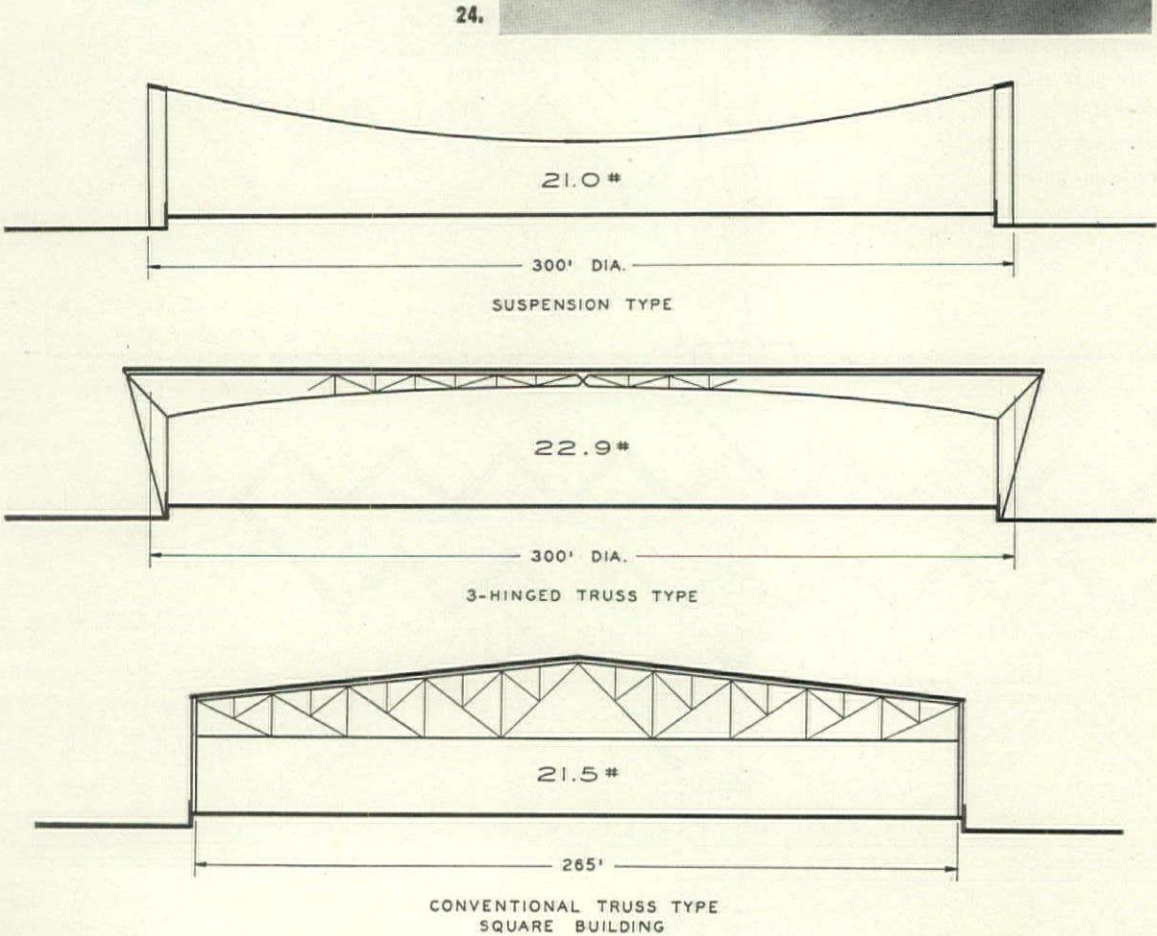
Apply a motion study to the factory and you will be surprised to find how readily the circle plan lends itself to the mass production problem. Whether these are linked as suggested in (24), or in some more complex pattern, is secondary. The interesting feature is that new structural possibilities emerge.

The diagrams below show a suspension type design for a circular plan, and a three-hinged truss scheme for the same plan, compared with a conventional truss covering a square of the same area as the 300 ft. diameter circle.

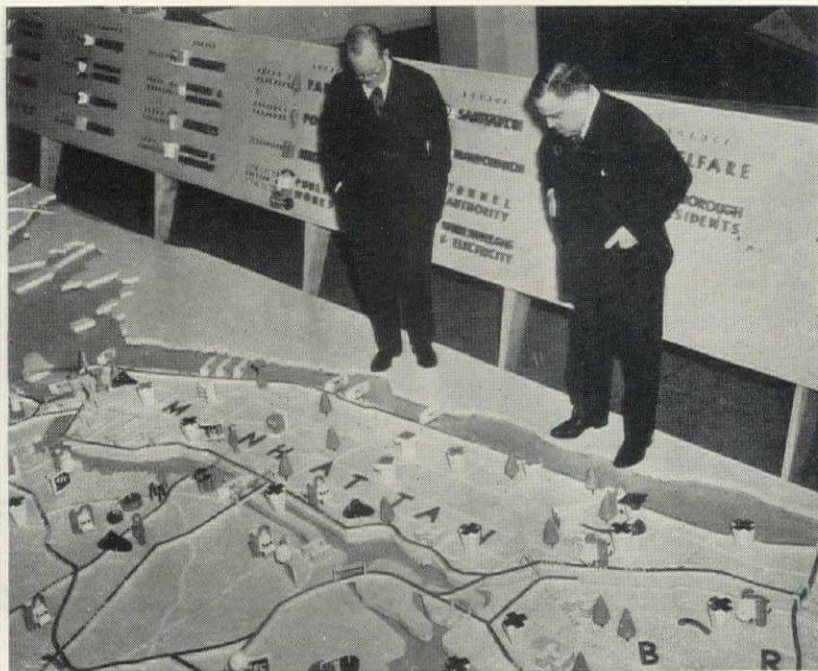
The conventional truss would require 21.5 lbs. of steel per sq. ft. of floor area, with a live load of 35 lbs. This includes the trusses, columns, purlins and roof deck.

The three-hinged truss figures at 22.9 lbs. per sq. ft., while the suspension type comes to 21 lbs.

Calculations on the suspended roof include an outside compression ring, a steel center disk, cables between disk and ring, steel deck, and exterior supports for the entire roof. While preliminary, these figures suggest that an economical structure solution for this type of enclosure is by no means beyond the range of possibility.







## PLANNING WITH YOU New York's billion dollar postwar program makes its bow to public plaudits and planners' protests.

Photos: Gottscho-Schleisner



To see what their city will look like after the war 500 or more New Yorkers wander daily into the streamlined Postwar Planning Exhibit which now occupies the old Board of Education building at 500 Park Ave. Designed by architects Skidmore, Owings and Merrill at a cost of \$90,000, this exhibit belongs to the people of New York. Here, especially for their amazement, are toy-sized models and detailed drawings of new schools, hospitals, parks, highways, sewers, and bridges which will sprout as soon as the war is over.

Crowds stop in the lobby to look at posters of manpower and materials which will be used in carrying out the Planning Commission's program — "Bricks, 344,750,000. Steel, 681,500 tons. Grass seed, 747,300 lbs." From a semi-circular ramp they next gaze down at an immense map of the metropolitan area spotted with all the projects planned for New York's five boroughs. Tiny trees, slates and red crosses symbolize parks, schools and hospitals on this giant display of postwar doings. In the main part of the exhibit citizens linger longest over specific improvements scheduled for their own boroughs, pause to peer down at the diorama presentation of the new Idlewild Airport, study parkway maps which give driving times from one part of the city to another.

At first glance the program is staggering in scope. Map after map and



model after model leave New Yorkers slightly dizzy. They discover that future plans include 60 new elementary schools, 10 health centers, 94 playgrounds, 14 hospital buildings, 16 fire houses, 12 police stations, 8 new parkways and expressways, 13 housing projects, 7 sewage treatment works and well over 500 extensions and additions to existing facilities. The cost: \$1,270,000,000. This huge expenditure will be split two ways. Less than 50 per cent will come from expected federal and state aid, the greater portion from New York's own pocket.

All these facts and figures add up to the most gigantic postwar program as yet undertaken by any city. However, New Yorkers who take a second and more thoughtful glance at the exhibit may wonder wistfully if these improvements are going to make any startling change in the appearance of their city. Although the first impression is that New York will receive a major face-lifting job, the catch is just this: the largest city in the world is so big that even a fragmentary program is a gigantic undertaking. New York's present planning could be compared to a small town's decision to build one new school, one new hospital, one fire station, one police station, a park and a couple of streets. Although ambitious, such a program would not be considered long-range planning in the sense of a complete city-redesigning job.

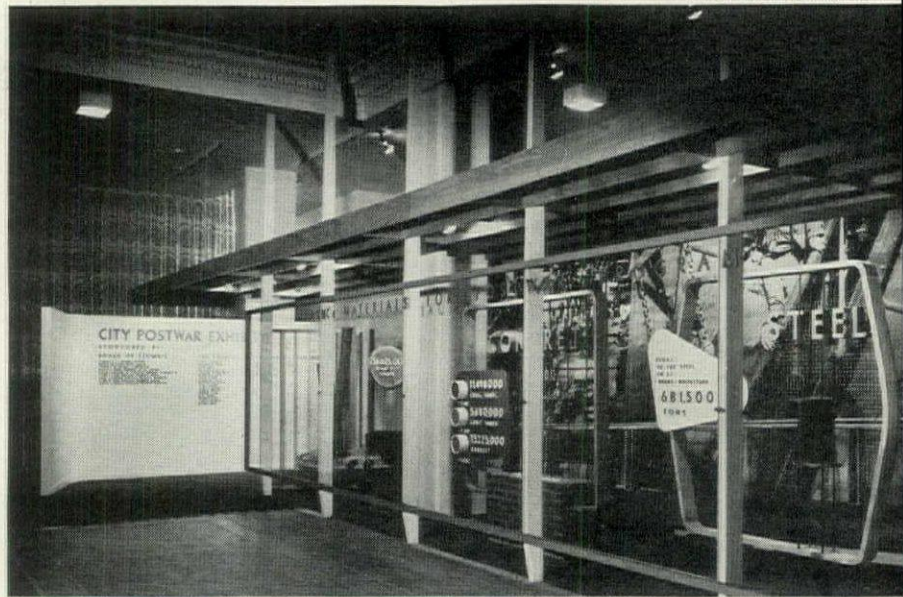
Many of the proposed improvements would have been done already if the war had not intervened. In addition, Planning Commissioners and City Fathers have politely ignored questions such as the problem of privately owned real estate which is in dreadful condition—although the program may turn out to be the first step in this direction.

Commissioner Robert Moses, power behind the present program, has always been a little suspicious of long-range over-all city planning. Therefore New York's postwar plans are primarily "immediate and practical."

Mayor La Guardia has given perhaps the best definition of what the program really amounts to. According to the Mayor, it "... will furnish the city and my successors for two or three succeeding administrations a complete, well studied, well-rounded public improvement program covering every civic, educational, social, health, traffic and safety requirement insofar as intelligent planning and predictable funds make it possible."

So far so good. As the Mayor's statement makes clear, New York's program is a huge public works undertaking which must be a part of any city plan—but it is not a plan itself.

In spite of this the program should



EFFECTIVELY DESIGNED DISPLAYS BRIGHTEN UP DULL STATISTICS OF MATERIALS

not be too lightly dismissed by city planners elsewhere. It has two important aspects which every town will find significant.

First, plans will be ready to go immediately after the war to ease probable unemployment when our troops come home and war factories close down. At its peak of employment the program expects to put 200,000 men to work. Indirectly thousands more will find jobs producing the necessary building materials. Every town in America will have to cope with a similar adjustment problem after the war and this is the time to look ahead.

Second, there is a certain degree of coordination in the program even though the projects are not related to an over-all plan. Separate master plans have been prepared for schools, parks, health centers, highways, sewerage, slum clearance and housing as well as rezoning from 10th St. on up in Manhattan. All the projects which fall into these categories have been designed to fit with their master plan. Schools will be placed near housing developments, sewage disposal plants located in strategic positions. The new arterial highway pattern will be coordinated with future highway plans. Parks will be part of an eventually related system.

These two aspects are both important, and the latter may indicate a tendency toward eventual complete city planning. So far, however, New York's program is a mixed effort. It is not the city planner's dream, in fact no respectable city planner would even get into bed with it. But it synthesizes present and improved public facilities within the limitations of existing laws and, more important, existing public apathy towards planning. Question: will it prove a short-range bonanza, a long-term boomerang?

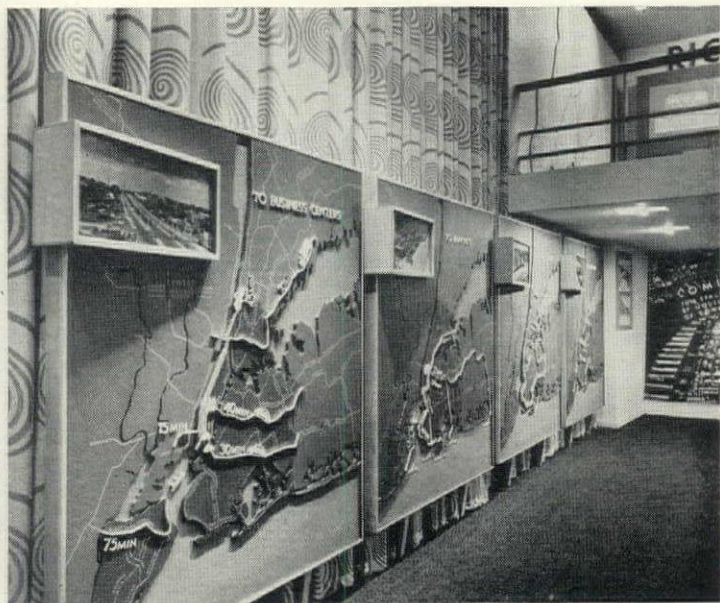
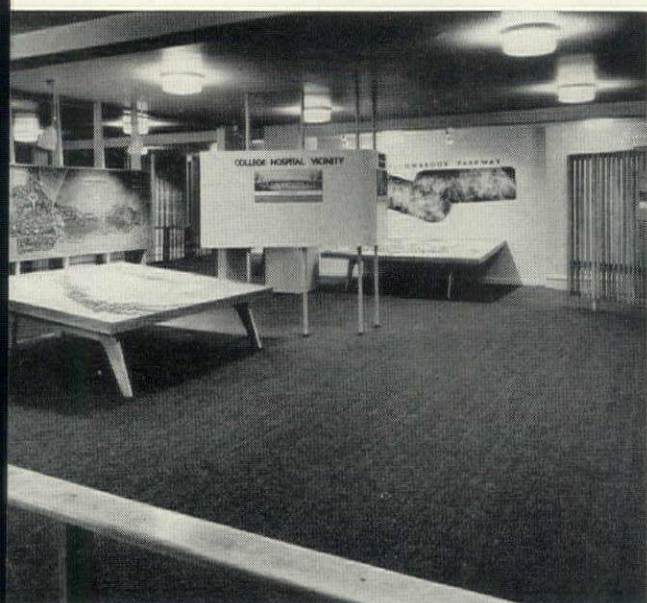
#### NEW YORK WILL SPEND:

CHIEF MEDICAL EXAMINER	\$500,000
CORRECTION	6,374,000
EDUCATION	118,678,000
FIRE	5,524,000
HEALTH	5,065,000
HIGHER EDUCATION	7,448,000
HOSPITALS	98,586,000
LIBRARIES	6,262,000
MARINE & AVIATION	76,018,000
MARKETS	1,970,000
MUSEUMS & INSTITUTIONS	17,984,000
PARKS	77,982,000
POLICE	3,597,000
BOROUGH PRESIDENTS	239,627,000
PUBLIC WORKS	
Buildings	12,053,000
Bridges	16,338,000
Sewage Disposal	86,640,000
PURCHASE	620,000
SANITATION	8,749,000
TRANSPORTATION	100,870,000
BOARD OF WATER SUPPLY	106,000,000
WATER, GAS, ELECTRICITY	10,380,000
WELFARE	600,000
FEDERAL GRADE CROSSING	2,546,000
HOUSING AUTHORITY	115,282,000
TUNNEL AUTHORITY	38,000,000
STATE & FEDERAL HIGHWAYS	89,000,000
STATE GRADE CROSSING	8,957,000
STATE PARKWAY	7,500,000
TRIBOROUGH BRIDGE AUTHORITY	1,000,000

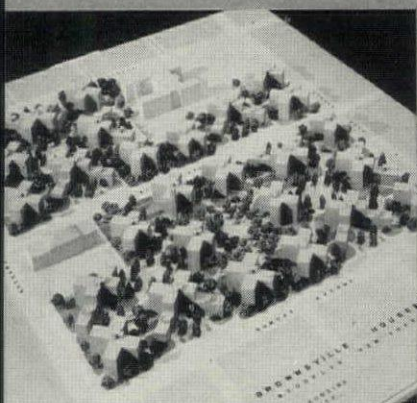
#### Projects shown on facing page:

1. Brownsville housing development.
2. P.S. No. 33 adjacent to Elliot Houses.
3. Nightingale Hospital, Manhattan.
4. Playground near Morrisania Houses.
5. Brooklyn-Queens Expressway.
6. Alley Park, Queens.
7. Brooklyn Terminal Market.
8. 26th Ward Sewage Disposal Plant.
9. Restaurant, Botanical Gardens, Bronx.





NY HOLDS DISPLAY FOR RICHMOND AND QUEENS. MAIN FLOOR, DEVOTED TO MANHATTAN, SHOWS PARKWAY SYSTEM



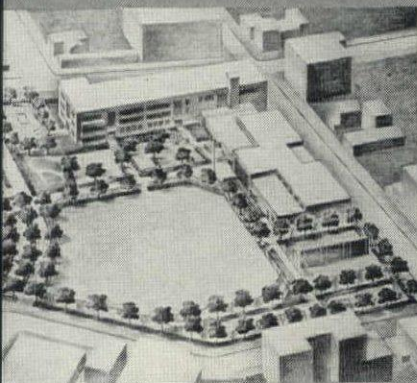
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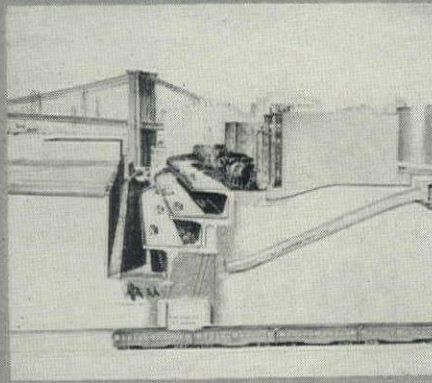
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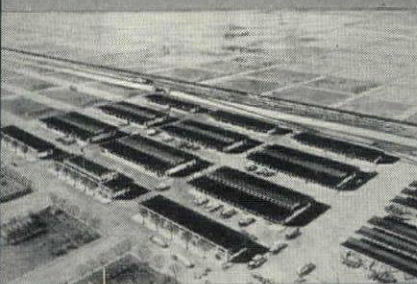
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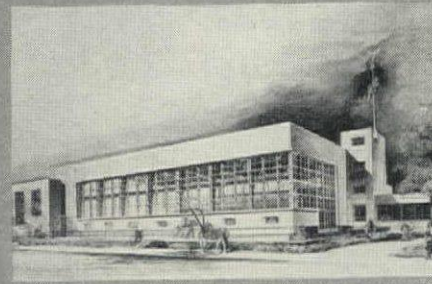
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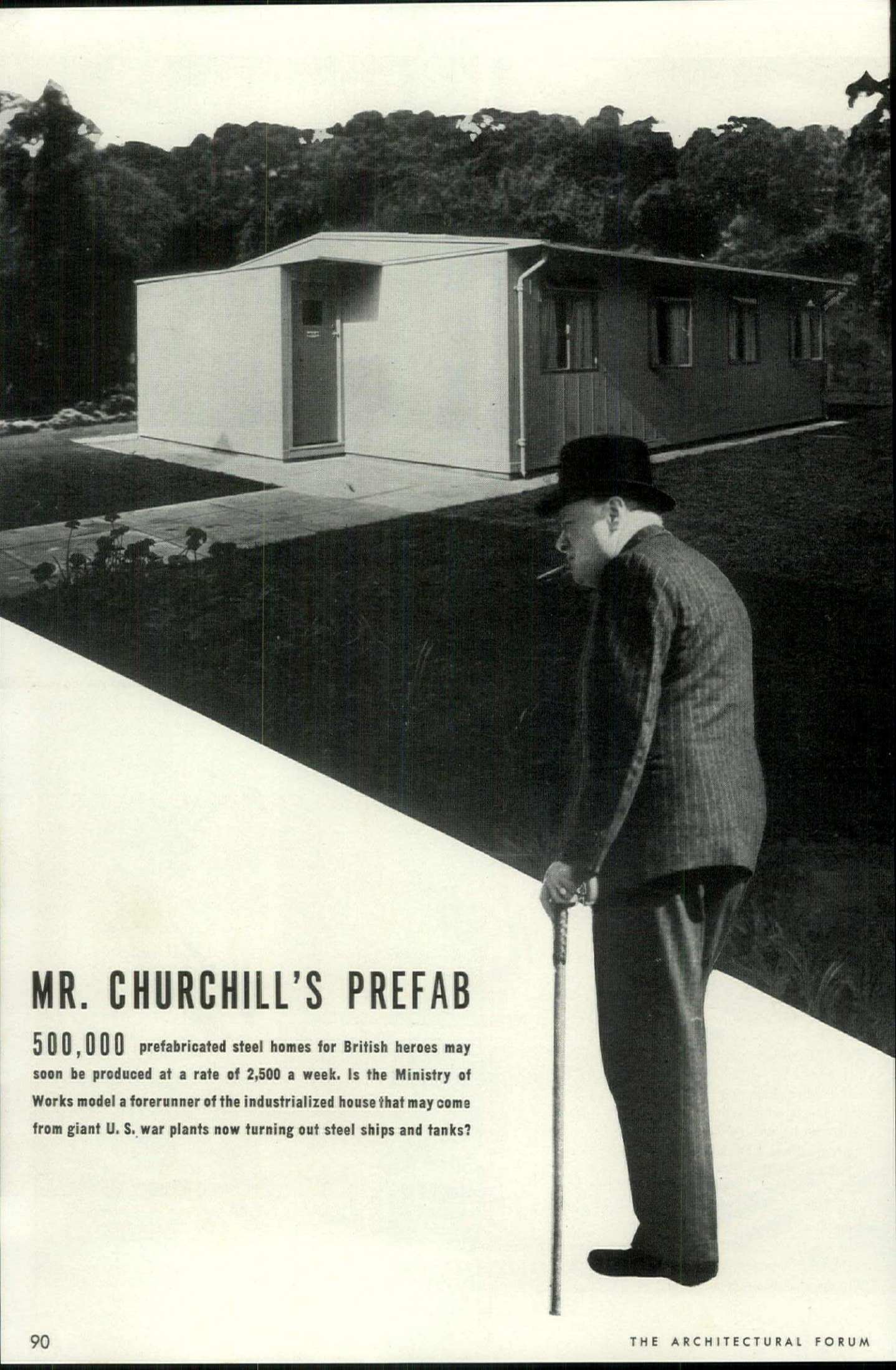


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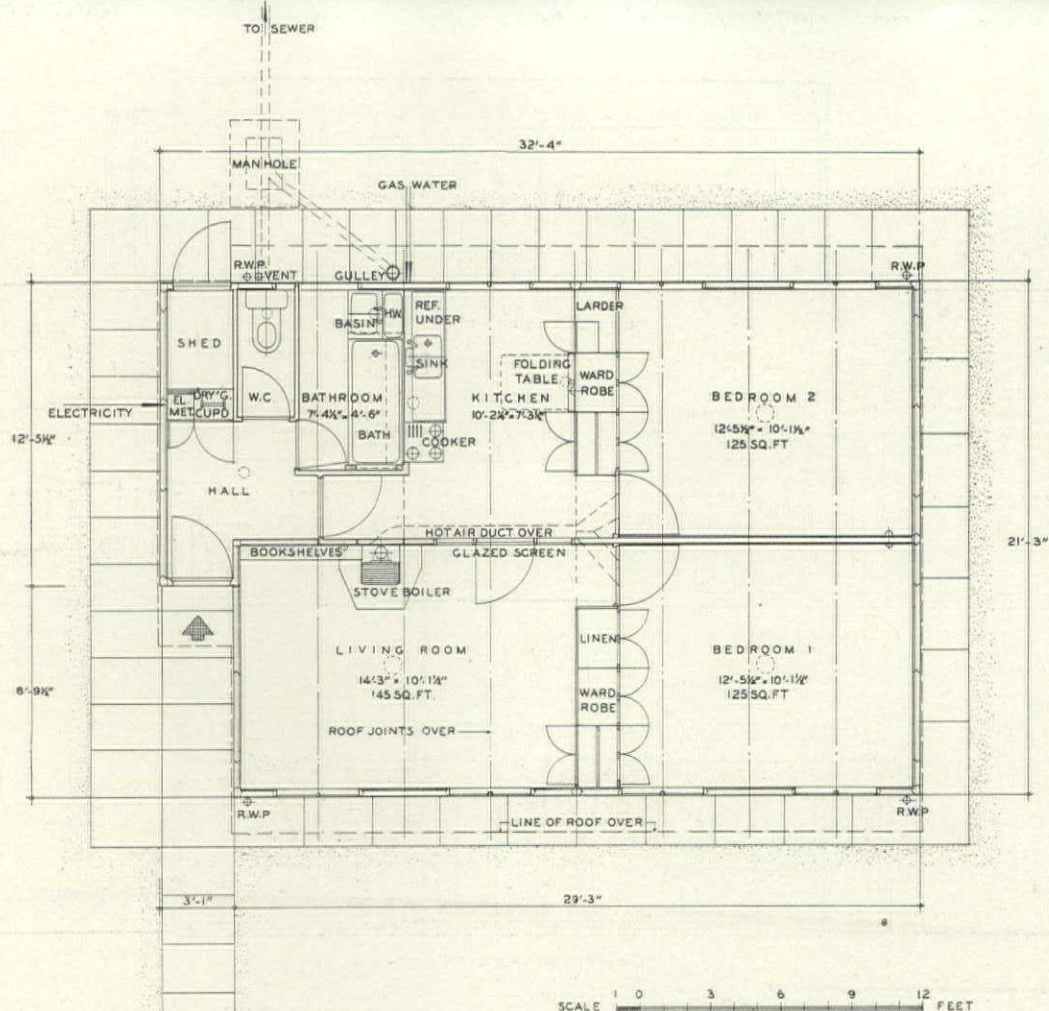




## MR. CHURCHILL'S PREFAB

**500,000** prefabricated steel homes for British heroes may soon be produced at a rate of 2,500 a week. Is the Ministry of Works model a forerunner of the industrialized house that may come from giant U. S. war plants now turning out steel ships and tanks?



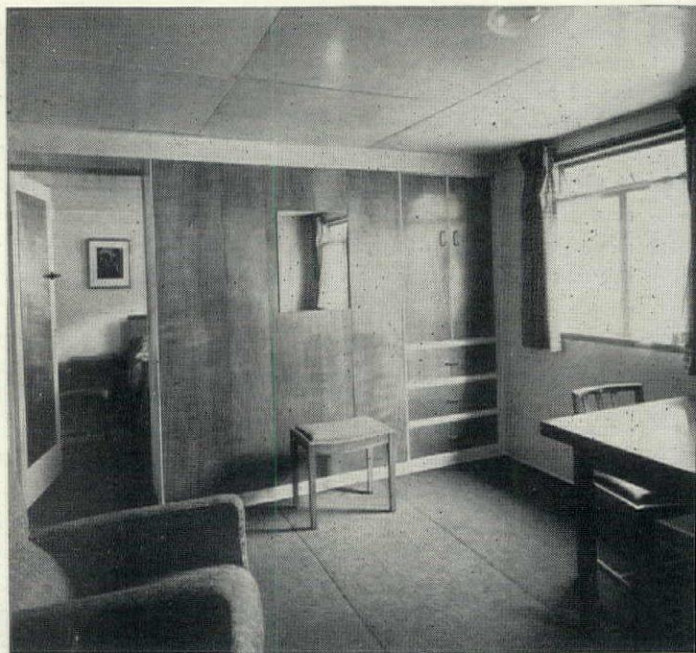


STRANGE TO AMERICAN USAGE IS THE SINGLE ENTRY GIVING DIRECT ACCESS ONLY TO BATHROOM AND KITCHEN

When the Prime Minister promised in March that the government would supply a half-million steel emergency homes for returning heroes, Britain's bombed-out, doubled-up families nodded approval, waited with skeptical interest. Stripped at last of official secrecy and canvas coverings, the government's yellow-and-green venture into prefab was by May Day on view at the Tate Gallery.

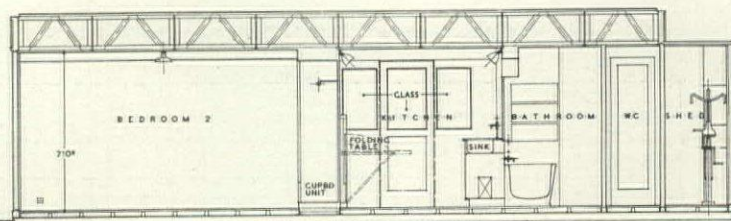
Churchill Villa, as delighted Britishers quickly dubbed it, is, very probably, the first completely industrialized house that will ever reach the reality of mass production. An assured market of a half-million units will open the way for integrated production on a scale that has been every U. S. prefabricator's dream. And recognizing this unprecedented and almost limitless design opportunity, the Ministry of Works had settled for no half-way formula. From the single steel unit holding bathroom and kitchen equipment to the steel wall panels with built-in steel windows, every part of the house can be built in one factory and, with only minor exceptions, from one material.

For Churchill Villa's nearest U. S. relative, it is necessary to look back to such revolutionary prefab models of the early Thirties as the Moto-Home. This impressive steel, cement and asbestos vision was built around a factory assembled mechanical core, which held not only plumbing and kitchen equipment, but also heating and air-conditioning. But the mass market necessary for economic production of

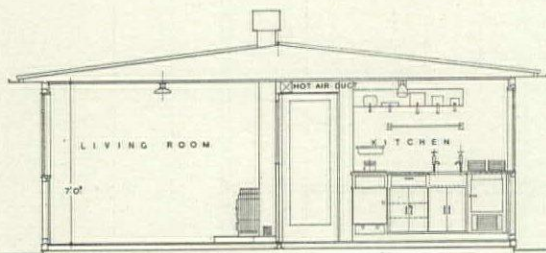


**LIVING ROOM** Interior gains warmth from rich veneer wall finish. Shelled china cupboard and drawers are built into central storage wall. Although this room will have many uses, its isolation from the front door suggests something of the traditional "parlor" treatment.

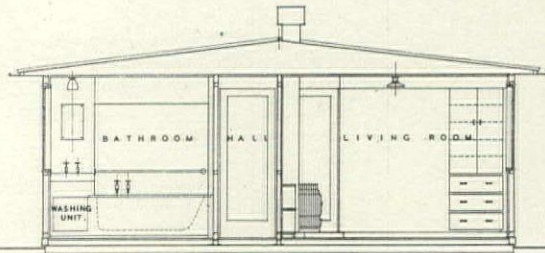




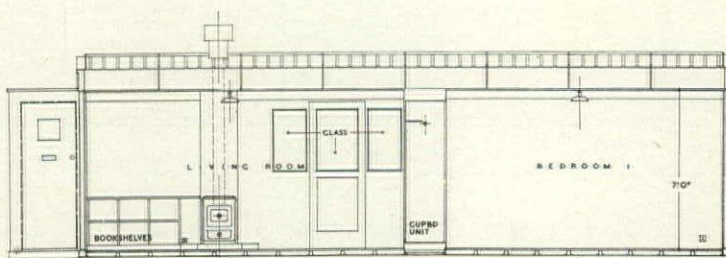
LONGITUDINAL SECTION



CROSS SECTION



CROSS SECTION



LONGITUDINAL SECTION

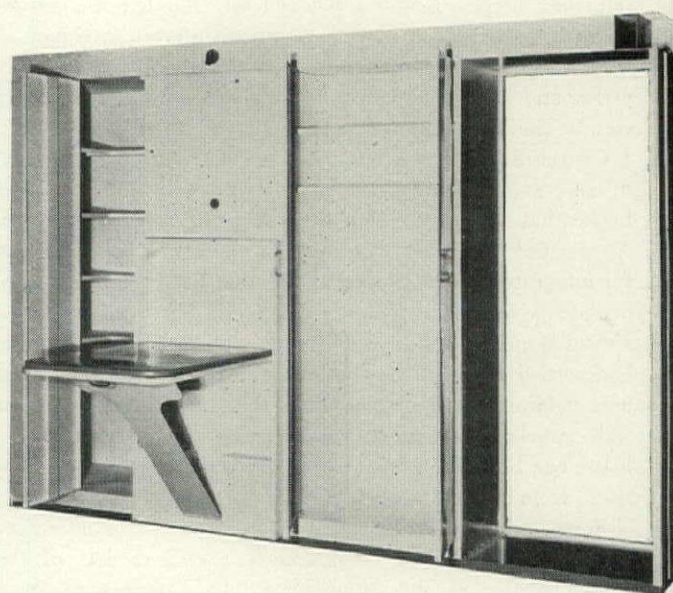
SCALE 1 0 3 6 9 12 FEET

FACTORY INTEGRATION OF EQUIPMENT AND ALL-STEEL CABINET WORK ACHIEVES LIVABILITY IN MINIMUM SP

such a unit was lacking. When war housing need supplied a tremendous market impetus, coincidental metal shortages forced prefabers to turn back to wood panel construction, with emphasis on demountability.

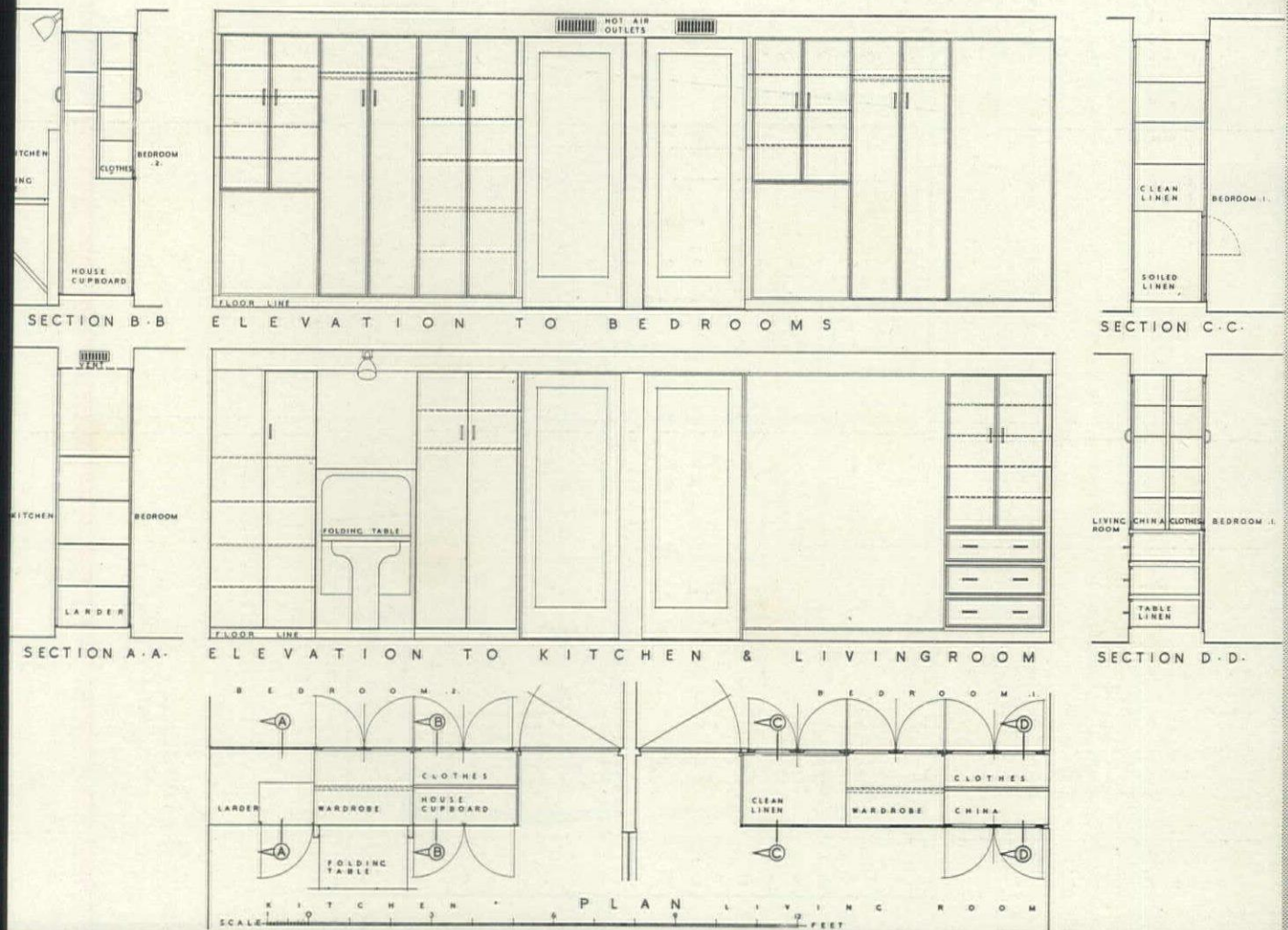
While Britain's lack of lumber is undoubtedly paramount in the decision to produce an all-steel house, there are other considerations more meaningful for the U. S. War's end will mean substantial surpluses, both of steel and of metal-working machinery. The British model, therefore, has enormous significance as the first concrete example of the kind of product that may emerge from the U. S. Steel-Foster Gunnison combine and from the rumored plans of a dozen other war giants now supposed to be exploring the industrialized house.

It is obvious that Ministry of Works planners have felt small obligation to make concessions to conventional construction and architecture, and they must have been assisted greatly by the pains the government has taken to tag the unit clearly as "temporary." The house will be leased to tenants by local authorities; its life will be limited to 10 years by government license. Packing a living room, two bedrooms, kitchen and bathroom into 616 sq. ft., the planners wasted no space in corridors, supplied only one door. Only hall is a small entry giving access to the kitchen and bathroom. A shed has been provided, however, for storing the bicycle which many a Britisher owns. A central storage wall runs



**KITCHEN SECTION OF CENTRAL STORAGE WALL** holds larder (left) with upper part ventilated to outside air for storage of perishable foods. The housewife can store brooms and crockery in the cupboard on right. Small hinged table folds up when not in use, giving added working space.

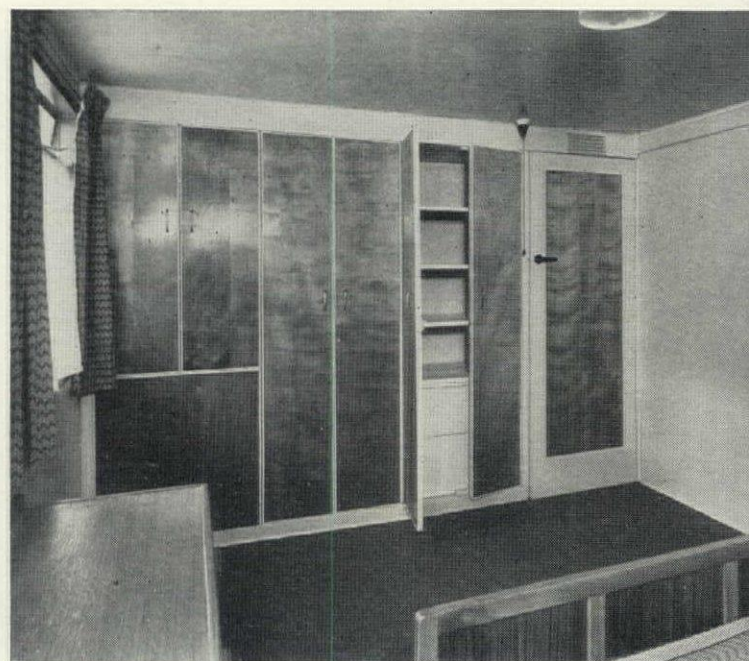




CENTRAL STORAGE WALL RUNS THE WIDTH OF HOUSE AND OPENS INTO MULTI-PURPOSE CUPBOARDS IN ALL ROOMS



**BEDROOM SIDE** of living room storage wall includes a linen closet (right) with space for laundry hamper. A similar arrangement in other bedroom is the reverse of kitchen cupboards shown on opposite page. Each bedroom has a shallow cupboard and full-height wardrobe closet with horizontal hanging rail.

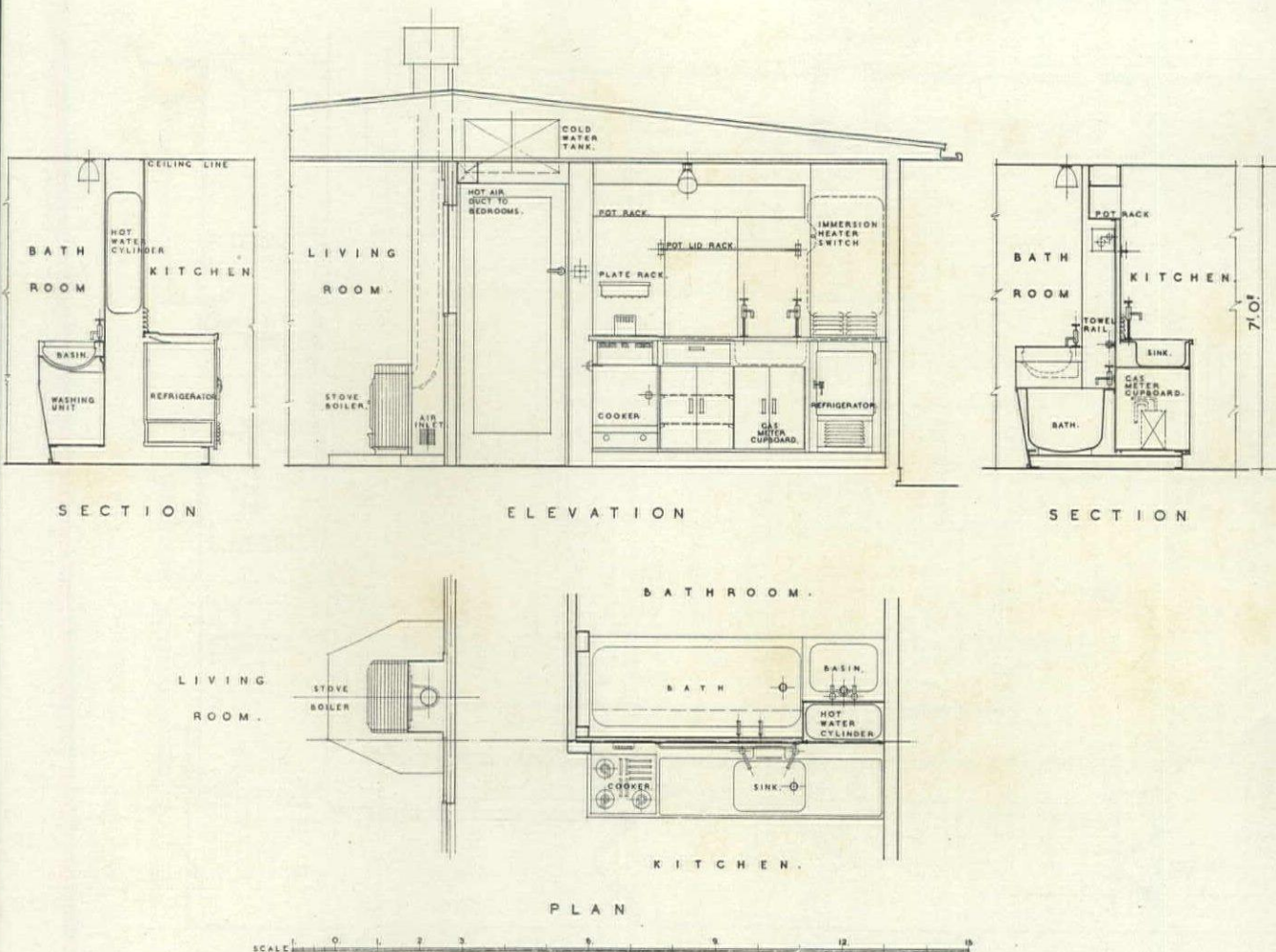


**BEDROOMS** have ample space for double or twin beds, since storage space is built-in. Thick storage wall also helps to insulate the bedrooms from noises in other living space. House can comfortably meet requirements of family of four. Hot air heating is supplied in both bedrooms through steel ducts connecting with the living room fire.

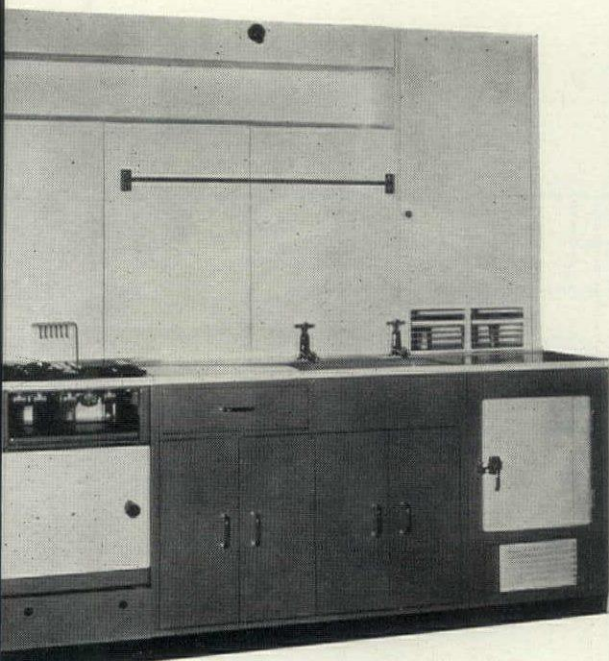




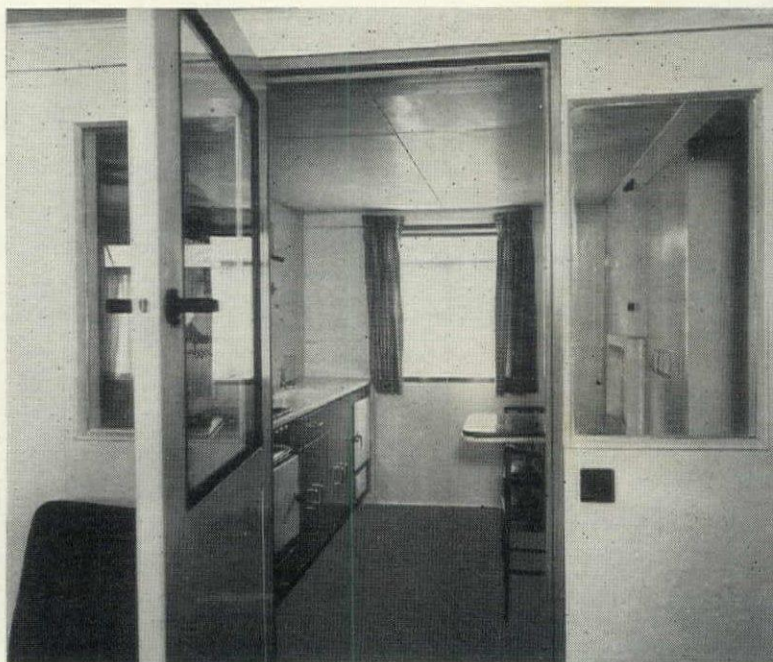




STAT SWITCHES ON ELECTRIC HEATER IN WATER STORAGE TANK BUILT INTO CORE OF KITCHEN-BATH UNIT

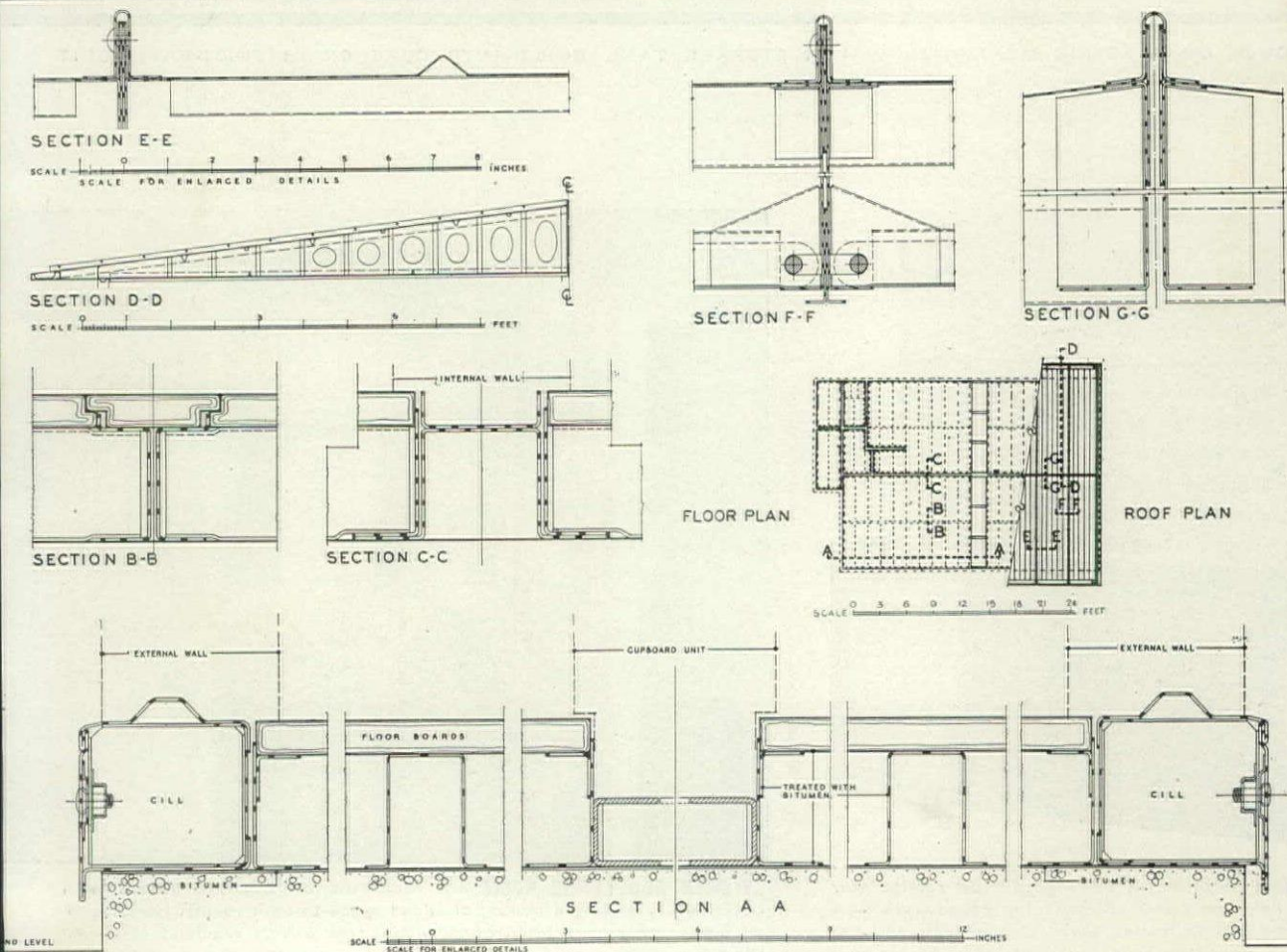
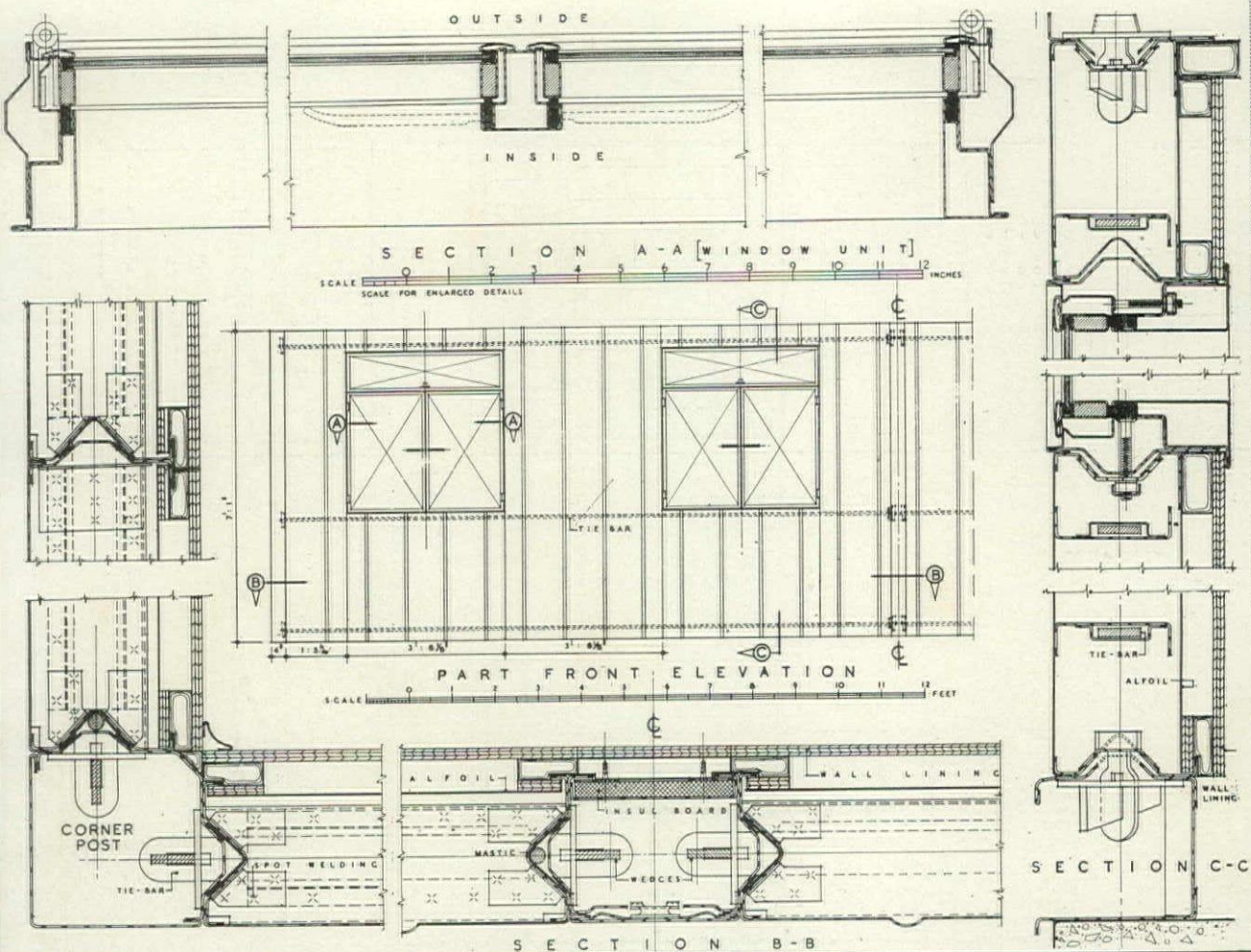


**ACT KITCHEN UNIT** with stove, sink, mechanical refrigerator cupboard space held most enchantment for housewives who the model. Few British homes have refrigerators, and the size of this one indicates that the customary larder will let plenty of use.



**KITCHEN AND LIVING ROOM** are separated by a glazed screen with center door, lending a feeling of added space to both rooms. Handles of all doors are placed high, apparently to be out of reach of children. Workmen who erected the model house each put in a request for one for themselves.







# FAMILY BEHAVIOR, ATTITUDES AND POSSESSIONS

An ambitious house-to-house research study limited to middle-income families, establishing a new and factual basis for small house planning. Apartments and free-standing dwellings share most shortcomings—pet peeve is still inadequate storage.

A good deal of data of interest to architects and builders of small houses has been brought to light in a recent research study published by the John B. Pierce Foundation.\* Owing to the voluminous and undigested character of the report some of its more intimate details have already been the subject of considerable ribald publicity. Austere *Business Week*, in a fit of verdant abandon, led off with a selection of juicy statistics mostly relevant to the sleeping habits of married couples. Conscientious and underfed columnists all over the country chortled and quoted. The *New Yorker*, trailing in the home stretch, capped the panic with a Perelman parody. But now that the wits have had their fun, the report sifts down to a wealth of factual material pertinent to small house planning.

Most architects and builders have long cherished certain convictions about the habits and practices of family life and have worked out their designs accordingly. The study, in a somewhat fragmentary way, confirms many of these familiar beliefs and suggests other, hitherto ignored aspects. While it is not intended as a comprehensive or conclusive survey, it is by far the most ambitious analysis of the functions connected with the sleeping portion of the house yet attempted. It deals solely with the bedroom, bath and storage space related to these units and is geographically limited to the New York area. At present similar research projects are under way in numerous parts of the country but only negligible regional differences have turned up. Two hundred and one families were selected for interview; 65 are tenants of a limited dividend housing development, the balance live in a large project of one family houses ranging from \$3,000 to \$4,500 in cost. The selection of these two groups is in itself important since they represent the socio-economic bracket from which most tenants of medium-cost housing will be drawn. Certain differences exist in the living habits of the two groups but they are nevertheless homogenous in a great many respects. Generally speaking, the adults have similar backgrounds and education. Most families have at least one child; few have over three. Monthly rent for both groups works out to about \$52. All family incomes are from \$2,000 to \$3,000. Only four-room dwellings housing five or fewer related people were studied.

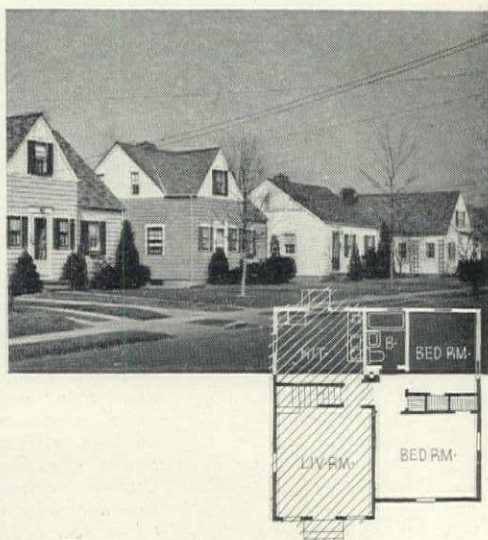
It is well to remember that only housewives were interviewed and by female interviewers. This fact alone rendered

\**Family Behavior, Attitudes and Possessions*. Published by the John B. Pierce Foundation, 40 West 40th Street, New York, 18. \$3.

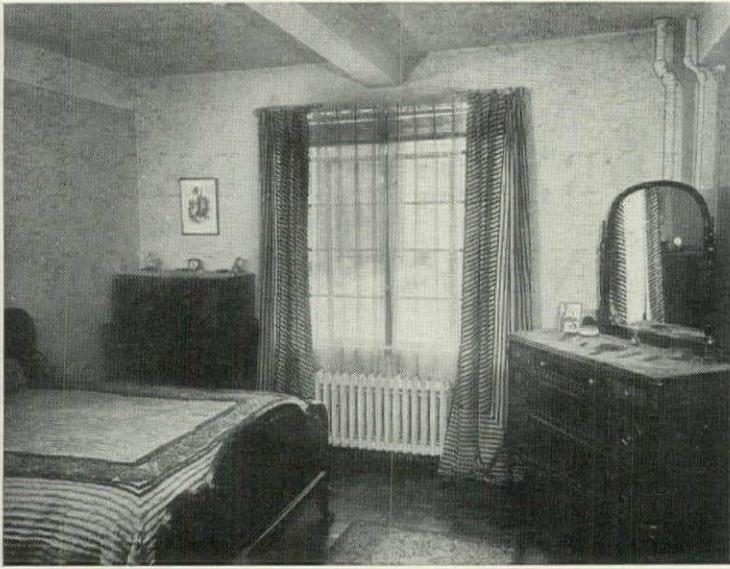
Photos: Myron Ehrenberg



Families interviewed were equally distributed between a multiple-dwelling project and a large development of speculative houses. Note that portions of dwelling studied—the bedroom-bath areas, are almost identical.







MASTER BEDROOMS USUALLY CONTAIN "SUITE"; SECONDARY BEDROOMS HAVE MORE USEFUL, MISCELLANEOUS FURN

the material incomplete since the husbands' and children's reactions are secondhand.

The survey is divided into two sections treating facts and attitudes. The first part deals solely with sleeping, dressing, washing, elimination and related activities. A great deal of convincing statistical information on this subject was gleaned from questionnaires, inventories and time logs. The second part of the survey, the Projective Technique, is subdivided into two parts: verbal interviews and the use of model furniture to determine the requirements for the "ideal dwelling". The findings in this portion are less concrete, more psychological, but of equal significance to the factual information of the first part since they provide a clue to the personal desires of future tenants.

## SLEEPING

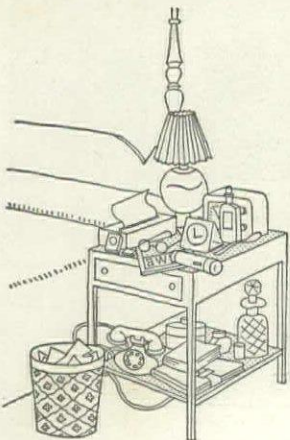
While the study shows that bedroom use is usually limited to sleeping and dressing, a general complaint is that of insufficient space. From a design viewpoint, this fact is significant and puzzling since it appears to be based on conflicting emotional and functional requirements. Most women want quite an assortment of furniture in the bedroom and therefore the desire for additional space often can be interpreted as a mere wish for additional furniture. There exists, in fact, a definite resistance to large, unoccupied floor space. Most housewives want the master bedroom to contain at least a double bed, a chest and dresser, an upholstered chair and one or two night tables. In flat contradiction to this tendency

toward overcrowding, when questioned on the actual acts of dressing and undressing, the majority claimed that they haven't enough room. At least half expressed the desire for a separate dressing room but most rejected the idea of two small rooms for sleeping and dressing in place of one large room for both. Since most men's and women's grooming is done in the bathroom, a combined dressing-bath might have been a better suggestion, but this alternative was not examined in the study.

America is known as the country of twin beds, but nine out of ten families interviewed have double beds in the master bedroom. To keep them free of the wall on both sides is a practical, general custom that permits easy access for both occupants. This arrangement, however, is not usual in secondary bedrooms where single or three quarter beds are more apt to be placed along a wall. More storage furniture and miscellaneous overflow items such as desks, bookcases, trunks, sewing machines and even pianos are kept there. Overcrowding the secondary bedroom, frequently the child's room, indicates inadequate storage and living space throughout the house. It may be simply that families possess too many odds and ends, but if this is a fundamental human trait, it deserves consideration.



*"More than half of the adults read, smoke or listen to the radio in bed before going to sleep."*

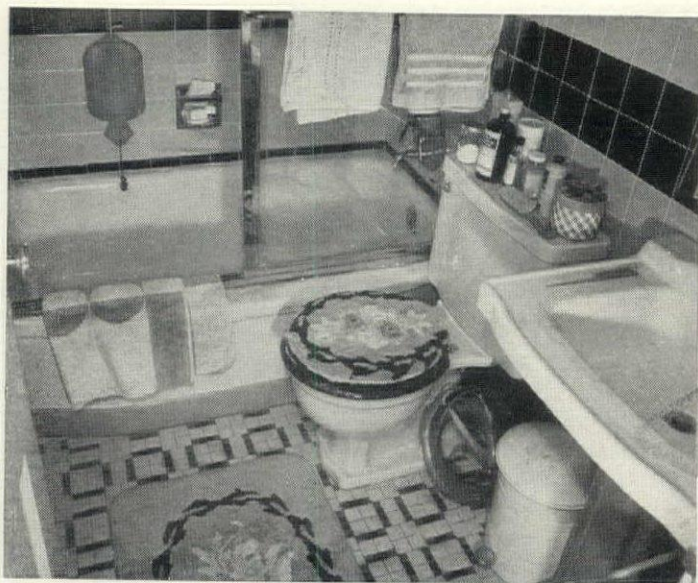


*"All families had a night table near the bed holding in order of frequency: handkerchiefs or cleansing tissue, lamp, clock, newspaper, magazine, books, radio, eyeglasses, water, food, smoking equipment, medicine, candy, flashlight, telephone, writing equipment, alcoholic beverage; also a rubbish container near bed."*

While the study underemphasized ventilation and window arrangement, other interesting points about bedroom planning are:

- Housewives, particularly apartment dwellers, complained of bedroom drafts; attributed them mostly to cross ventilation or northern exposure.
- Parents and children express a strong desire for each child to have its own bedroom.
- Tenants of individual houses have twice as many guest sleeping facilities as do apartment dwellers having the same number of rooms. Apparently a more suburban environment increases the importance of this facility.





STORAGE FACILITIES REVEAL INADEQUATE SPACE AND DISORGANIZED ARRANGEMENT THROUGHOUT DWELLING

- The sleep of many families is disturbed by street lighting and outside noises.
- Apartment dwellers have less "peeping in" but mind it more.
- Most husbands and wives sleep together in a double bed but almost half the wives consider twin beds ideal.
- Most women object to a combined living-bedroom because of exposure of beds during the day and unsuitable appearance of bedroom furniture.
- Women show a definite dislike and even fear of small sleeping spaces.
- When available, a full length mirror is most often used. Most women not owning a triple mirror would like one.

## STORAGE

The storage arrangement for groups of articles is just as important a design problem as adequate space for the total number of items possessed. Bathroom storage, storage of bedding, clothing and household items appear to be consistently inadequate. A wide variety of places are used by different families to store the same type of belonging.

Most housewives concluded that lack of space is a more serious defect than arrangement. However, since it can be assumed that few if any of them are familiar with recent developments in the scientific arrangement of storage space, this opinion should not be taken too seriously. Both in the houses and apartments, existing storage space appears to be average, or slightly below average. Each housing unit has standard size bedroom and hall closets but the plan does not indicate that the houses were provided with coat closets though the apartments have them.

*"Some overcrowding of clothes closets is caused by valises, toys, vacuum cleaners, sporting equipment, bridge sets, books, tools, trunks, etc."*



Overcrowding and poor organization often cause articles to be stored in inconvenient places. It is not unusual to find cleaning utensils in the linen closet, though the latter may

*"The husband's clothes are likely to be stored in the hall closet as well as the bedroom closet."*



be located next to the bathroom. Frequently, soiled linen is found in the bathroom closet, the kitchen tub, the washing machine and even the vanity. But bathroom storage appears to be the most inadequate of all:

- Only three per cent of the housewives are able to store clean towels in the bathroom though almost all of them would like to.
- Of 36 toilet accessories listed, at least 25 of them are to be found in over half of the homes though a great number of them are not kept in the bathroom.
- Only one out of seven wives considers her bathroom storage space adequate.
- Extra rolls of toilet paper are kept in the bathroom in only six instances.
- Among the various families, sheets are stored in eight different places.
- Two-thirds of the wives and half of the husbands have not sufficient closet space for their clothes.
- Over half the women share closets with their husbands but 81 per cent do not like this arrangement.
- The number of drawers provided affects their convenience since extracting an article from an overcrowded drawer often involves a lengthy search and disarranging other contents.

## BATHING

The bath, usually the smallest room in the house, has the greatest variety of functions and is the most frequently used.



Of the four functions involved in the study, sleeping, dressing, washing and elimination, all but the first are totally or partially carried out in the bathroom. Therefore, its arrangement, space and facilities deserve the designer's closest attention.



"Washing feet was reported second oftenest as another use for the tub; others are umbrella storage, washing hair, washing clothes."

Noise, size and minor planning details were most often subjects of complaint. Fixtures for the most part were found satisfactory though basins were mentioned as being too small. Noise is by far the most common annoyance. All but three of the women state that toilet flushing can be heard in other parts of the house. Most object strongly to this disturbance because it annoys and embarrasses them. Two housewives complained that it interferes with their listening to the radio.

The size of the house bathroom (4 ft. 10 in. by 6 ft. 8 in.), was often referred to as too small. While the apartment baths are narrower and just a few inches longer (4 ft. 1 in. by 7 ft. 6 in.), only a quarter of the families found them unsatisfactory in size. Layout was practically ignored by the women interviewed, undoubtedly because standard bathroom arrangement is so firmly fixed in the layman's mind. The toilet was occasionally mentioned as being too near the shower, too near the door or too far away from the door, but on the whole, little constructive criticism of bathroom arrangement was offered.

It is not surprising to find women very much against the location of the bathroom window over the tub, as was invariably the case in the apartments. While the small, standard window is reported to give adequate light and ventilation, both groups complain that there is no privacy when it is open. Even when closed, the obscure glass used in the windows of the apartment bathrooms is found unsatisfactory from this viewpoint.

Congestion among bathroom uses is evident throughout the study and calls for a close examination of the relation between elimination and washing. Numerous wives postpone washing or rush through it so as to vacate the bathroom for other members of the family. A third of them wash their hands and faces in the kitchen sink. Though in some



"Women do not mind walking during dressing."

instances speed may be the motive for these practices, it is more likely that most women use the kitchen because the bathroom is either inaccessible or otherwise occupied. Very few of the women interviewed have extra lavatories in their homes but at least three-quarters of them said they would like one.

A number of small points further emphasize the multiple use and poor planning of the average bathroom:

- Possessions kept out or in frequent use include; soap, towels, wash cloths, paper towels, bath brush, pumice, sponge, shaving equipment, hand mirror, cleaning powder, floor mop, floor brush, floor rag, shampoo, hair tonic, bath-

ing cap, bath salts, bath oil, talcum powder, water softener, manicuring equipment, mouth wash, medicines, waste basket and hot water bottle.

- No grab rails are provided over the tubs but 84 per cent of the women would like them.

- Light laundry is a frequent bathroom function in both groups though apartment dwellers wash fewer articles of clothing at home. Personal apparel is usually dried on the shower rail or on a rack suspended from the ceiling over the bath tub.

- Most mothers bathe small babies in a bathinette or in the kitchen tub. Either arrangement is considered satisfactory.

- More people slip while using rubber bath mats in the tub than those using none.

- Sliding glass shower doors in some of the houses were found to interfere with cleaning the tub and washing children.

- Among the women who shower, a slight preference is shown for the high-pressure, needle type.

- Aside from wash basins being too small, "no mixing faucet" was found annoying.

- Nine out of ten women object to the bathroom floor getting wet during use of shower.

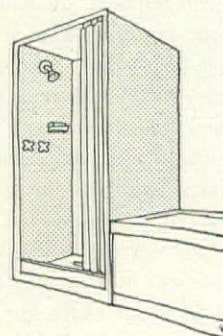


"75 per cent of women wash light laundry in the bathroom during or after undressing."

## PROJECTIONS

The projective technique presented in the second part of the study is an attempt to grasp and analyse the real motivations which determine people's attitude toward housing and the behavior which results. In practice, this portion deals with psychological differences rather than with the strictly factual information stressed in the first part of the study.

From the planning viewpoint certain outstanding psychological traits which bear directly on house design and room sizes were clearly evident. While the first part of the study shows that, in practice, the desire for space could often be interpreted as merely the desire for enough room to accommodate more furniture, the projective technique brings to light a strong desire for space, as such. This wish manifests



"A stall shower is the most desired luxury item, mostly to keep the bathroom from being splashed."

itself in an equally strong rejection of small space, no matter how well or how efficiently it is planned. While the study makes no attempt to resolve these two reactions, the very proof of their existence is interesting and certainly deserves further examination. It is suggested that the following aspects may produce extremely important basic factors for determining small house dimensions:

- 1) What constitutes small or large space actually perceived as such?

- 2) What factor influences the perception of the size of house space?

(Continued on page 156)



# HOUSES

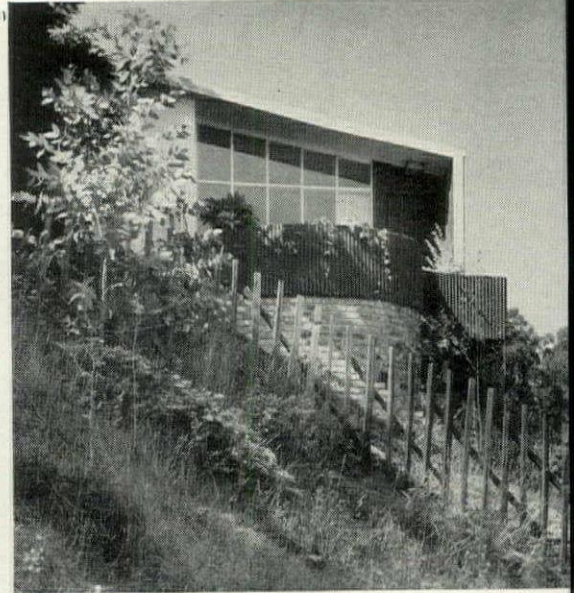
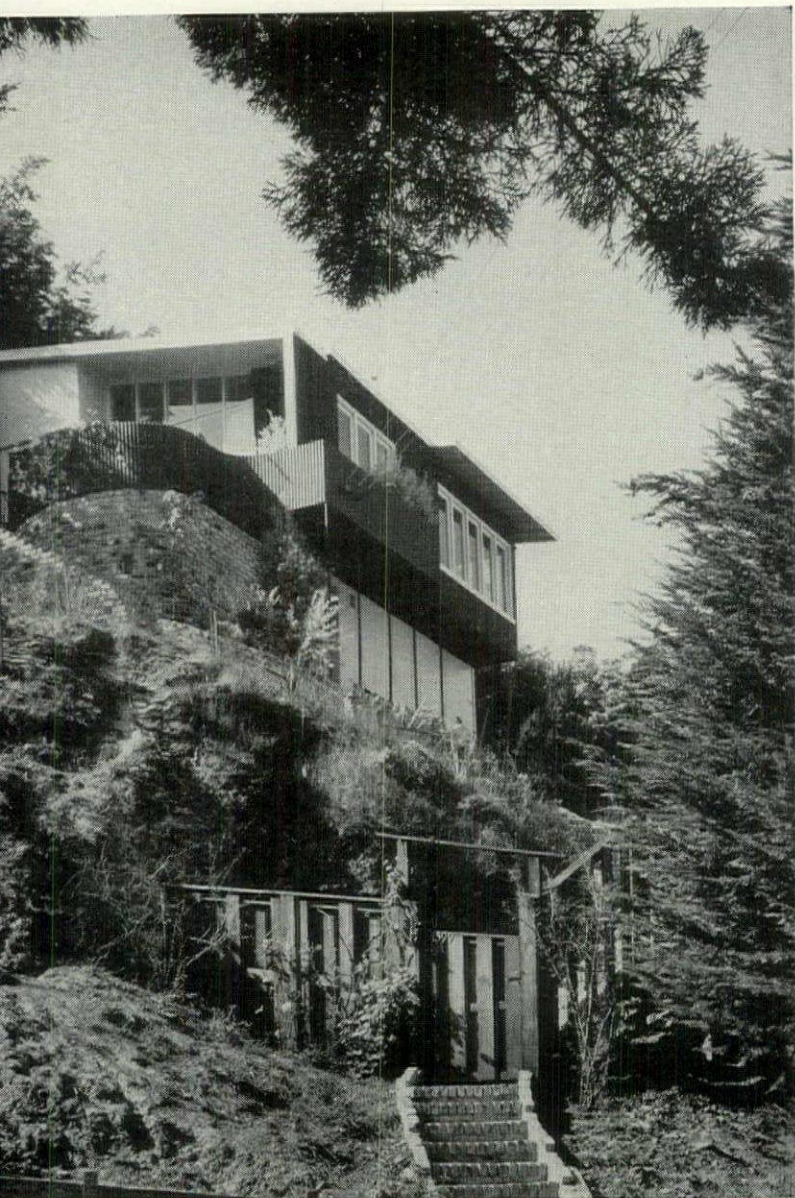
Photos: Max Heiney



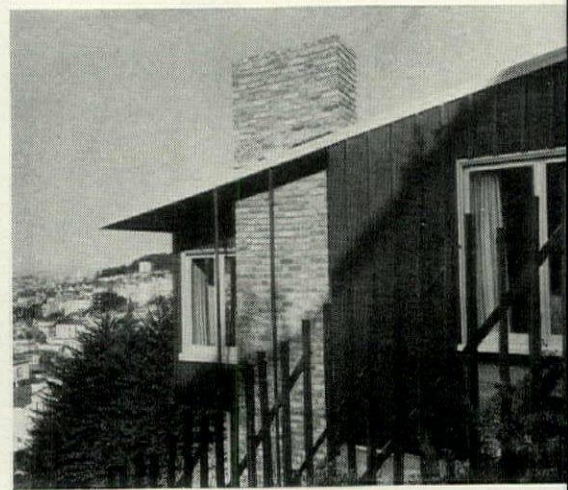
HOUSE IN SAN FRANCISCO, CALIF., JOHN CARDEN CAMPBELL AND WORLEY WONG, DESIGNERS



# HOUSE IN SAN FRANCISCO, CALIF. A comfortable living pattern on a steep west

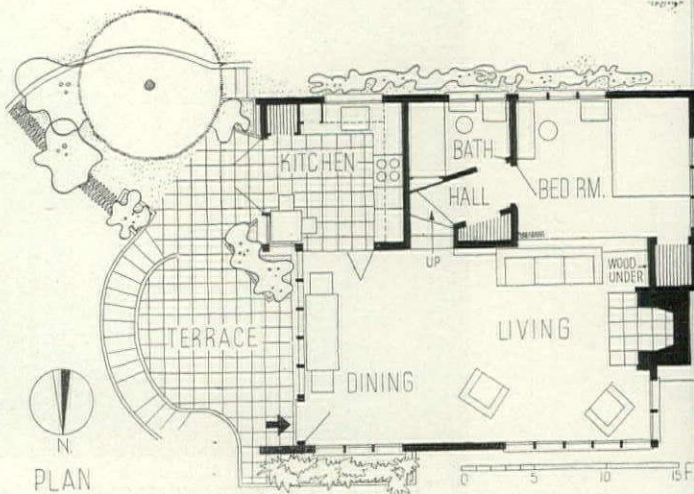
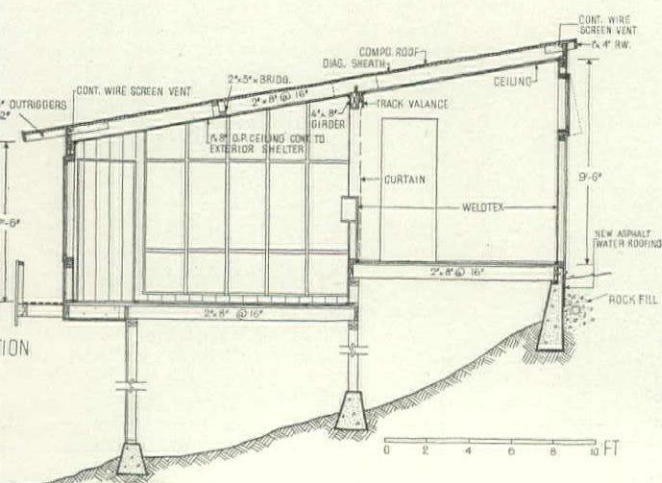


LARGE WINDOW FACES EAST AND ONE OF MANY



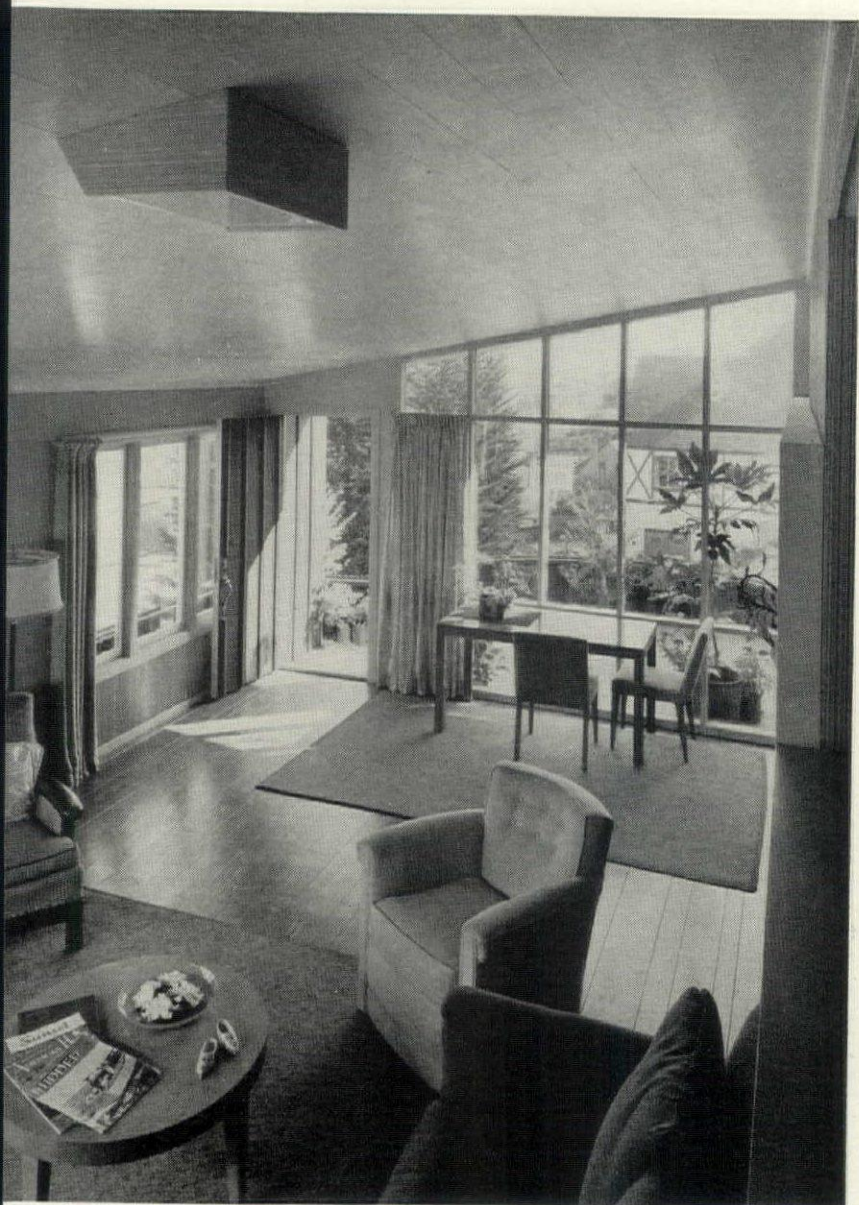
ROUGH STAINED REDWOOD BOARDS USED ON

STEEP SITE UTILIZES A BRICK RETAINING WALL UNDER TERRACE





highly successful result of Chinese-American collaboration.



LOOKING INTO LIVING ROOM FROM OPENING IN BEDROOM WALL

NOTE CHINESE PATTERN OF LINES CREATED BY SHALLOW SHELVES



There is a jewel-like quality about some small houses, and when one is good it can be really good, without the complications that grow with size. Because it is so small and simple, this California house benefits particularly from two features of the modern idiom: flexible use of space and an open plan. The kitchen, terrace and dining-living area are beautifully organized. And on three sides there are sweeping views that fall away sharply to the spread-out city, Golden Gate, and distant mountain peaks seen on clear days.

Since the downhill panoramic side faces north away from the sun, the main window is on the terrace side towards the east and a secondary view. The very steep slope of the small lot (60 x 64 ft.) called for a stepped plan: the bedroom is four risers above the main floor, and has a view to the west and the Golden Gate.

A feeling of spaciousness in both bedroom and living room is achieved by an opening in the wall between the rooms, and it is further enhanced by generous openings between living room, terrace and kitchen. This feature of space flexibility does not add to the cost but adds immensely to satisfying living, especially in so small a house.

The opening between bedroom and living room was originally to be closed off by folding doors, but these were not installed. Provision has been made for the installation of curtains, but even these have not been found necessary.

Colors and textures have also been used to interrelate the different rooms. The red quarry tiles of the kitchen carry through onto the terrace. Yellow-green is used throughout the house and on the exterior trim

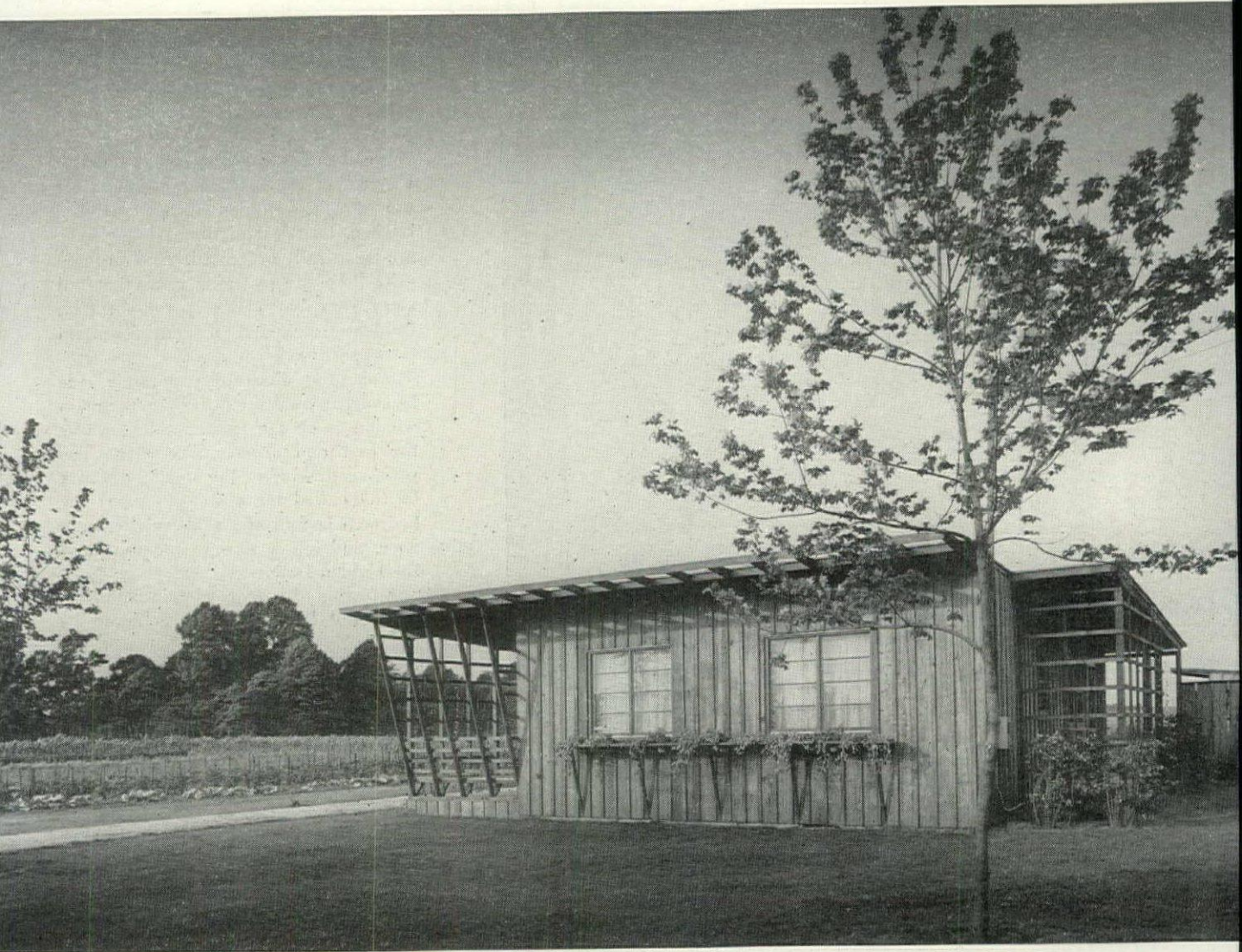
#### CONSTRUCTION OUTLINE: STRUCTURE:

Exterior walls—redwood board, building paper, studs; inside—Weldtex, U. S. Plywood Corp. Floors—oak. Ceiling—Douglas fir. ROOF—80 lb. mineral surfaced cap-sheet over 4-ply built-up, Johns-Manville. FIREPLACE: Damper—Heatilator Co. SHEET METAL WORK—galvanized sheet metal. WINDOWS: Sash—wood casements. Glass—sheet plate and quality B, Pennvernon, Pittsburgh Plate Glass Co. FLOOR COVERINGS: Main rooms—Klearflax rugs, The Klearflax Linen Looms, Inc. Kitchen—tile, Richmond Clay Products Co. Bathrooms—asphalt tile, Armstrong Cork Co. WALL COVERINGS: Main rooms—combed wood and fir, U. S. Plywood Corp. PAINTS—W. P. Fuller and Samuel Cabot, Inc. HARDWARE—Schlage Lock Co. ELECTRICAL WIRING—BX. Fixtures—Phoenix-Day Co. LAUNDRY EQUIPMENT: Washing machine—Bendix Home Appliances, Inc. BATHROOM EQUIPMENT—Crane Co. HEATING—warm air system, Sears-Roebuck Co. Water heater—Hoyt Heater Co.



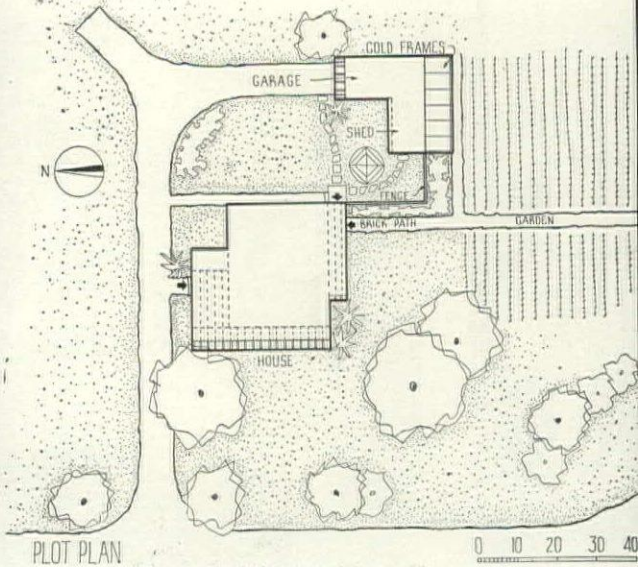
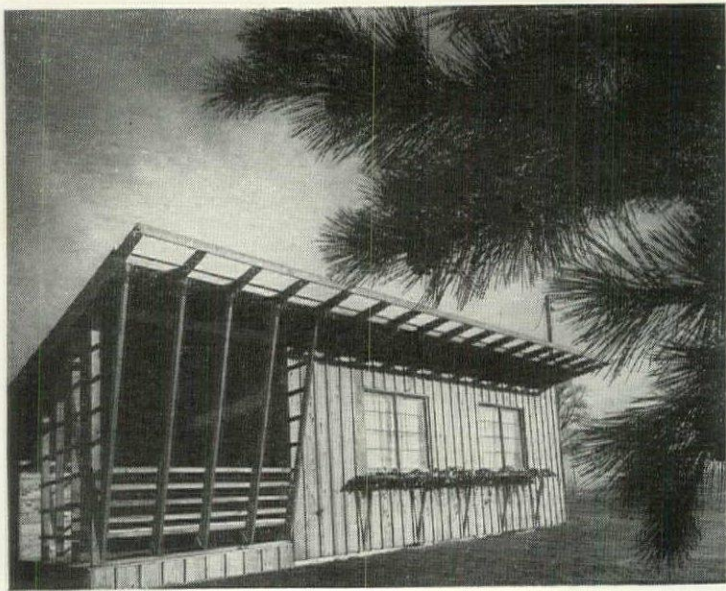
HOUSE IN HOCKESSIN, DEL. Victorine and Samuel Homsey's little gate-house on t

Photos: R. Damora



LATTICEWORK FOR VINES AND POT RAIL FOR PLANTS GIVE BOWER-LIKE LOOK TO A SIMPLE SQUARE BOX

PORCH SIDE HAS ENTRANCE VESTIBULE UNDER SLOPED ROOF

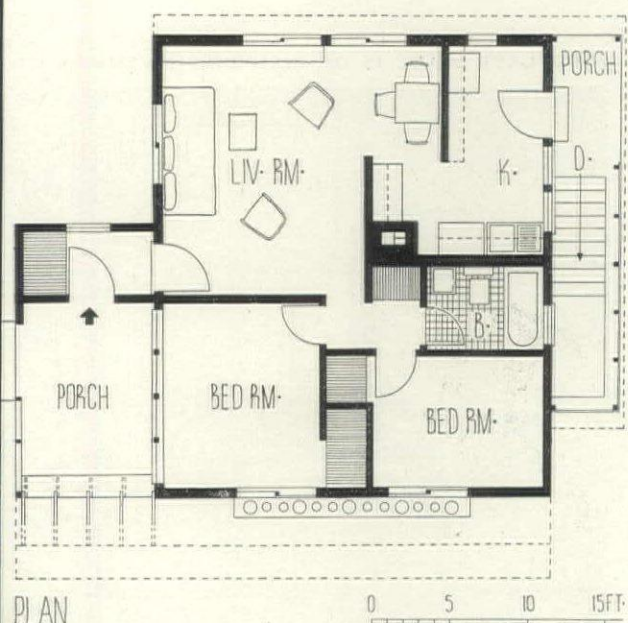




shows what can be done to a perfectly simple, economical unit with trellised porches.



SMALL SIZE OF LIVING ROOM IS RELIEVED BY OPEN OFFSET PLAN AND EXCELLENTLY CHOSEN FURNITURE

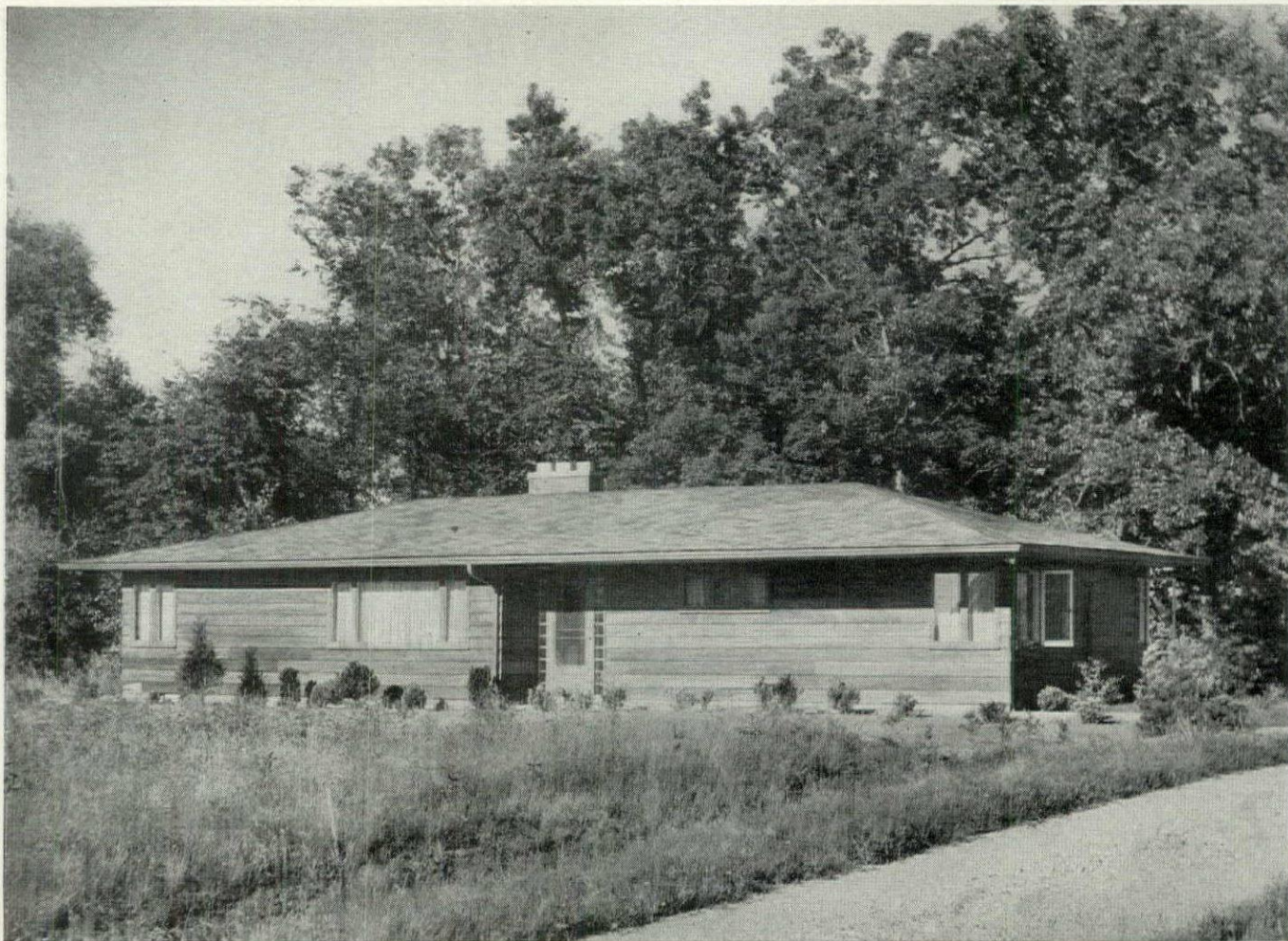


Built for a tenant on the architects' farm and following the design of their own house (see ARCH. FORUM, Sept. '40), this little cottage might well be a model for low-cost builders. Its economical box shape has been elaborated by a porch-vestibule at one side and a trellis on the kitchen side. These projections catch the eye and break the monotony, besides providing needed shelter over the two entrances. The small interior is opened up by an offset arrangement of kitchen, dining section and living room. Total cost, including adjacent garage-shed, was \$3,450.

**CONSTRUCTION OUTLINE:** STRUCTURE: Exterior walls—cypress boards, Vaporseal, Celotex Corp., studs; inside—U. S. Gypsum Co. Rocklath and plaster. WINDOWS—Andersen Frame Corp. FLOOR COVERINGS: Kitchen and bathrooms—Congoleum-Nairn, Inc. KITCHEN EQUIPMENT: Range—Glenwood Range Co. Refrigerator—Frigidaire Sales Corp. Sink—Speakman Co. LAUNDRY EQUIPMENT: Washing machine—Maytag Co. BATHROOM EQUIPMENT: Fixtures—American Radiator-Standard Sanitary Corp. Fittings—Speakman Co. Cabinet—Columbia Metal Box Co. HEATING: Hot water system, American Radiator-Standard Sanitary Corp. GENERAL CONTRACTOR: John E. Healy & Sons, Inc., Wilmington, Del.

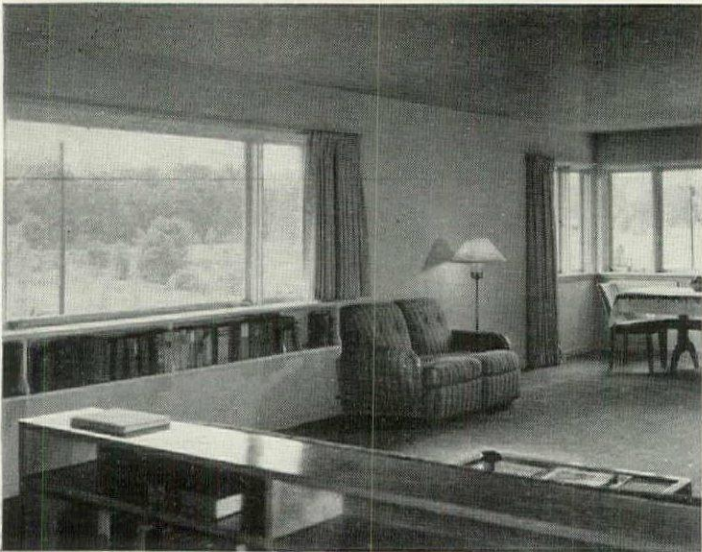


HOUSE NEAR DETROIT, MICH. An owner who knew what he wanted gets a contempo



FENESTRATION IS ABOVE AVERAGE BUT STILL SOMEWHAT MEAGER WHEN MEASURED BY RECENT STANDARDS

LIVING-DINING ROOM FRONTS WEST AND NORTH VIEW



FIREPLACE WALL IS OF RICH BIRCH VENEER

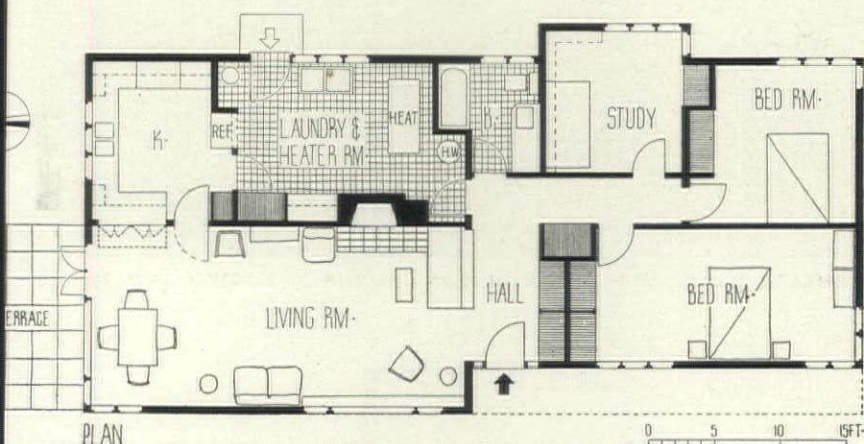




e with a unique floor plan from architect Buford Pickens.



GENEROUS OVERHANG IS A SUNSHADE AND A SHELTER FOR WALK



TWO-WAY SERVICE COUNTER BETWEEN KITCHEN AND DINING AREA



This house is the result of an architect's interpretation of the client's very clearly stated needs. The owner knew definitely what he wanted—and asked for it. His list included many items not usually found in the traditional house plan. In a very real sense, it dictated the ultimate solution:

►A generous utility room for heater and work area, since there would be no basement.

►Kitchen, bathroom and utility room closely related to simplify plumbing.

►Combined living and dining areas to avoid cutting into small rooms and provide one large living space.

►The following work-saving details: Bathroom washbowl incorporated in a long counter for bathing and dressing small children, with space for storage beneath. Two-way cupboard and counter between living room and kitchen to permit easy passing of food and dishes, designed to create a folding sideboard on the living room side.

►A liberal amount of built-in furniture—bookshelves, a fireside seat in the living room, a desk, cupboards and bookcase in the study.

►Generous closets (there are 9) with raised floors to prevent dust from collecting in them.

►Large window areas, providing a pleasant outlook from all rooms and increasing the feeling of spaciousness.

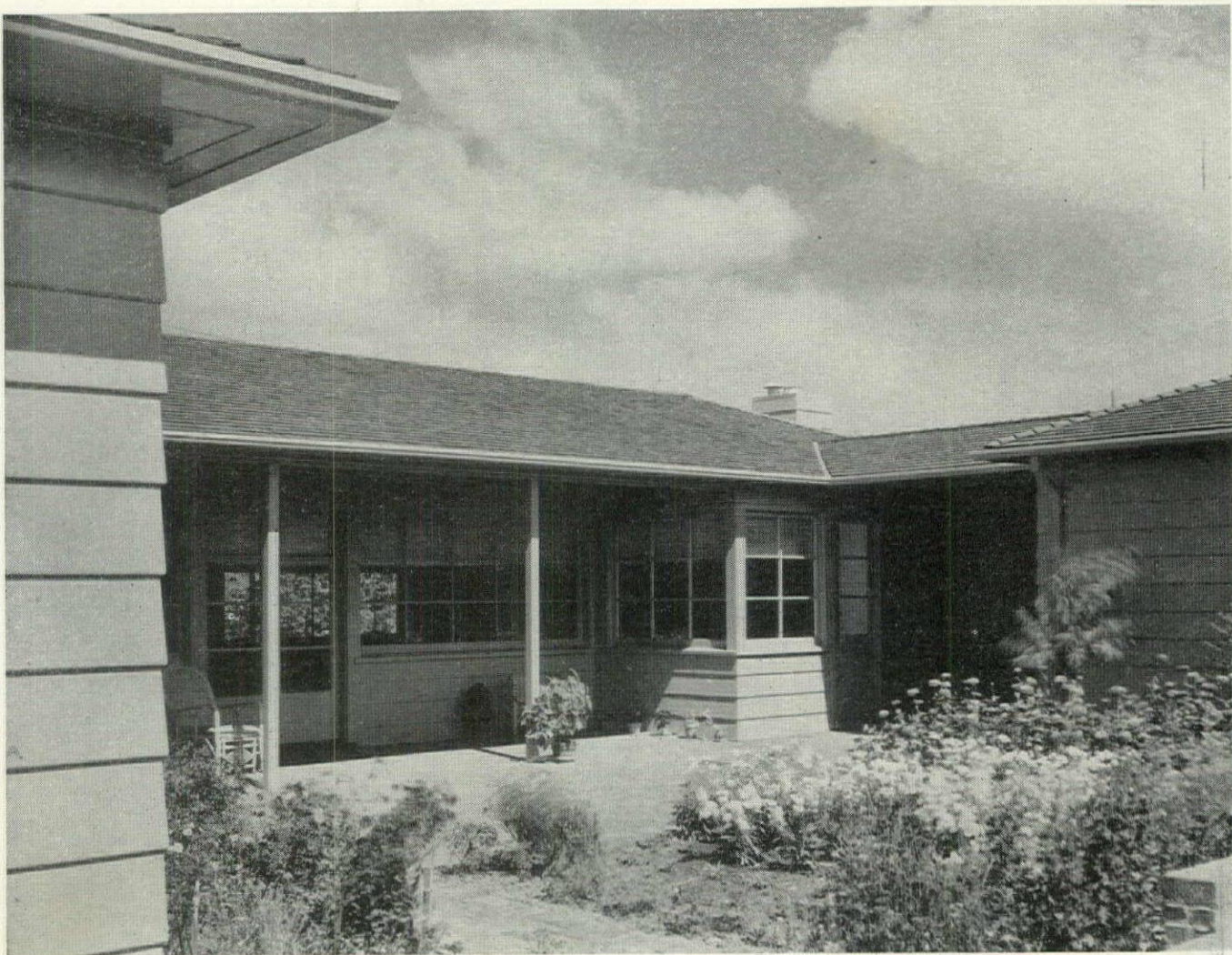
►Overhanging eaves, shading the windows in summer but permitting winter sunlight to enter, and making a sheltered walk from driveway to front door.

The house that resulted is a very simple, straightforward solution of these problems. Exterior walls are redwood bevel siding, interior walls birch plywood. Sub-floor is a concrete slab laid directly on the soil, finish floor is asphalt tile except in the living room where carpet is laid directly over concrete. Cold air return for the oil heater is through a concrete tunnel under the floor.

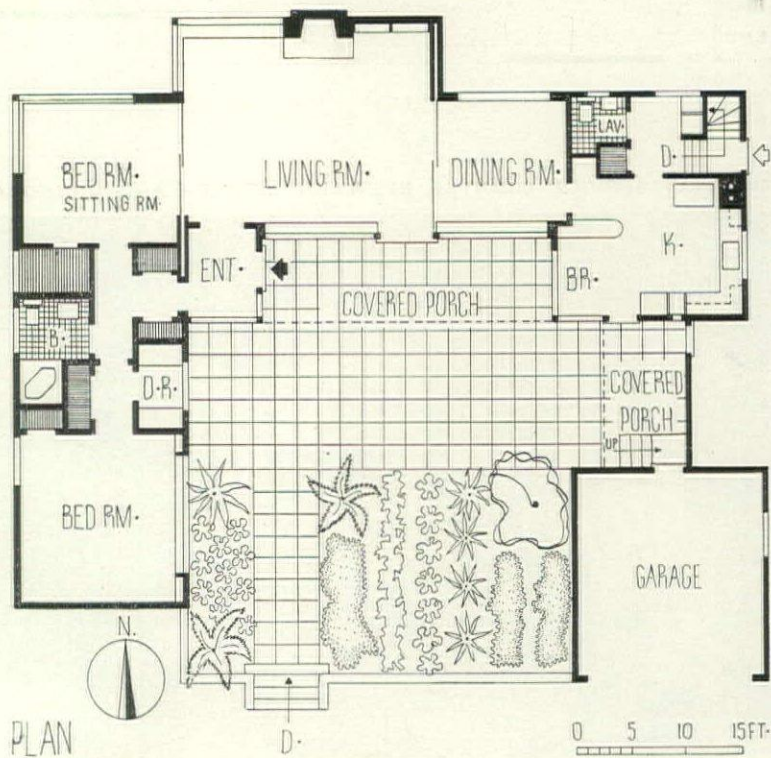
**CONSTRUCTION OUTLINE:** STRUCTURE: Exterior walls—redwood siding, Insulite, Insulite Co., studs, Fiberglas insulation, Owens-Corning Fiberglas Corp. WINDOWS: Sash—wood casement. Glass—double strength, quality A, and crystal, Libbey-Owens-Ford Glass Co. Glass blocks—Pittsburgh-Corning Corp. PAINTS —Pratt & Lambert, Inc. KITCHEN EQUIPMENT: Range—Norge Heating & Conditioning Div., Borg-Warner Corp. Refrigerator—Leonard Div., Nash-Kelvinator Corp. BATHROOM EQUIPMENT —Crane Co. HEATING—Warm air system, filtering. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Lockinvar Products Div., Michigan Tank & Furnace Co.



HOUSE IN OAKLAND, CALIF. Architect Clarence W. W. Mayhew designs a convent

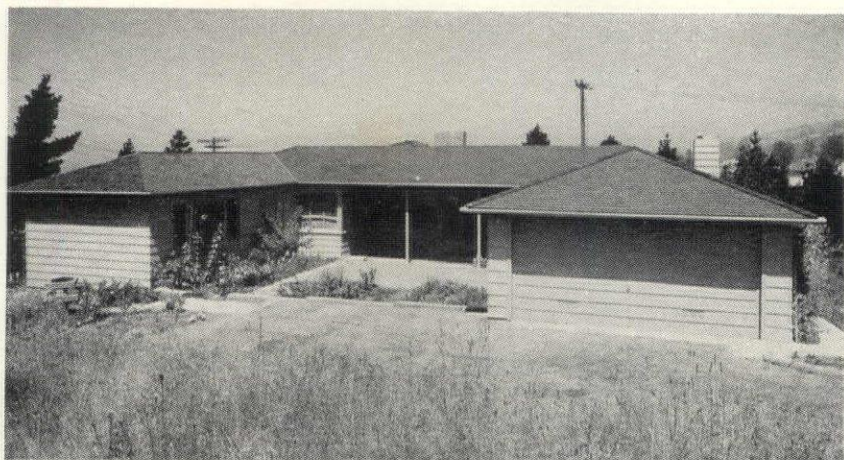


DINING ROOM AND BREAKFAST NOOK FACE SHELTERED COURT THROUGH CONTINUOUS WINDOWS AND DOORS

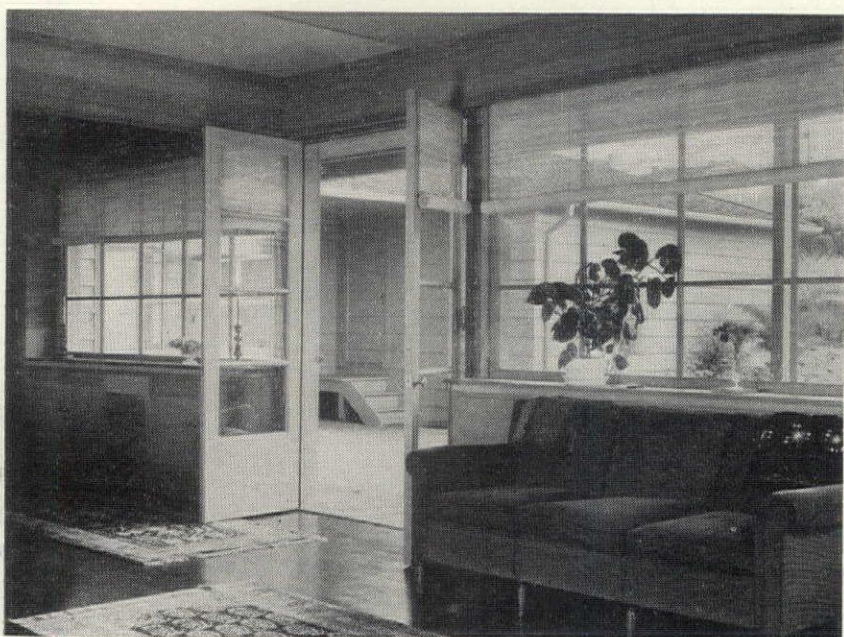




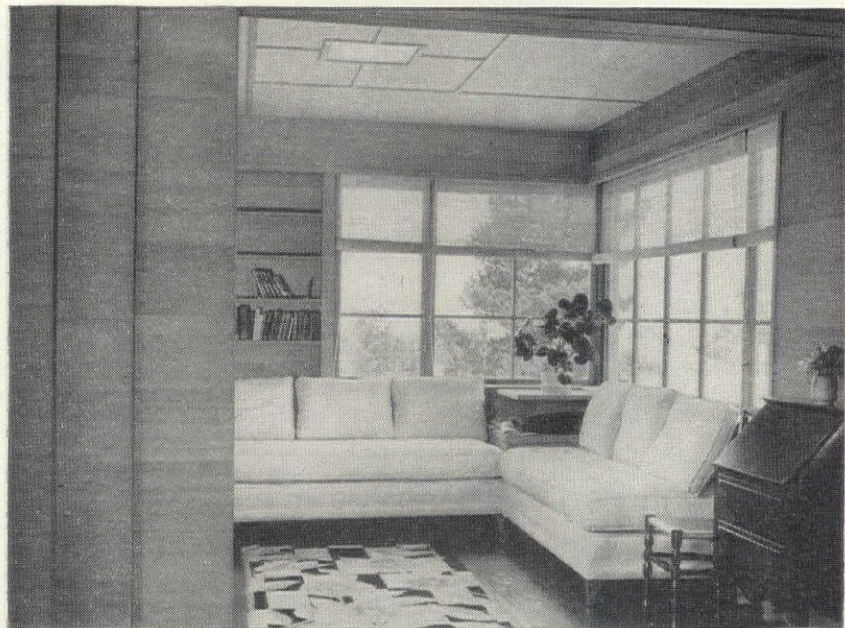
e in the California manner with a roomy, modern floor plan surrounding a court.



WING ENDS GIVE ENTRANCE SIDE SOMEWHAT STERN APPEARANCE



LOOKING FROM LIVING ROOM ACROSS COURT TOWARD GARAGE WING



BED-SITTING ROOM CEILING UTILIZES DECORATIVE BATTENS

Flexible use of space, the most important feature of this Oakland house, is here a reality and not just a designer's phrase.

The very workable arrangement is centered in a living area having two sets of sliding doors which may be opened or closed to create a variety of room sizes. By pushing both sets of doors back into their pockets, one large room is made out of three, the resulting space for entertainment extending 48 ft. in length. When the doors are closed, there is a dining room, a living room, and a bedroom that may be a sitting room or study in daytime.

This interchangeable living area forms the basis of a U-plan framing an outdoor court oriented to the southeast. This produces a plan one room deep, in which most of the rooms have generous windows on opposite sides. In the living and dining rooms these give an intimate view into the terrace courtyard with its planting, and a more generous outlook to the north.

The looseness of the plan is further illustrated by the variety of dining arrangements. One may eat in the dining room, in the breakfast nook of the kitchen, or in one of two covered niches on the outdoor terrace, both accessible from the kitchen.

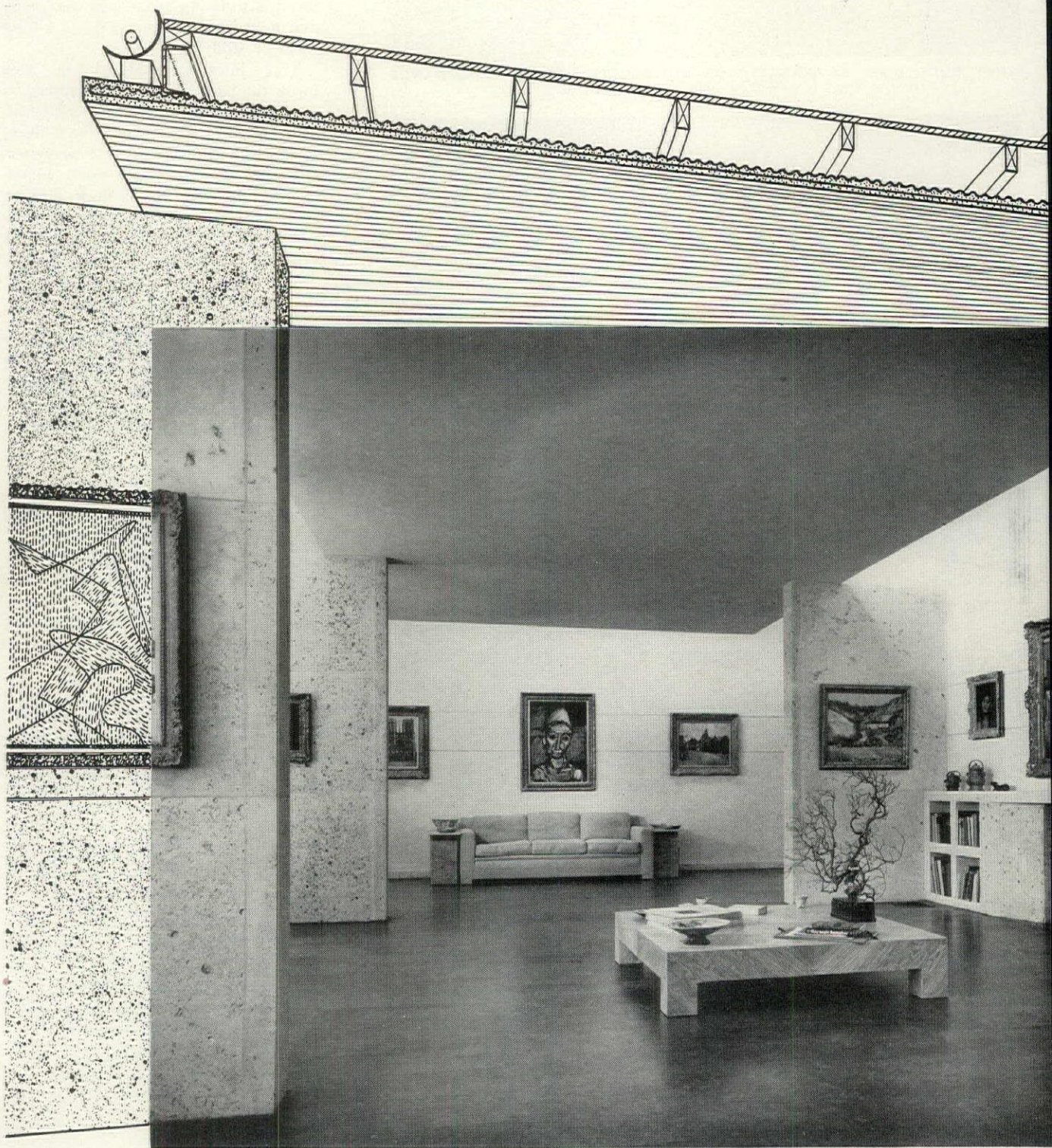
The bedroom section is planned as a unit available from the front entrance. One bedroom is used solely for sleeping, while the other has a dual purpose as part of the living room in the daytime and as a private study, with convertible studio couches that transform it into an auxiliary bedroom when needed. The walls of this room and of the living room are of natural redwood flush boarding, with built-in shallow shelves for books.

#### CONSTRUCTION OUTLINE: STRUCTURE:

Exterior walls—redwood siding, studs; inside — redwood boards. Floors—oak. Ceiling—Graylite, Insulite Co. ROOF—cedar shingles. SHEET METAL WORK: Flashing and leaders—copper. Gutters—redwood. Ducts—galvanized iron. INSULATION: Roof and sound insulation—Graylite, Insulite Co. WINDOWS: Sash—casement, sugar pine. Glass—crystal sheet, Libbey-Owens-Ford Glass Co. Screens—Berkeley Disappearing Screen Co. FLOOR COVERINGS: Kitchen and bathrooms — linoleum. WOODWORK — redwood. HARDWARE — Schlage Lock Co. PAINTS—W. P. Fuller Paint Co. ELECTRICAL WIRING—knob and tube. Switches—General Electric Co. KITCHEN EQUIPMENT: Range—gas, Spark Co. Refrigerator—General Electric Co. Dishwasher, washing machine and drier—Bendix Home Appliances, Inc. BATHROOM EQUIPMENT—Crane Co. HEATING—warm air system. Water heater—Crane Co.



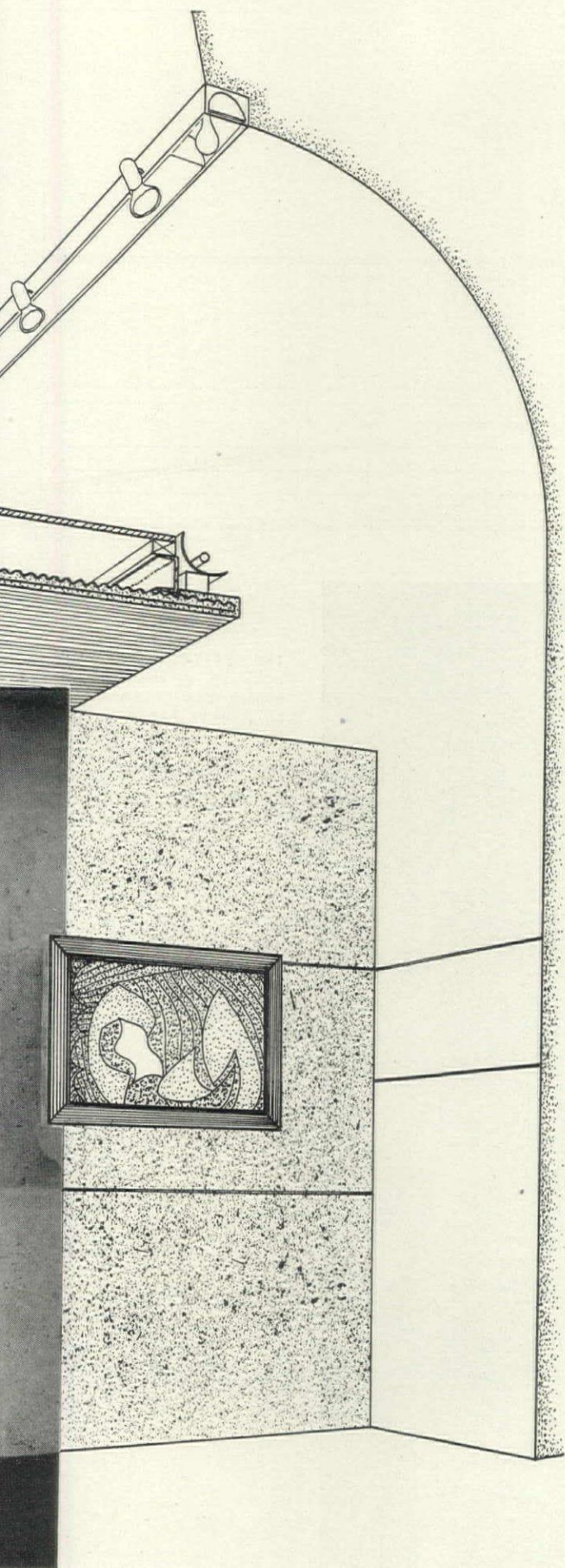
PRIVATE GALLERY IN BEVERLY HILLS, CAL



Photos: Maynard L. Parker



The office of Samuel A. Marx designs a private exhibition room in the home of Edward G. Robinson.

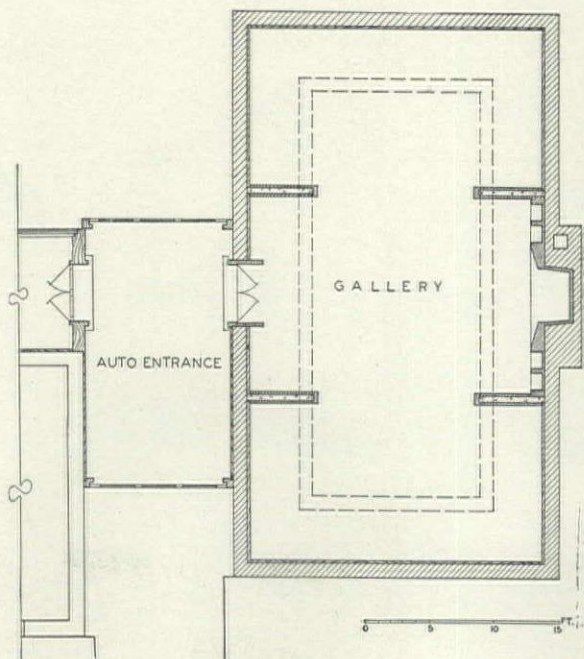


When Edward G. Robinson is not busy playing cops and robbers in the moving picture or broadcasting studios, it is a pretty safe bet that he is out buying paintings or looking at ones already purchased. His collection, built up with enthusiasm and discrimination over a long period, finally swelled to the point where a gallery had to be built to house it. This is the gallery. It is an addition to one of those large, vaguely Tudor mansions in which the Hollywood area abounds.

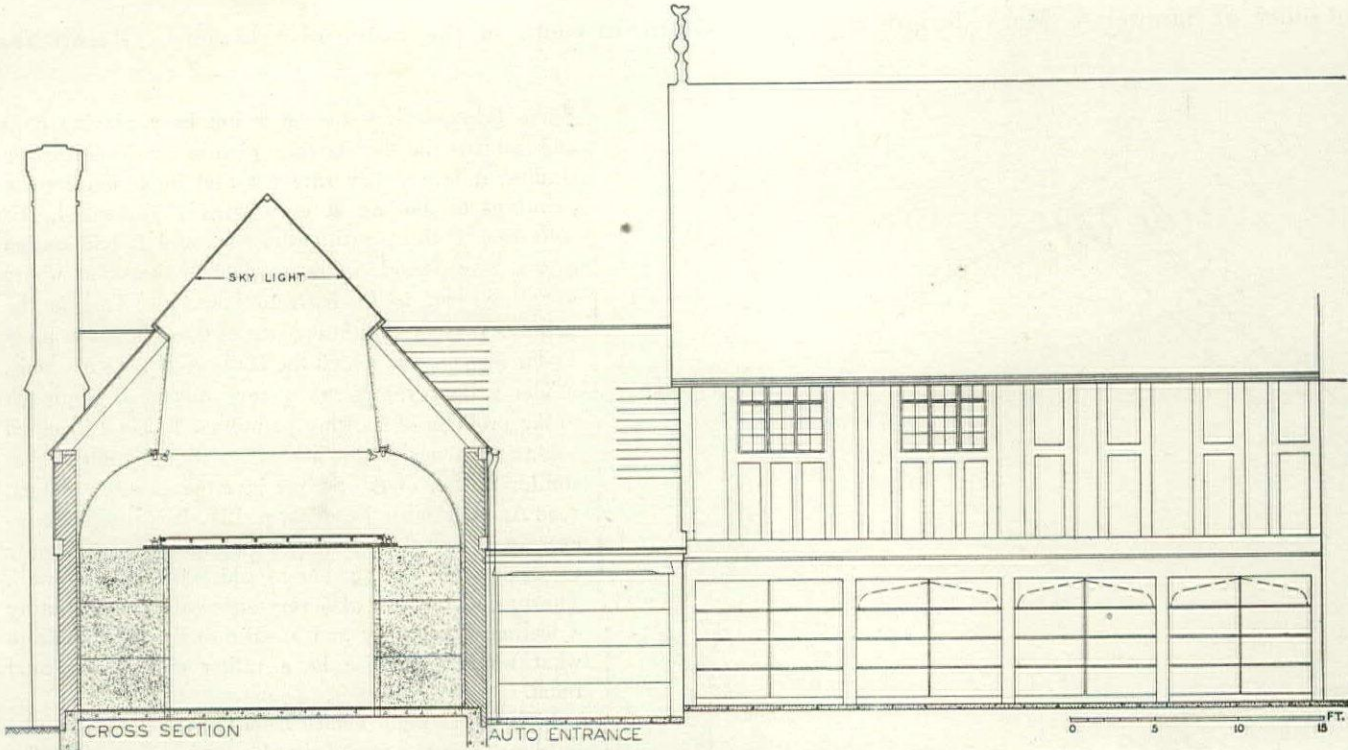
The gallery represents a very advanced approach to the problem of showing paintings. It has a dropped ceiling with a skylight above, an illumination design similar to that of the Seager inverted monitor system. (see ARCH. FORUM Nov. '36, p. 12). It is unique, however, in its use of stone fins, whose function is not only to support the ceiling, but to add wall space as well. The projections are also very successful in imparting a feeling of intimacy and a sense of domestic scale to what would otherwise be a rather cold and formal room.

Lighting at night comes from the same direction as by day: from the top of the dropped ceiling. The fixtures are of three types: incandescent, fluorescent, and spotlights, the last being used to highlight certain paintings. The combination of incandescent and fluorescent lamps is one commonly employed to give illumination that is pleasantly balanced in color. Separate switches permit the three types to be used individually or in any desired combination.

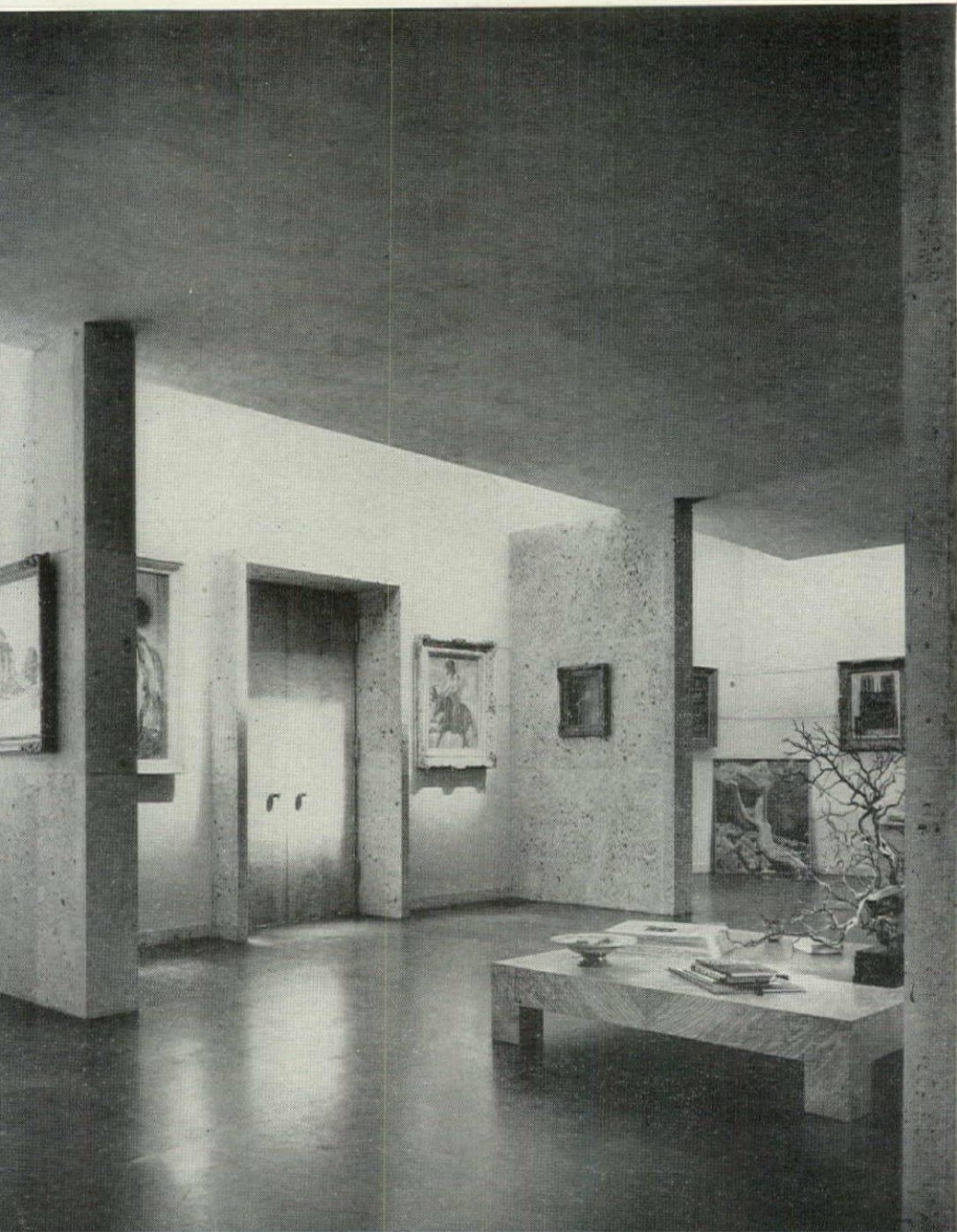
Another example of typical gallery practice is the use of continuous slots, built into the plaster walls, which make it possible to change pictures as often as wished without damage to the walls. Materials are simple, but by no means inexpensive. The floor is of dark brown cork, projecting walls are sand finish Cordova shell, and the doors are veneered with Tamo. Both walls and ceilings are sand finish plaster.





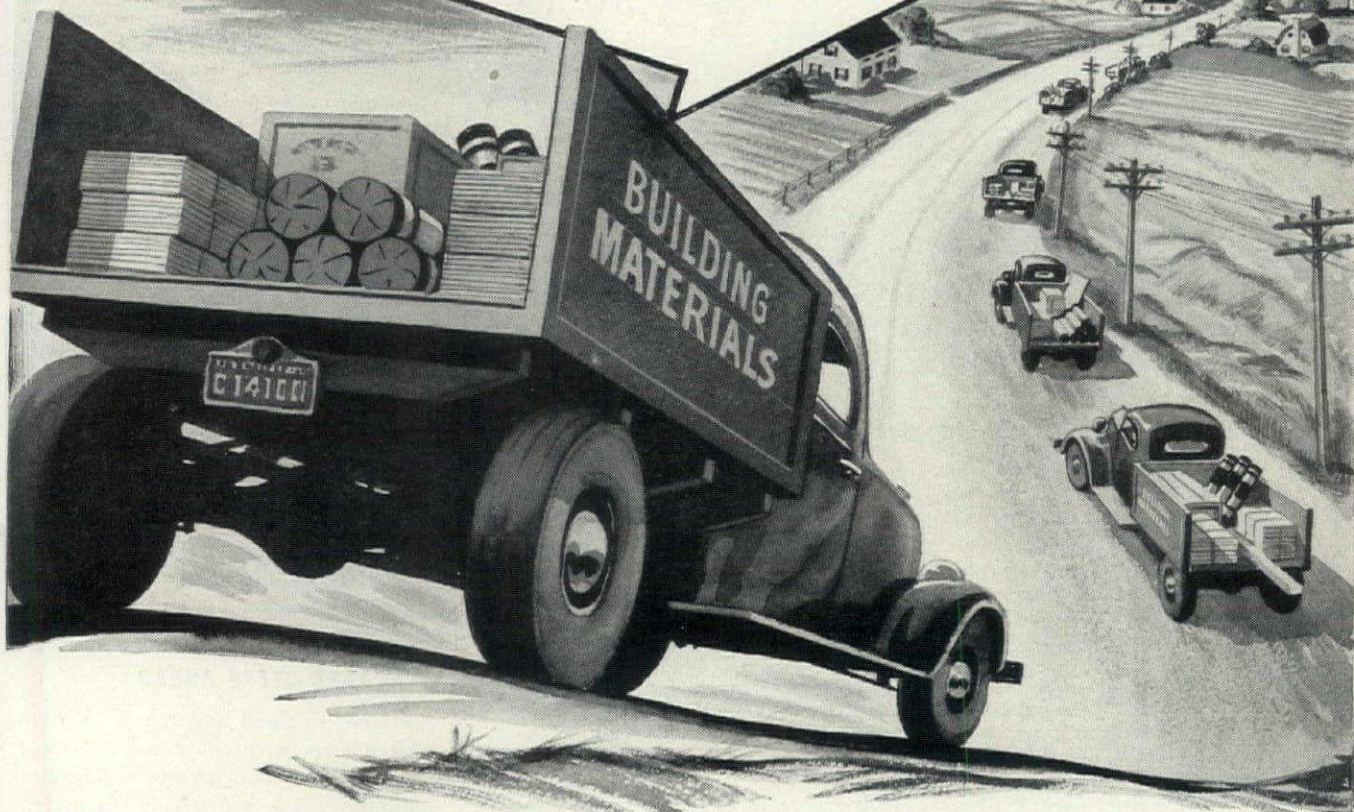


**THE PORTE-COCHERE** over the driveway between house and gallery can be converted into an interior hall by pushing a button. Motor-operated overhead doors provide the basis for this ingenious solution.





Here's One  
Builder's Supply Line  
the War Hasn't Cut!



...Your use of Asbestos Sidings helps provide a critical war material!

Asbestos fibres are mined in a variety of lengths. Long fibre is critically needed for vital war products. But many tons of short fibre must be mined to obtain one ton of long.

Since asbestos sidings and shingles are the chief outlets for short fibres, the more of them that are used, the more war-essential long fibres can be mined.

Thus your sales and use of asbestos sidings benefits 2 very important partners!

YOU!

And UNCLE SAM!

YOU can put to work for your profit all the well-known advantages of asbestos fibre and Portland cement... which combine to make Flintkote sidings fireproof, rotproof, weatherproof, termite-proof... and ageproof besides!

And with Flintkote's wide variety of styles and finishes to choose from you can have wide freedom of design to remedy any "ailing house."

Besides, when you encourage the use of asbestos sidings for essential maintenance and repair, you contribute substantially to the war effort!

That's why WPB has given the green light to asbestos siding sales.

And for top-quality in these profit-packed building products, figure on Flintkote!

### THE FLINTKOTE COMPANY

30 Rockefeller Plaza, New York 20, N. Y.

Atlanta • Boston • Chicago Heights • Detroit • East Rutherford • Los Angeles • New Orleans • Waco

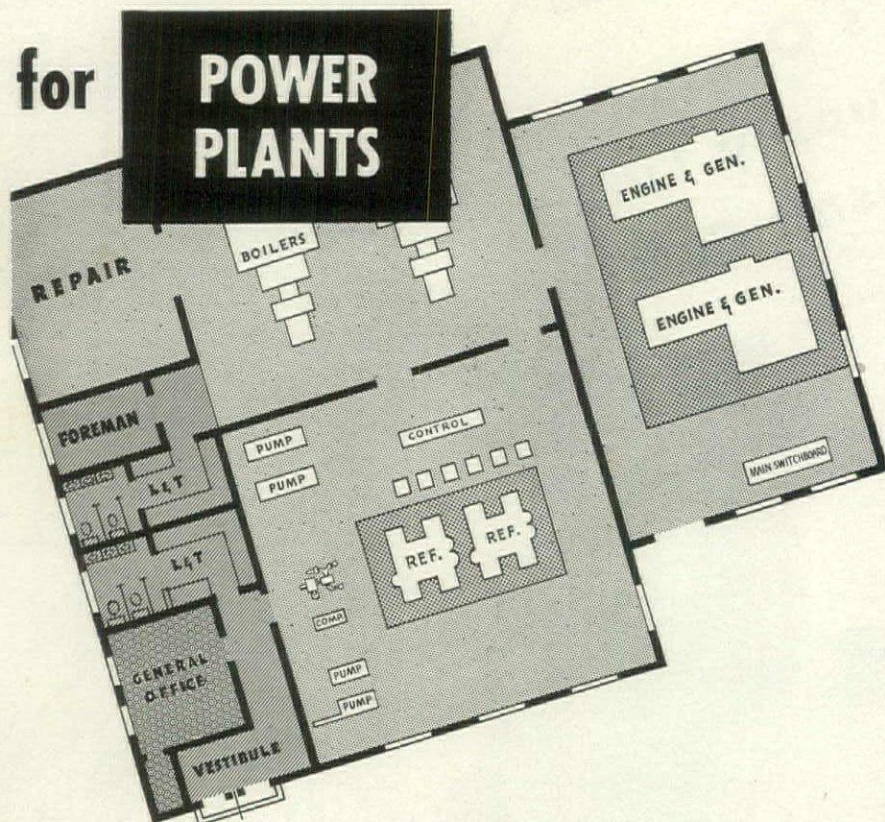
*Figure on FLINTKOTE for 'Forty-Four!*



# Here are the floors we suggest

for

## POWER PLANTS



**Industrial Asphalt Tile** . . . A durable flooring for boiler room, engine and generator room, pump room, and repair shop. It's non-sparking, nonslip, and fire resistant—low in cost, quickly installed, easy to maintain. Can be used on suspended or on-grade floors.

**Greaseproof Asphalt Tile** . . . For floor areas which are subject to oil and grease conditions, as around machinery. Like Standard Asphalt Tile, it resists moisture and alkali commonly found in concrete subfloors in direct contact with the ground, on or below grade.

**Standard Asphalt Tile** . . . For corridors, locker-toilet rooms, foremen's offices—wherever a long-wearing, easy-to-clean floor is required. Can be used on all floors—suspended, on grade, below grade. Unusually economical in first cost and in maintenance.

**Linotile (Oil-Bonded)** . . . Ideal for general offices and similar areas because of its distinctive appearance and its unusually high resistance to wear and indentation. An exclusive Armstrong Floor, Linotile is available in a variety of marbleized colorings.

**New-Safety Floor Coating** . . . for ramps, catwalks, and other areas where a safe, nonslip surface is essential. Troweled on quickly, hardens quickly.

**P.S.** For full information about the complete line of Armstrong's Resilient Floors, consult Sweet's or write to Armstrong Cork Co., 2306 Duke St., Lancaster, Pa.



INDUSTRIAL  
ASPHALT TILE

STANDARD  
ASPHALT TILE

GREASEPROOF  
ASPHALT TILE

LINOTILE  
(OIL-BONDED)

CONDUCTIVE  
ASPHALT TILE

## ARMSTRONG'S RESILIENT TILE FLOORS

### MONTH IN BUILDING

(Continued from page 62)

Taft is not satisfied that the National Housing Agency, hastily slung together for war operations, is in good shape to provide leadership in any government program for aid to the housebuilding industry. And, like many a Building man, the Senator wishes he had a clear notion of just what such a government program might be. Nor was the Senator happy to be in the dark about any plans NHA might have for the permanent war housing built by the government.

Finding his curiosity shared by some of his colleagues on the Senate Postwar Economic Policy and Planning Committee, Senator Taft formed a subcommittee with the special job of looking into housing. By early June the ambitious subcommittee had tapped as consultants housing researcher Miles Colean and Dr. Ernest Fisher, American Bankers Association economist, summoned NHA Administrator John Blandford to its first session. Two proposals about NHA's future sure to come up: ▶ Senator Taft's hunch that the Department of Commerce would make a good permanent home for the 16-odd agencies now grouped under NHA.

▶ Mr. Blandford's natural interest in a broadened and legitimized NHA, with over-all responsibility for dealing with housing, city planning, and urban redevelopment.

### STANDARD STEPS AHEAD

Scotland, England and the U. S. each took a step in recent months to close their national doors on any of the jerry building which regrettably characterized the construction boom that followed World War I. The Scottish Housing Advisory Committee was out first with recommended standards for the design, planning, and furnishing of new homes. This easy-to-read report was intended to guide local authorities through a three-stage program: 1) temporary, preferably demountable, housing; 2) permanent houses built to "short-term" standards; 3) permanent houses with improved "long term" standards of design and equipment, to be built as soon as material and labor are once again plentiful.

Next day first of the British Ministry of Works postwar building studies was off the press. Sir George Burt's committee on house construction had lengthily and painstakingly evaluated home construction methods in terms of strength, moisture penetration, thermal and sound insulation, fire hazard, and maintenance.

How to make local building codes flexible enough to allow for new con- (Continued on page 118)





*On this you can rely-*

**W**HEN you include the Square D Multi-breaker in your specifications, you're giving your clients the convenience and protection which every modern home deserves. The fuss and bother of fuses simply doesn't fit into the pattern ahead—especially, since the Multi-breaker costs little more than the fusible equipment it replaces—often actually less.

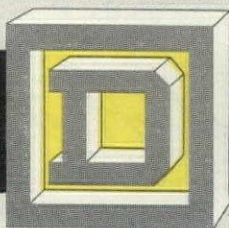
There is a Multi-breaker for homes of every type and size—prefabricated or otherwise. For commercial and industrial buildings, too. Your nearby Square D Field Engineer will be glad

to work with you in setting up the best electrical specifications for any project you are planning. He's a source of sound counsel.

. . .

*Currently, every Multi-breaker we produce is assigned to wartime service. But the same features which make it so valuable to the war effort, earn it a place in the homes which will be built in the future.*

*The Multi-breaker eliminates fuses completely. When a short circuit or dangerous overload occurs, the circuit is cut off automatically. A simple movement of the shock-proof lever restores current. There are no delays—nothing to replace.*



ELECTRICAL EQUIPMENT

KOLLSMAN AIRCRAFT INSTRUMENTS

**SQUARE D COMPANY**

DETROIT

MILWAUKEE

LOS ANGELES



We have it from high authority in the OPA that Timken burners are setting up marvelous records for economy under fuel oil rationing. The following excerpts from owners' letters not only bear this out but give you a good idea of the all-around satisfaction users get from Timken equipment —

**Gentlemen:**

This letter is to advise you of how well I am pleased with the dependability and economical operation of my Timken Wall-Flame Oil Burner.

When using hard fuel my heating cost was approximately \$85.00 per season but with the Timken Wall-Flame Burner the heating cost will average around \$60.00 per year.

F. J. T.  
Flint, Mich.

**Gentlemen:**

I am enjoying my sixth winter of Automatic Oil house heating with a Timken Silent Automatic Oil Burner. I can't recommend it too highly for its economical and most perfect operation.

I have the rotor wall-flame system and last year when oil was hard to get, I burned 100 gallons less than my allotted ration, and also heated all the hot water I could use for a family of three persons.

P. T.  
Upper Darby, Pa.

**Gentlemen:**

I can honestly say in two heating seasons I have saved at least 3200 gallons of fuel oil, a saving of \$248.00 and much more satisfaction and better and quicker heating results with a Timken Silent Automatic Oil Burner than with my previous burner. I am not condemning the . . . outfit, but it is almost unbelievable of so much difference. I was of the opinion you people would like this information and would be pleased to hear from you.

N. N. B.  
Kent, Ohio

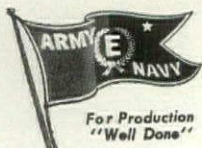
**Gentlemen:**

I never in all my life have had such perfect comfort with heat and at such low cost as I am having today with my Timken Silent Automatic.

L. J. A.  
Chicago, Ill.

**NOTE TO ARCHITECTS:**

Timken will be ready shortly after Victory with new and improved heating and air conditioning equipment for every size and type of home. There will be other new Timken products for the home, too. Each will be built to the same standards of quality and economy so familiar to architects and owners of the famous Timken Silent Automatic Wall-Flame Oil Burners and Oil-Burning Water Heaters.



## A black and white photograph of a modern, open-plan living and dining area. The room features large windows, a brick fireplace, a large television set, and a white refrigerator. The text "A POSTWAR HOME" is visible in the upper right corner of the image.

*Reverend Sir*

**New Timken Silent Automatic Heat**

Four-and-a-half million homes will be built in America in the years following Victory. What will they be like? Will they be at radically new designs?

time alone will reveal all the answers to these questions.

...be ready with new and improved  
...and air conditioning equipment  
...consistent with quality for every

There will be other new...  
acts, too. Each...

... of quality and economy to the standard of the famous Tinkin Sibot Automatic Wall-Floor Oil Burner. Talk to your Tinkin Sibot Dealer.

plan the most economical type of  
have him put your name on  
ration list.

**TIMKEN** *Silent Automatic*

Quality Name Appliances - for 1 number 1 excellence and peace of mind.

Division of THE TIMKEN DETROIT AXLE COMPANY, Inc.

10000 E. 12th Ave., Detroit 4, Michigan

Circle 32 on Reader Service Card

**Silent Automatic**  
 Division of THE TORONTO DETROIT AILE COMPANY, Detroit 32, Michigan

To: **TOYOTA SALES, INC.**  
 400 Clark Avenue, Detroit 32, Michigan

Send **FREE** Booklet to:

Name \_\_\_\_\_  
 Street Address \_\_\_\_\_

*Timken Silent Automatic Advertisement from June 5th LIFE.*

# Can a heating dealer help the architect?

You bet he can! First, he can work with the architect in planning the best heating system for each home.

Second, he can perform an invaluable service by furnishing only the highest quality of heating equipment and doing an A-1 installation job. This will insure client satisfaction for the architect, greater owner satisfaction and lower total costs.

But good heating dealers can go even farther than this. They can sell the public on the benefits and economy of installing quality equipment.

And when this equipment is shown in a home designed by an architect,

and featured in national magazines (see LIFE advertisement above), it associates quality equipment and better homes with an architect's services.

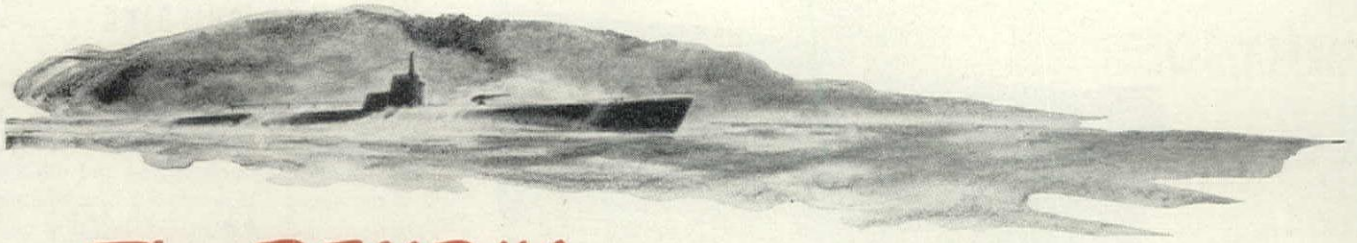
Ads, like the above, featuring Maxwell A. Norcross, Cleveland architect, stimulate thinking now when millions of people are planning postwar homes. They encourage people to build better homes, and to use the services of an architect as well as to install quality heating equipment.

Yes, the Timken dealer in your territory can help you. Let him work with you on heating when you are drawing up the plans.

# TIMKEN *Silent Automatic*

**Quality Home Appliances — for Comfort, Convenience and Economy**  
Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit 32, Michigan





## The BENDIX that swam in Tokyo Bay

**T**he U. S. Submarine Nameless has surfaced in the night. The crew is refreshed by a welcome breeze, though it blows off the shore of Japan.

As they *lie awash*—they *do* the wash. Or rather, it *does itself*—automatically—while they go about getting ship-shape for tomorrow.

Yes, there's a Bendix Automatic Home Laundry aboard, as there is on many a Navy ship. And as there will be in many a completely equipped post-war home that's now in the planning stage.

*Why?*

For one reason, architects and builders know as well as anyone else that the overwhelming post-war preference will be for *automatic* "washers".

For another, they know that the Bendix Automatic Home Laundry is the *only* automatic "washer" that has met the vital test of wide-spread service in the home—more than 300,000 were in *home use* when the factory converted to war work.

And for a third, they can see—from the picture on this page—that if



there's room for a Bendix where cubic inches count, there's room to spare where you deal in cubic feet!

**BENDIX HOME APPLIANCES, INC.**  
SOUTH BEND, INDIANA

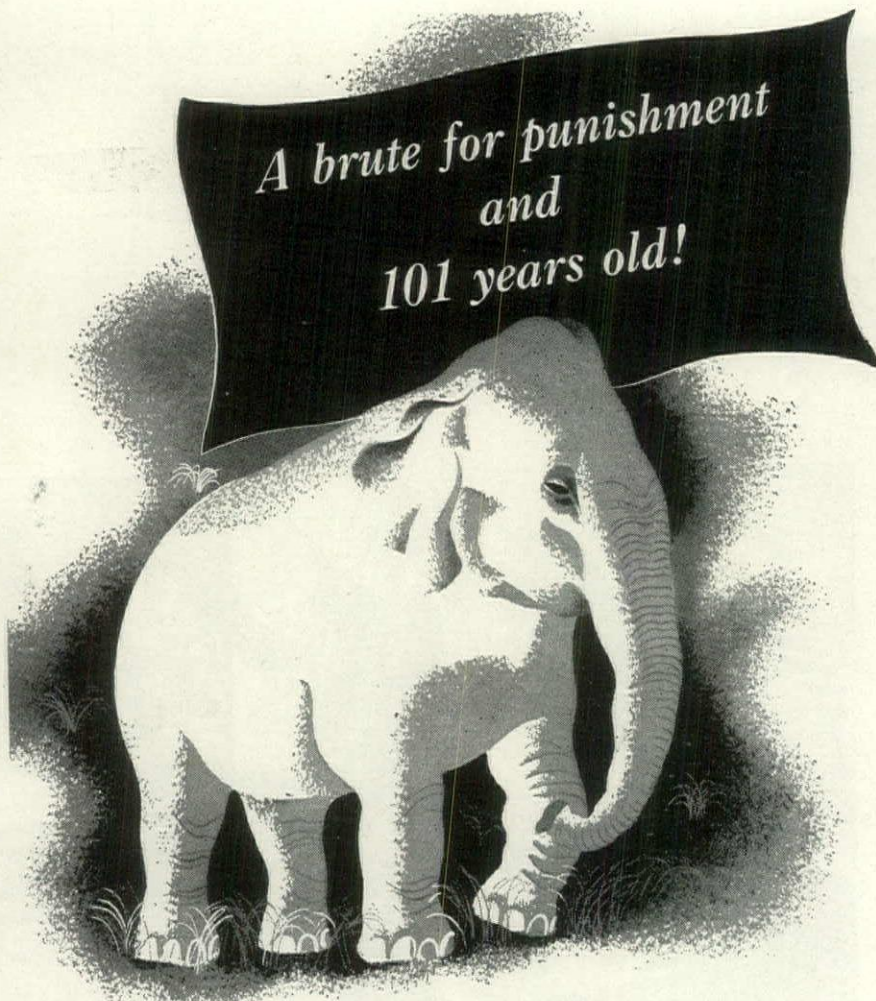
*The People Who Pioneered and Perfected  
the Automatic "Washer"*



## BENDIX AUTOMATIC HOME LAUNDRY

This advertisement does not imply endorsement of our product by the U. S. Navy





If you are casting about for a beautiful paint that will wear as stubbornly as elephant hide... we earnestly suggest Eagle Pure White Lead, esteemed by American architects since 1843.

Thomas Jefferson knew and approved of white lead paint for exterior and interior surfaces. In England before him, Christopher Wren was solidly for it. As this most simple of paint mixtures (pure white lead ground in pure linseed oil) has preserved many of the world's architectural masterpieces, so Eagle Pure White Lead can safeguard the surface of the buildings you design.

In addition to its superb good looks, Eagle Pure White Lead has these most practical properties: (a) its tough film protects against the wear of time and weather; (b) by clinging tenaciously to the painted surface, expanding and contracting with it, Eagle Pure White Lead does not crack or scale; (c) it ages gracefully and slowly; (d) at repainting time, the surface is *ready*, requires no burning or scraping. As for coverage and economy... ask any master painter!

You need no priorities for Eagle Pure White Lead. Deliveries are prompt. And the cost is no more than that of other quality paints.

**Let's ALL BACK THE ATTACK—Buy Another War Bond!**

THE EAGLE-PICHER LEAD COMPANY, CINCINNATI 1, OHIO

Member of the Lead Industries Association



**EAGLE  
WHITE LEAD**



## MONTH IN BUILDING

(Continued from page 114)

struction techniques was the concern of the American Standards Association. Last month ASA approved and offered to the nation a new standard, redefining the powers and duties of building officials. Significance of this administrative guide: enforcement officials would have broad discretionary authority to determine how far new methods and materials meet the intent of local codes.

### G. I. BENEFITS SNARL

Eleven million ex-service men and women will be a potent force in the postwar housing market. Applauding Congressional efforts to give the veterans some help on a down-payment, Building men last month eyed anxiously House action that threatened to snarl this section of the omnibus veterans' benefit bill. As passed by the Senate, the bill carried a pat provision for housing loans up to \$1,000, interest-free the first year, a flat three per cent thereafter (see ARCH. FORUM, Mar., '44). To avoid any tangling with FHA prohibitions against secondary financing, the bill stated simply that no serviceman shall be declared ineligible for an FHA-insured loan because he has borrowed money from the government.

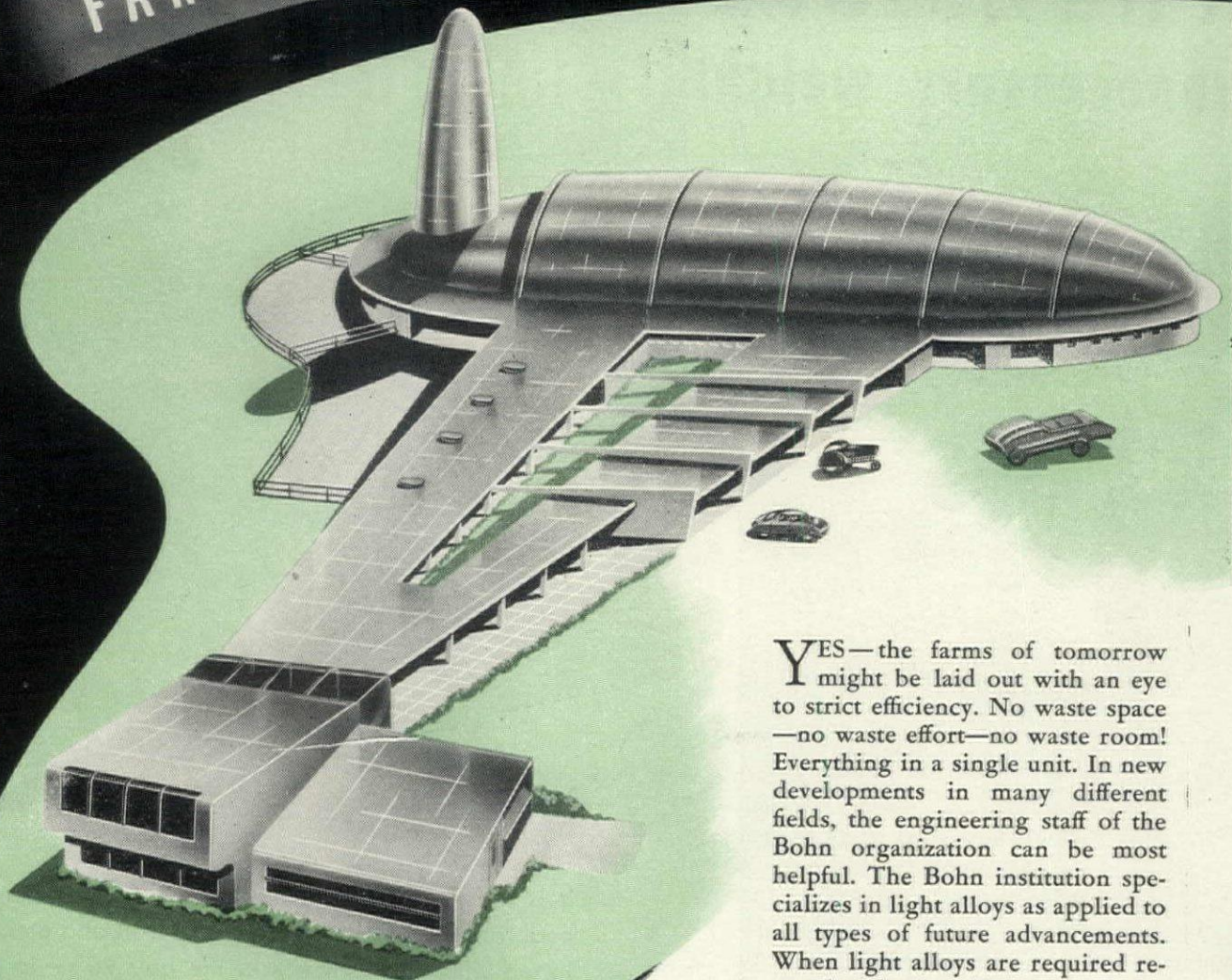
Back of the Senate proposal for downpayment loans, the House could see a horrid new legion of bureaucrats springing up to administer the program. Housing loans were fine, Representatives agreed, but why not decentralize procedure so that the veteran could go to a lending institution in his own town and get the money? Flourishing the banner of "decentralization", the House labored mightily and brought forth a hodge-podge amendment promptly termed unworkable by Washington specialists in housing finance.

There were a lot of things wrong with the House idea of how to speed veterans on the way to home ownership, but the most glaring fault was that it failed to give the aid most needed: cash for a down-payment. As the earnest Representatives worked it out, a veteran might go to his local bank and borrow \$5,000. The government would insure the lender against loss on half of this; the remainder would be secured by a first mortgage on property purchased. Under most state mortgage laws, none of the money so borrowed could be considered an equity payment. The veteran wishing to become a home owner would, therefore, have to find a sizeable amount of cash in his own pocket. Hope was that House and Senate conferees would reach a simpler, more efficient compromise.

(Continued on page 122)



# FARM UNIT OF TOMORROW



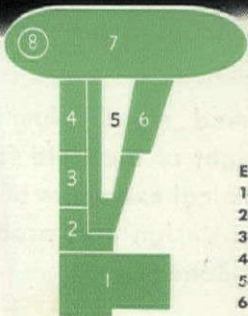
YES—the farms of tomorrow might be laid out with an eye to strict efficiency. No waste space—no waste effort—no waste room! Everything in a single unit. In new developments in many different fields, the engineering staff of the Bohn organization can be most helpful. The Bohn institution specializes in light alloys as applied to all types of future advancements. When light alloys are required remember the name Bohn.

## BOHN ALUMINUM AND BRASS CORPORATION

GENERAL OFFICES — LAFAYETTE BUILDING, DETROIT 26, MICH.

*Designers and Fabricators*

ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS



### Explanation of illustration

- 1—Living Quarters
- 2—Help's Quarters
- 3—Creamery
- 4—Poultry House
- 5—Flower Garden
- 6—Farm Equipment Shelters
- 7—Cattle and Horse Barn
- 8—Silo

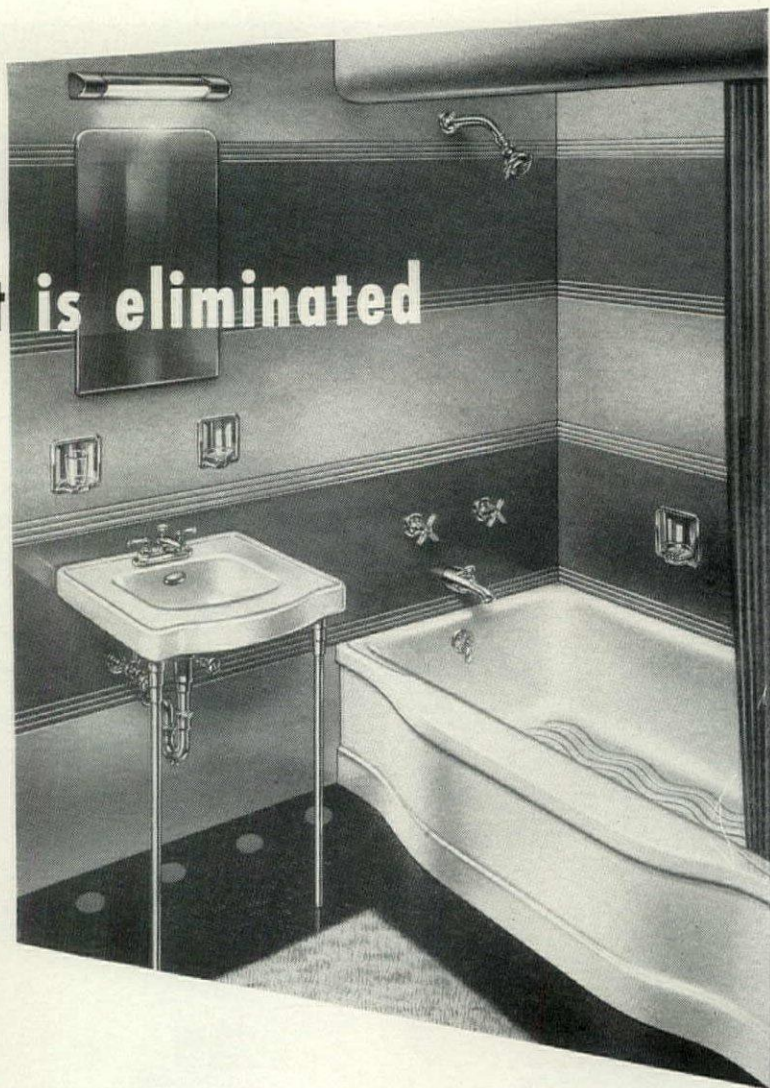


BUY  
WAR  
BONDS

# BOHN



# If it's **BRIGGS** unnecessary weight is eliminated



## OTHER MODERN FEATURES OF BRIGGS BEAUTYWARE

- Smartly styled functional design.
- Color — in a wide range of pleasing pastels.
- Acid-resisting vitreous porcelain enamel—at no extra cost.
- Serpentine embossed flat safety bottom on all Briggs Bathtubs — a patented feature minimizing the hazards of slipping.
- Unvarying dimensions — an aid to installation.
- Integral one inch flange permitting waterproof flashing of tub to walls.

It is a far cry from grandmother's cumbersome coal range—fashioned from cast iron and embellished with the curlicues of the gay 90's—to the gleaming porcelain enameled range of our time. New materials—eliminating unnecessary dead weight—paced the evolution of modern design.

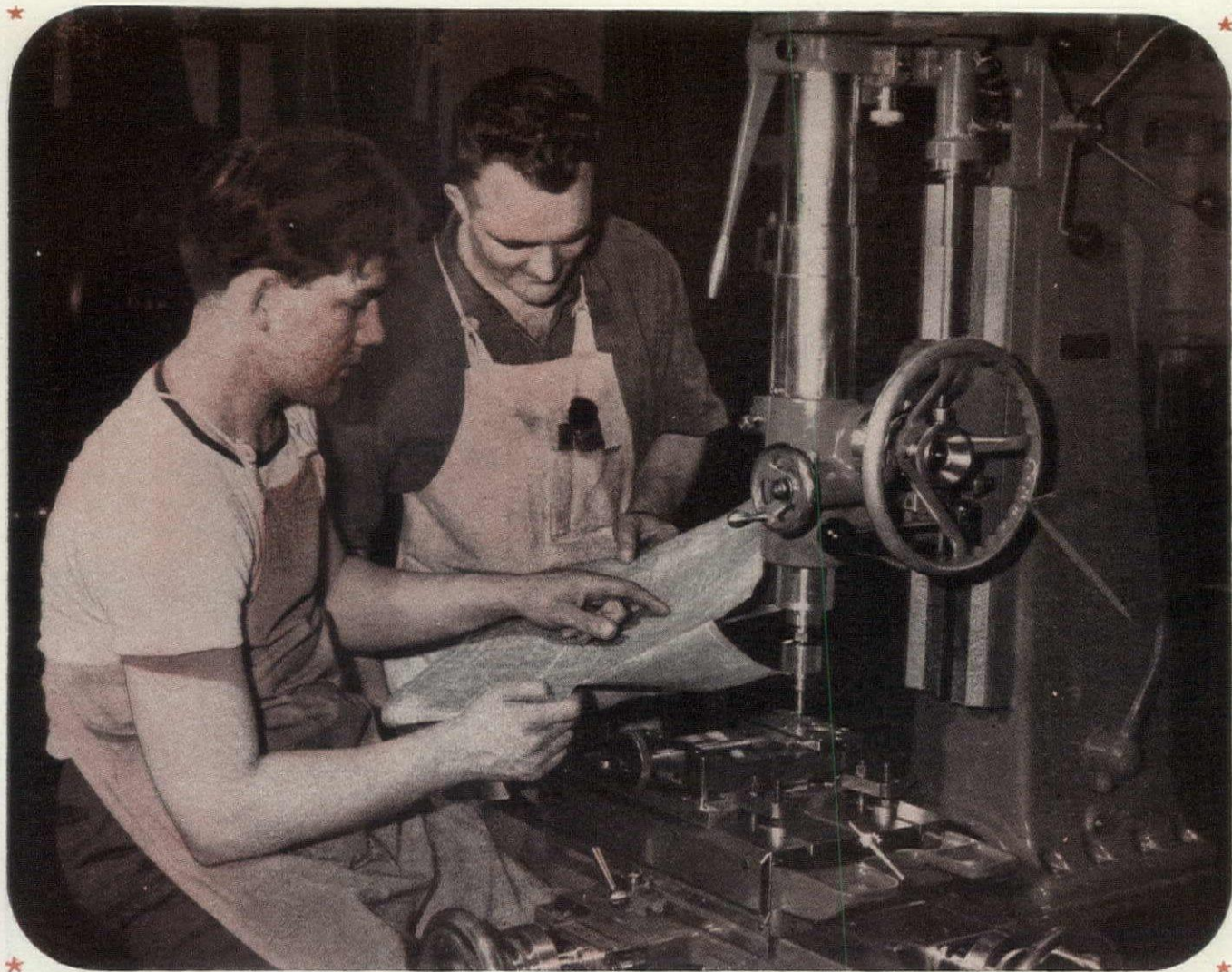
Present day heating units, refrigerators and other appliances, all are standing proof that reduction in weight goes hand in hand with increased utility and beauty.

Briggs Beautyware formed metal plumbing fixtures—one-third the weight of their old fashioned predecessors—are typical examples of the contributions which modern design and production methods have made to Better Living.

BRIGGS MANUFACTURING COMPANY, DETROIT 11, MICHIGAN

**BRIGGS** *Beautyware*  
PLUMBING FIXTURES





## *One of these Days* **THEY'LL BE WORKING TO A DIFFERENT SET OF BLUEPRINTS**

### **HAND BOOK OF SPECIAL STEELS**

Newly revised and reprinted—a comprehensive book on the properties, uses, and best methods of handling, treatment, etc. of tool, stainless and other alloy steels. Plenty of tables to facilitate quick reference and selection. 136 pages, pocket-sized, latest data.

**SEND FOR  
YOUR COPY**

Address Dept. AF-23



**A** GREAT many companies—yours probably included—already have a clear idea what items those new blueprints will cover. One thing's sure: whether your future products stay in familiar fields or enter new markets, they'll have to be as modern and value-packed as your engineers can make them. Improved design, and the use of better materials, are the means to the end.

You'll find a lot of your "better materials" answers among the various Allegheny Ludlum families of special, high-alloy steels. If you're looking for such qualities as improved electrical characteristics,

finer appearance, greater strength, resistance to heat, wear or corrosion, etc., we have the design and production data you need. Let our Technical Staff help with your plans.

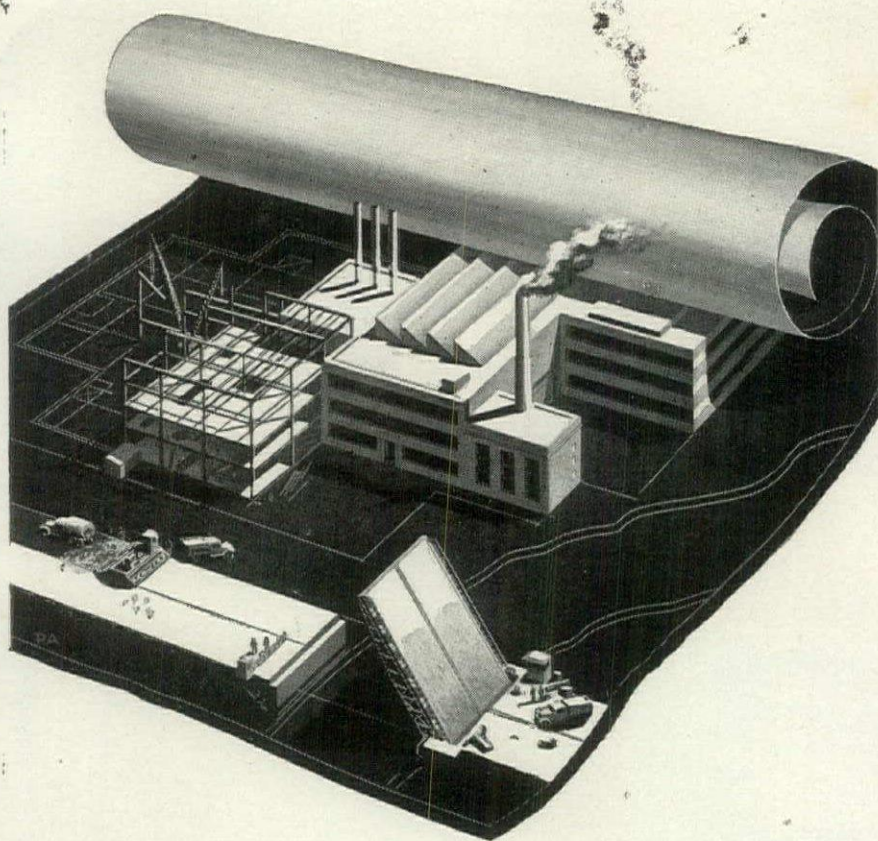


**Allegheny Ludlum**  
**STEEL CORPORATION**

GENERAL OFFICES: BRACKENRIDGE, PENNA.

W & D A-9330





## BEYOND THE BLUEPRINT...

Beyond the blueprint stage...after engineer and architect have defined the requirements and designed and set up specifications for the post-war structure you are planning...comes the intricate and complex job of bringing men, materials and construction together.

Coordinating and consolidating these factors into a smoothly functioning operation—to insure a properly completed structure being delivered at a specified time and cost—is a problem the experienced, skilled and efficient general contractor is best equipped to solve.

Place centralized responsibilities for all construction in his hands and time, money, work and worry will be saved.

*This Is Blueprint Time!*



**THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC.**

NINETY CHAPTERS AND BRANCHES THROUGHOUT THE COUNTRY  
NATIONAL HEADQUARTERS—MUNSEY BLDG., WASHINGTON, D. C.

Skill, Integrity and Responsibility in the Construction of Buildings, Highways, Railroads and Public Works

## MONTH IN BUILDING

(Continued from page 118)

### GRAND EPOCH?

Re-elected as president of New York's Architectural League last month, Hugh Ferriss thought it was time to call out any of his colleagues who might still be lurking in a leaning ivory tower. Ferriss, whose pencil is famous for pinning down the future, saw a closer alliance of building arts and sciences ahead. Needed, he thought, was "re-integration of the impulse to make things work and the impulse to make things beautiful." Said he:

"We've been in the industrial age for about 100 years, time enough to get used to the most amazing of new ma-

Otto Hegel



**FERRISS would wed art and science**

terials and techniques. I should think that when work resumes after the war we could use the technologies of our own day as a matter of course, just as the great artists of past epochs used the technologies of their days as a matter of course."

### WELCOME FOR PREFAB

In Britain, where homes have a brick-solid, built-for-centuries look, a prefabricated house might be expected to fall far short of winning public favor. But Britishers who last month got a first look at the government model of the all-steel, factory-built house which 500,000 of them may some day move into were apparently more than willing to trade bricks for bathtubs. (See pages 90-96 for description.) Housewives, who at Winston Churchill's diplomatic suggestion were the first to view the government's prefab solution, were enchanted mainly by the kitchen unit, compactly holding range, sink, cup-

(Continued on page 126)



Routine Inspection shows

# *COPPER WORK*

"in Very Good Condition"

Reports Buffalo Statler

"A RECENT INSPECTION of the Buffalo roof shows the Anaconda Copper in very good condition," says Mr. Harold B. Callis, Vice President of the Hotels Statler Co., Inc., "and confirms our judgment in selecting this material when the hotel was built."

Famed for the quality of its service and its clientele, the Statler chain believes equally in quality materials and equipment. In nearly twenty years of protecting the "home house" in Buffalo, the Anaconda Copper Flashing and Roofing have required but minor structural repairs.

When building can be resumed, copper will again be the favored metal for roofing, flashing and exposed metal work. Whether for a great hotel, hos-



After 19 years of service the Anaconda Copper Roofing, Flashing and Panels on the Hotel Statler in Buffalo, continue to give complete protection. Sheet Metal Contractors, P. Christman & Sons Co.; Architect, George B. Post & Sons.

pital, office building or a small home, Anaconda Copper will provide enduring protection.

4430A



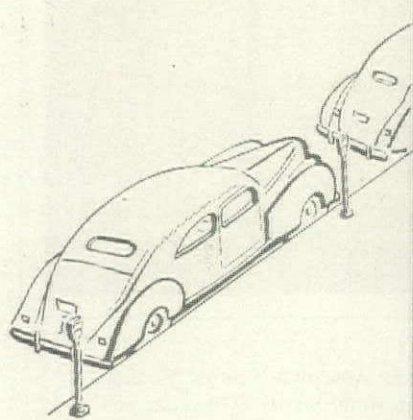
## *Anaconda Copper*

THE AMERICAN BRASS COMPANY—General Offices: Waterbury 88, Connecticut

Subsidiary of Anaconda Copper Mining Company—In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.



# service ... LESS than one call per meter per year!



That's the story of 1400 MI-CO Parking Meters installed in an eastern city. In one year only 1322 service calls were made for mechanical failure . . . *less than one call per meter per year.* The low cost of maintaining MI-CO Parking Meters is the result of unusually rugged construction, fewer moving parts, and many mechanical refinements. MI-CO Parking Meters are made to meet the requirements of a small village or a large city. Right now these meters are not available, but it's not too early to be thinking about and planning for the future. A fully illustrated folder, "MI-CO Parking Meters Offer Many Advantages," gives complete details and specifications. Send for a copy today.

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**CORPORATION—231-239 Court Street, COVINGTON, KY.**

MI-CO Parking Meters are manufactured under the patents of F. L. Michaels by The Michaels Art Bronze Co., Inc., Covington, Ky.



THE *Modern* METHOD OF JOINING COPPER AND BRASS PIPE

# *walseal* \* VALVES AND FITTINGS

FOR MAKING  
*Silbraz* \*  
JOINTS



save space and trouble in modern office buildings



The above illustrates the details of a Walseal tee and Silbraz joints. The center port has been cut away to show the ring of brazing alloy inserted by the manufacturer. . . . The righthand port has been cut away to show the penetration of the alloy after the pipe and fitting have been silver brazed. . . . Left side of tee shows the fillet of alloy completely encircling the pipe at the juncture of pipe and fitting — indicating that the Silbraz joint is completed.

Threadless Silbraz\* joints made with Walseal bronze valves and fittings eliminate many piping problems in office buildings. They make permanent, leakproof connections on copper and brass pipe, and require no maintenance or repairs. They are easily installed by oxyacetylene flame brazing. Through this modern method of installation, they may be nested closely in locations where space is at a premium.

A ring of Sil-Fos silver brazing alloy is incorporated into connection ports of all Walseal products. When fitted on the pipe and heated by an oxyacetylene torch, this ring melts to make a tight, permanent Silbraz joint — stronger than the pipe itself. Silbraz joints are highly resistant to shock, vibration and corrosion. No properly made Silbraz joint has ever leaked.

Walworth manufactures a complete line of Walseal bronze valves, fittings, and flanges. For detailed information, write for a free copy of Walworth Catalog 42.

\*Registered Trade Marks



BOSTON WORKS  
KEWANEE WORKS

**WALWORTH**  
valves AND fittings

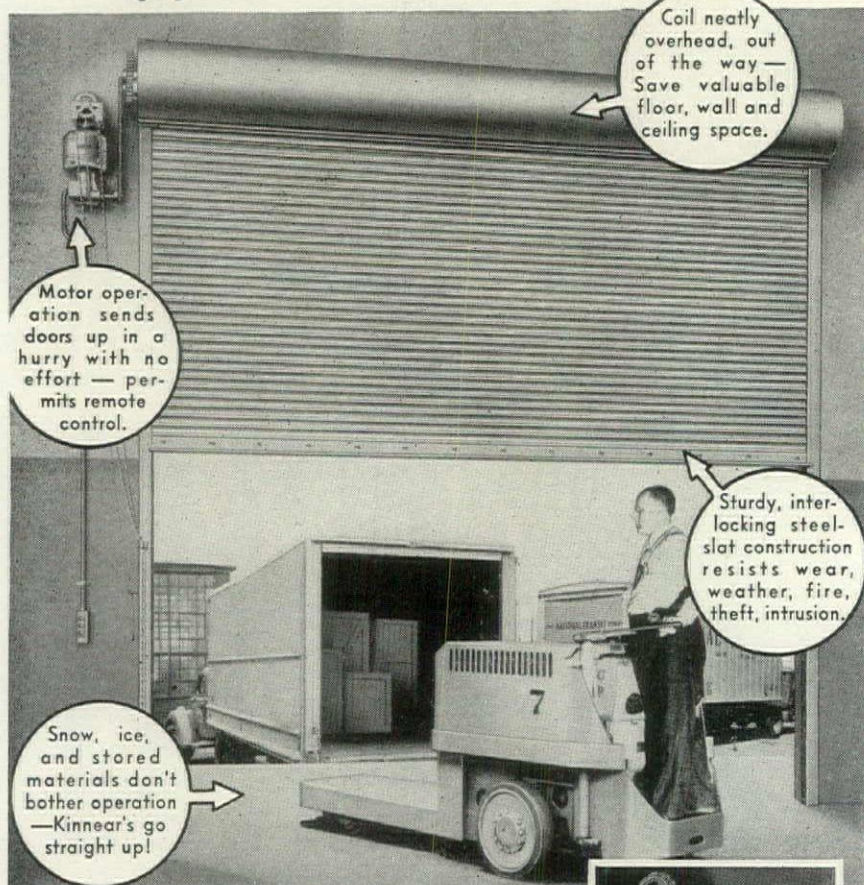
60 EAST 42nd ST., NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD



With KINNEAR ROLLING DOORS, Your Clients

*gain these advantages*



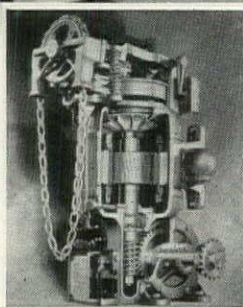
Coil neatly overhead, out of the way — Save valuable floor, wall and ceiling space.

Motor operation sends doors up in a hurry with no effort — permits remote control.

Snow, ice, and stored materials don't bother operation — Kinnear's go straight up!

Sturdy, interlocking steel-slat construction resists wear, weather, fire, theft, intrusion.

When you install Kinnear Rolling Doors you gain more than smooth, easy operation. Kinnear Rolling Doors coil overhead, out of the way, offering valuable savings in floor, wall and ceiling space. The sturdy, interlocking steel-slat construction discourages theft and intrusion; repels fire and the elements. Kinnear durability has been proved — doors in continual use for 20, 30, and even 40 years are still giving the same efficient service. Motor operation enables you to raise doors quickly by merely touching a button, thus saving time and labor. Push-button control cuts operating and air-conditioning cost by reducing the tendency to leave doors open. For efficient time- and labor-saving doorways, write for full details on Kinnear Rolling Doors. The Kinnear Manufacturing Company, 1640-60 Fields Avenue, Columbus 16, Ohio.



Sectional view showing the rugged construction of the Kinnear Motor Operator.

## MONTH IN BUILDING

(Continued from page 122)

board and—marvel of marvels—a mechanical refrigerator. Peering over the shoulders of the exclaiming ladies, proponents of a clear-cut emergency housing policy were no less enchanted by the most tangible step ahead the government has yet taken to meet a formidable postwar need, a step which would in no way confuse or delay action to solve Britain's long-term housing problems.

Solemnly debating the merits of prefabrication, the Royal Institute of British Architects had gracefully welcomed the inevitable, agreed that the "assistance which prefabrication and standardization could make towards the carrying out of the postwar building program" would be measurable. The R.I.B.A. could not refrain, however, from voicing the hope that prefab would not be sprinkled at random over England's landscape.

But approval while broad was not unanimous. Same day the government's emergency house went on view in London, a Hull builder opened a public exhibition to demonstrate that private enterprise could put up a two-story wood-frame house in four days that would last for 50 years. Said the Amalgamated Union of Building Trade Workers: the industry was well able to produce 500,000 brick houses a year. Biggest popular block to growth of a non-subsidized prefab industry in England: most thrifty Britishers regard building as a long-term investment, are apt to be lukewarm to prefabers plea for consideration of houses as consumer goods with a rapid rate of replacement.

War industries looking for a new job to do are conducting their own investigation of the industrialized house. A combine of 120 firms, representing five major British industries—aircraft, plywood, steel-tubing, light alloys, iron and steel—have prepared a half-dozen basic designs for a prefab house, which will borrow heating and insulating devices now used in fighting planes.

Whatever market possibilities are opened up by private industry, the all-steel model prepared by the Ministry of Works, if approved by Parliament, will be the only prefab house purchased by the government. Winston Churchill hoped that the emergency house, first demonstrable achievement of his four-year plan for transition from war to peace, would enable "several hundred thousand of our young men to marry several hundred thousand of our young women and make their own four-year plan."

(Continued on page 130)

SAVING WAYS  
IN DOORWAYS

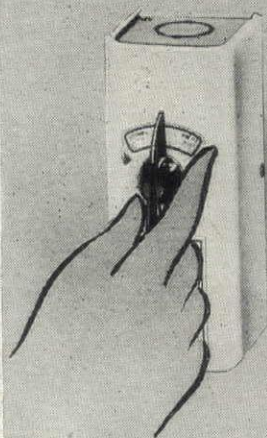
**KINNEAR**  
ROLLING DOORS



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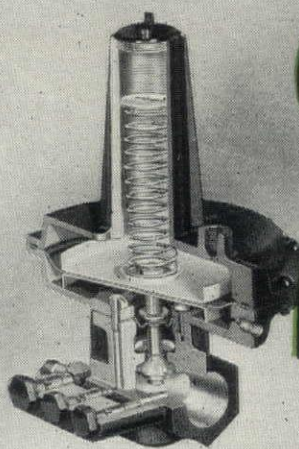
...that assure genuine **INDOOR COMFORT**  
and greater heating satisfaction in your  
post-war homes



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**The Mueller Season-stat**—this exclusive control keeps any Mueller automatic heating plant in step with the weather.

The Season-stat shuts off the gas valve or oil burner, or operates the damper motor on a coal-fired unit, in accordance with the plenum temperature which is determined by the setting of the pointer on the Season-stat. The attractive instrument may be located on the wall of any first-floor room. Thus, long periods of air circulation are attained under any outdoor temperature conditions. In mild weather, air is delivered at a relatively low temperature with the *continuous movement* essential to comfort and health.



# 2

**The Mueller Levelizer** — an exclusive Mueller gas-heating control—regulates the gas flame up-and-down instead of on-and-off. The Levelizer automatically provides continuous heat in varying quantities, as needed. Thus the operation of the heating plant matches the weather.

Include Mueller heating equipment in your post-war plans. Write for bulletins on these and other features of the complete, nationally-known, nationally-advertised Mueller line. **L. J. Mueller Furnace Company, 2001 W. Oklahoma Avenue, Milwaukee 7, Wisconsin.**

B-17

**MUELLER** *Climatrol*  
HEATING AND WINTER AIR CONDITIONING



# THE BUYING GUIDE OF

# 19,000,000 WOMEN!

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Gas Ranges bearing this seal meet the highest performance standards of engineers and home economists combined.



Every Gas Range bearing this famous CP Seal is certified to give tops in cooking perfection and maximum savings in time, food, fuel and money. Millions of women know it! Millions more are learning it every day! That's why they'll expect to see CP Gas Ranges in the kitchens you design and build for postwar living. For full information on CP Gas Ranges, ask your Gas Company.



... THE FLAME THAT WILL  
BRIGHTEN YOUR FUTURE

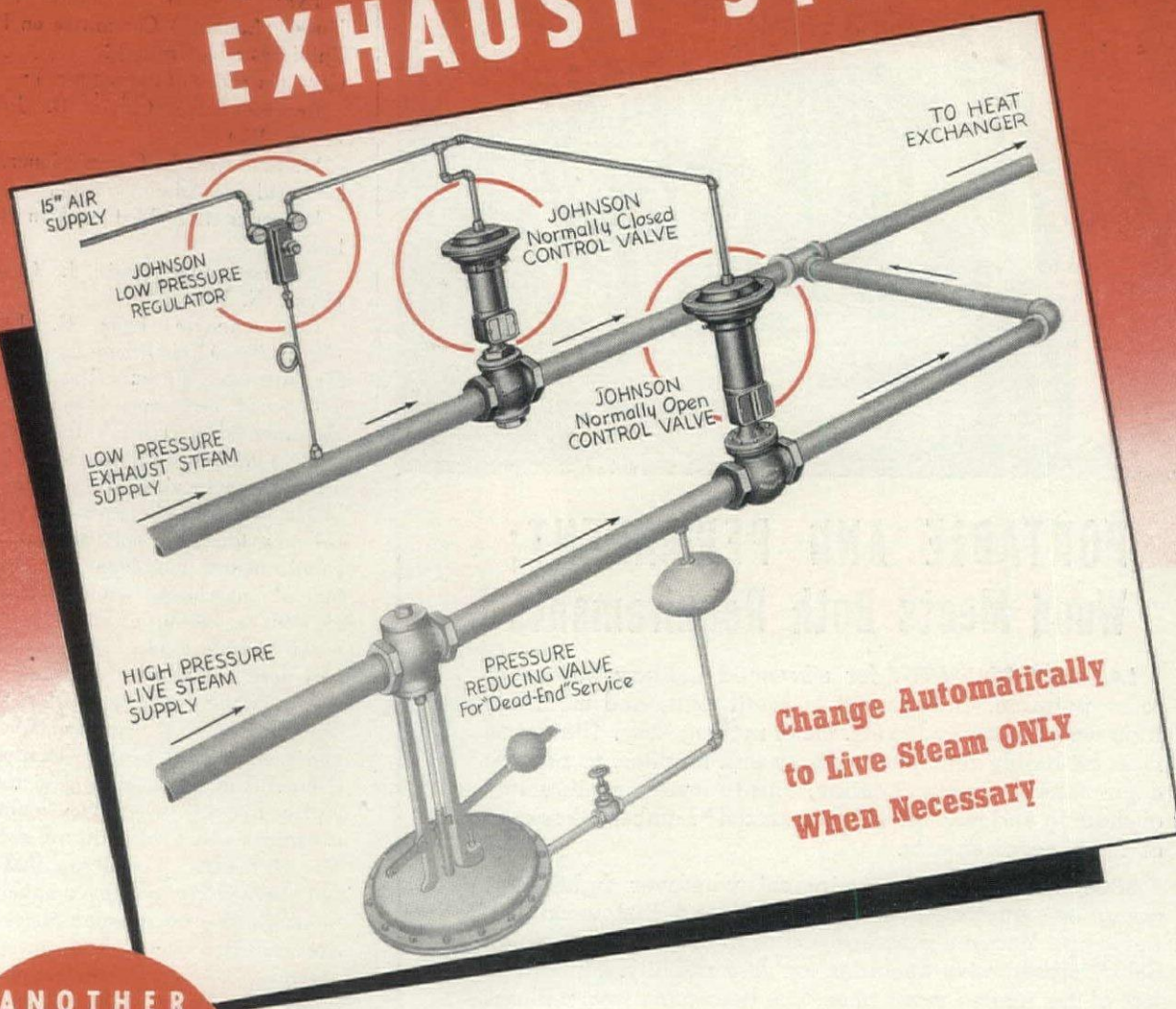
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Conserve wartime fuel! Save steam! Save money! Utilize economical *exhaust steam*, whenever possible. . . . The Johnson control hookup, illustrated above, overcomes the principal disadvantage of using exhaust steam for heating coils, heat exchangers and other equipment where low pressure steam is required. When the pressure of the exhaust steam drops to a point where it ceases to be useful, the Johnson "Low Pressure Regulator" closes the Johnson Valve on the exhaust steam supply and opens the Johnson

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to Live Steam ONLY  
When Necessary**

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## JOHNSON

*Fuel-Saving  
Starts With  
CONTROL*

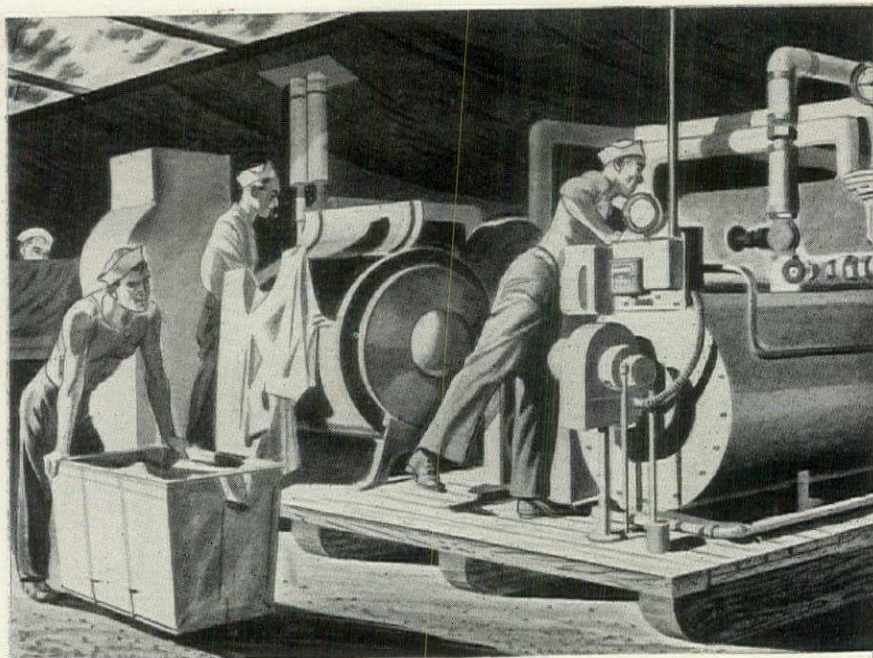
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TEMPERATURE AND  
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**MINALITH\*-TREATED** wood—flameproofed—is proving similarly valuable to the war effort. Blimp hangars, warehouses and the like are safeguarded against fire, helping to preserve their usability in the face of extraordinary hazards. Wood treated with Minalith fire retardant will not catch fire. It will not spread fire.

**ALL OF TODAY'S** production is, of course, going into war work. But Wolmanized Lumber and Minalith-treated Lumber will be available for your postwar use. With either type of treatment, all of the usual advantages of building with wood are retained—lightness, ease of handling and erection, strength, resilience, high insulation value. American Lumber & Treating Company, 1647 McCormick Building, Chicago 4, Illinois.

\*Registered trade marks

WOOD THAT'S



FOR SAFETY AND ENDURANCE

**AMERICAN LUMBER & TREATING COMPANY**

## MONTH IN BUILDING

(Continued from page 126)

### SLUM CLEARANCE ON CAPITOL HILL

**SCENE:** Postwar planning session, House (Lanham) Committee on Public Buildings and Grounds.

**CAST** (in order of appearance):

Representative Calvin D. Johnson (Dem., Ill.)

W. E. Reynolds, Commissioner, Public Buildings Administration.

Representative Earl Wilson (Rep., Ind.)

Representative Louis J. Capozzoli (Dem., N. Y.)

Representative Fritz G. Lanham (Dem., Tex.), chairman

**MR. JOHNSON:** Frankly, I as an individual would be opposed to the slum-clearance idea. I think that we have made a mistake in going into blighted areas, so to speak, and trying to build better homes of the tenement type for the individual. I believe that if we could modify our loans so that the federal government could loan a man as little as \$500, provided he would build himself a two-room house on a half acre or an acre of ground somewhere in the outlying districts of the city in which he is employed, we would find thousands of people—hundreds of thousands of them—willing to move to a place like that, where they could raise the things which they will use as food.

**MR. REYNOLDS:** I will say that what you suggest is possible, although I would raise some question about it. It has been tried before. You run into the question of sewers, water supply, and things of that sort, which run your cost up if you are going to have those facilities. If the soil conditions are right for septic tanks, you can do it pretty well; or if you can get a well at a reasonable depth, you can do it pretty well.

**MR. WILSON:** But not on \$500. Five hundred dollars is not enough. It is absurd to begin with. Let us say \$5,000 to start with.

**MR. JOHNSON:** Five thousand dollars is more absurd than \$500. You can build a two-room house for \$500 and buy ground for \$200, making a \$700 outlay.

**MR. WILSON:** But not with a sanitary system.

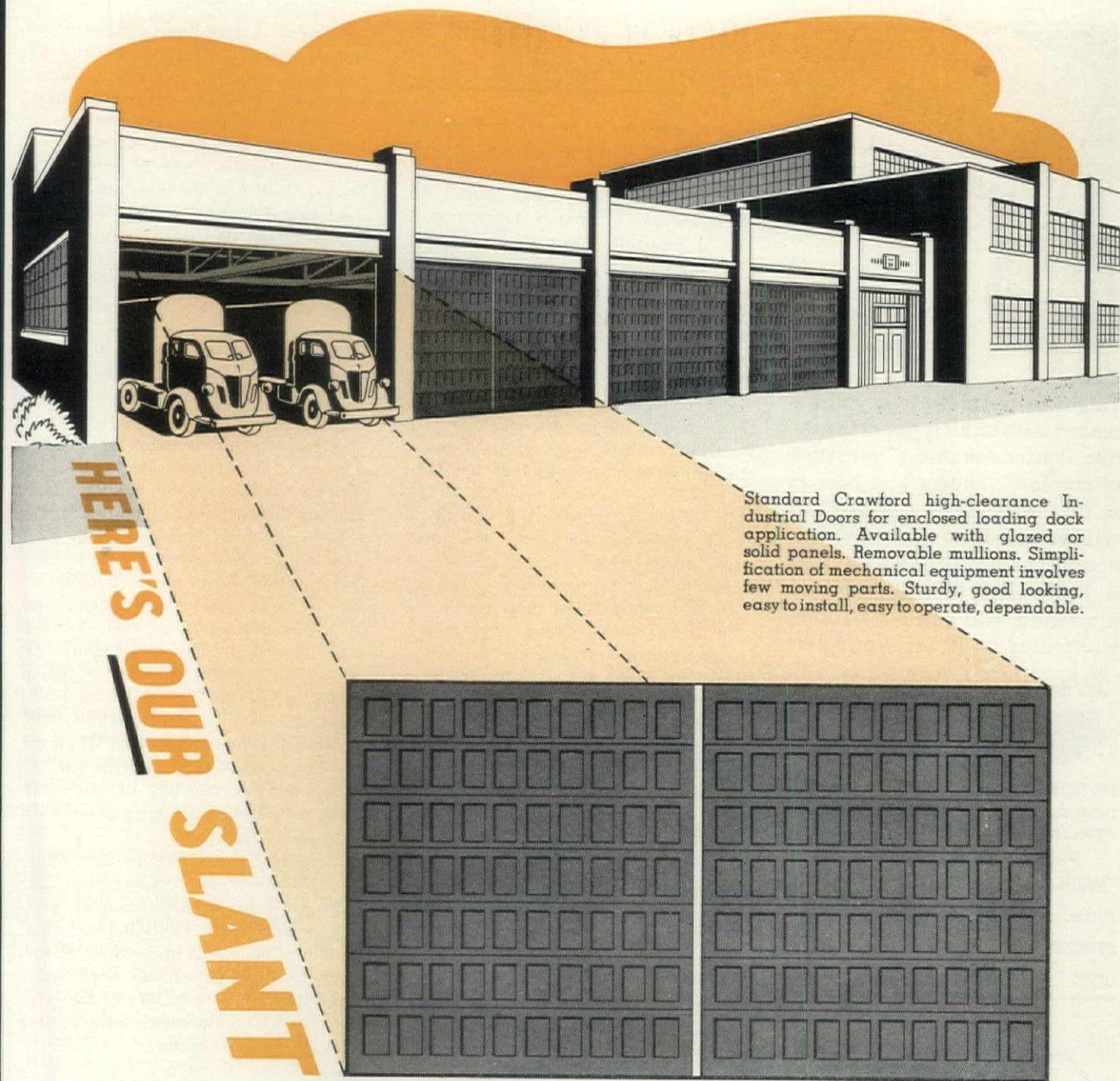
**MR. JOHNSON:** Absolutely not. That is what runs your cost up. That is the ridiculous part of your whole program.

**MR. WILSON:** Then, it would be better to stay in the slums, where there are some sanitary features.

**MR. REYNOLDS:** I think that this was found: that the average person strangely enough, if you gave him an acre of land, did not develop it; he did not work it. . .

(Continued on page 132)





Standard Crawford high-clearance Industrial Doors for enclosed loading dock application. Available with glazed or solid panels. Removable mullions. Simplification of mechanical equipment involves few moving parts. Sturdy, good looking, easy to install, easy to operate, dependable.

## on the all-weather protected loading dock problem

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Hand or Power Operated Doors  
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## MONTH IN BUILDING

(Continued from page 130)

There seems to be some reluctance on the part of those people to develop these garden plots.

Then, again, they have forced on them the cost of transportation, which would probably mean an automobile. MR. JOHNSON: Do you know of anybody who lives in the slums in normal times who does not have one?

MR. REYNOLDS: I think the majority of them do not.

MR. CAPOZZOLI: Thousands and thousands of them do not have automobiles. If you will come down to the East Side of Manhattan, I will show you many thousands of people who do not have automobiles.

MR. WILSON: They will be riding in their cars while the weeds take over the gardens. The Lord will furnish the sunshine, but the weeds will grow.

MR. JOHNSON: Well, they do not do that in the slums because they do not have either the gardens or the weeds.

THE CHAIRMAN: We already have quite a bit of testimony in the hearings along that line. Suppose we move along.

This question, I think, is pertinent: should not the federal government payroll be reduced?

### DRAB WORLD

Dreary as is the private world of mental illness, many a state hospital patient lives in an outer world even drearier. So concluded a commission appointed by Governor Thomas E. Dewey to find out how well New York State is caring for its mentally ill. With public confidence in the mental hospital's function increasing, patient population in state

hospitals has almost doubled over the last 20 years. But rate of patient admission has outdistanced new building. Utica State Hospital still uses a building erected 100 years ago; as late as 1924 Harlem Valley State Hospital took over buildings erected as prison cell blocks. Nor has the vast amount of new therapeutic technique been reflected in the design of even recently constructed buildings. Massive 5,000-bed skyscrapers shut patients away from the out-of-doors; seldom is there planning for recreation space.

Taking a look at the state's 26 institutions, representing an investment of \$188,000,000, investigators found: buildings over-run with "rodents and vermin"; the fire hazard of wooden floors; no proper provision for housing medical staff and their families; lack of planning for service facilities.

Best measure of how far mental hospital design has fallen short of its special function is the investigators' picture of the life of the up-patient, who knows no horizon larger than the hospital day-room. "It is a common sight to see some thirty to ninety patients sitting in rows in such rooms or walking restlessly up and down without any supervised activity whatever. When the weather permits such patients are occasionally escorted out of doors, in many institutions only for a group walk in a two-by-two file."

Inspecting Craig Colony for Epileptics, the investigators observed: "The cows are kept in clean spacious quarters, well provided with fodder, while certain of the wards of the State in this institution have lived and slept under conditions which members of the commission felt could never have existed in a civilized community."



SOMETIMES THE PIGS ARE BETTER HOUSED. Piggery and patients' quarters, both part of New York State's mental hospital facilities.





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**A. C. Horn Company** *established, 1897*

Manufacturers of Materials for Building  
Construction and Maintenance  
43-36 Tenth Street, Long Island City 1, New York



# WATERFOIL

THE UNIQUE TREATMENT FOR EXTERIOR MASONRY SURFACES





## BOOKS

(Continued from page 28)

however high-minded, score 100 per cent on what will be good for everybody. Lilienthal's report of the farm improvement program stands as a shining example that community participation in TVA has been no empty shibboleth. In a region where more people depend for a living on each acre of farm land than anywhere else in the U. S., the land itself was exhausted. But all that the agronomists could teach might have been lost to the valley without the multitude of demonstration farms.

"What was needed was not alone more technical information, but that on the farm itself there should be a unification of all the available knowledge and skills. The technical knowledge of all kinds available at the various state university agricultural experiment farms had somehow to be moved to thousands of valley farms, actual farms. What happened at a beautifully equipped experiment station or in a laboratory was one thing, what would happen on a man's farm was quite another. The laboratory had to be taken to the farm; the whole farm as a business was the farmer's problem."

With a happy talent for the specific, Lilienthal shows by dozens of examples how the presumably formidable questions of cooperation with state and local governments and with business, sale of power to communities, education, health and recreation programs find easy solutions implicit in an operating scheme based firmly on broad popular participation and approval.

Lilienthal spends few pages belaboring the "yardstick" aspect of the TVA scheme; the lawyer who joined TVA to work out power distribution obviously does not suffer from the specialization which he condemns. His recognition that the people of the valley constitute a resource of far more importance than the power of its rivers has evidently never wavered. Thus, at every step, methods are as important as results. "Whether happiness or unhappiness, freedom or slavery, in short whether good or evil results from an improved environment depends largely upon the methods by which the physical results have been reached, and in what spirit and for what purpose the fruits of that change are used."

Lilienthal's confidence that a public agency need not necessarily bog down in the evils of bureaucracy is contagious. Even the most confirmed opponents of government-in-business will find it hard to put down this simply told, profoundly moving story of democracy in action.



# 832 CHAMBERLIN SAFETY-DETENTION SCREENS INSTALLED ON BELLEVUE'S PSYCHIATRIC PAVILION



Shown above are some of the various mental departments at Bellevue, the windows of which are now equipped with Chamberlin Safety-Detention screens. These rugged, efficient screens are providing unobtrusive detention yet provide the strength of steel without the bars. They offer these advantages:

- More home-like environment with safety
- Insect proof — adequate light and ventilation
- Unobtrusive, noiseless detention
- Clean, litter-free grounds outside windows
- Protection against outside criminal contacts



## CHAMBERLIN

SAFETY-DETENTION SCREENS

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LET A CHAMBERLIN ENGINEER HELP YOU PLAN

Write for name of our nearest estimating engineer also new  
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# Plan for 10 million new homes!

A MILLION new homes a year for ten years—say government figures—will be a postwar necessity. The people who will build them are undoubtedly earmarking millions in war bonds for that purpose. These people represent a lot of profitable business for architects who can show them how to have better homes for less money.

They will want distinctive, durable home equipment, the safety and protection they can get only with incombustible, weather-resistant, vermin-proof steel building products. They will demand the economies made possible by freedom from re-

pairs and replacements, insured by using structural members, roofing, closets, cabinets, kitchen and bathroom equipment made of steel.

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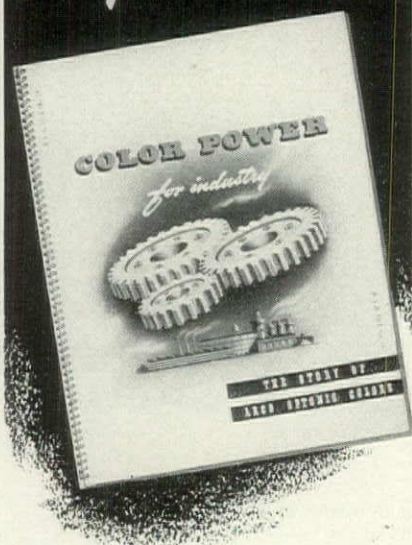
BUY MORE THAN BEFORE IN THE FIFTH WAR LOAN DRIVE

# UNITED STATES STEEL



# THERE'S A NEW WORD FOR THE SCIENCE OF COLOR IN INDUSTRY

# Optonics



## SEND FOR THIS BOOKLET

OPTONICS is a new word which describes a new science—the practical, *functional* use of color in industry. A descriptive booklet will be mailed to you with our compliments on receipt of a note on your business letterhead. Write for it today

**THE ARCO COMPANY**

CLEVELAND, OHIO • LOS ANGELES, CAL.



## LETTERS

(Continued from page 36)

### Forum:

... In order to create employment it is, of course, necessary to have a certain volume of construction and under Title II with its low cost index, I do not believe it is possible. Title VI gives the builder firm commitments so that he can start a large project and know that he is financed, even if they do not sell and if compelled to rent. It also gives him the advantage of being able to sell on contract with a small amount down or on a lease option basis. Title II does not offer any of these possibilities. Under Title II there is a possibility of 80 per cent loans to builders but this is limited to about \$50 or \$100 thousand total to any one builder. With this loan how can anyone build? And under the present cost index under Title II the loan changes to about 60 per cent. We know in this territory that we will build apartment houses after the war as we have had practically no construction of this type for the last ten years. This, of course, would not be possible under Title II or the old 207.

I believe to attain the above outlined, it would be necessary to either revise Title II or to continue Title VI. There is a feeling on the part of the FHA offices that Title VI would create too much volume. This can easily be guarded against as the local office can limit the credit or the amount of loans to any one builder or project...

M. M. ROBINSON

*General Houses, Inc.  
Detroit, Mich.*

### Forum:

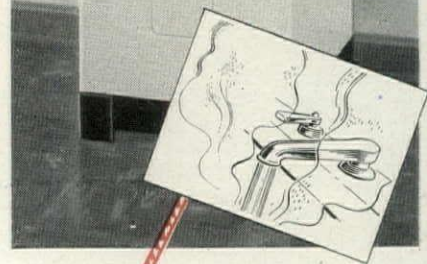
... Perhaps Henry Wright can tell me something about the "Home Freezing" story. Why did the old iceless refrigerators have the heat they removed from inside the box sensibly conducted away by water, while the newer ones re-radiate the heat into the room in which the box stands, thereby heating the box itself which the machinery is working to cool?

If we are to have air-cooled refrigerators at least the hot air should be blown out the window as in a room cooler unit.

And question No. 2. My experience is that all boxes (except perhaps Westinghouse) instead of having a thermostat control of the inside temperature, have a sort of "throttle setting" control. My General Electric monitor top has several "speeds." If we set it to low speed on a normal day maybe everything is fine. But then the weather gets

(Continued on page 140)

## The MODERN Water Heater is *Electric*



Post-War homes will sell Faster if equipped with a modern automatic *electric* water heater. For an electric water heater is:

CLEAN—Smokeless, sootless.

SAFE—Flameless, fumeless.

EFFICIENT—Because flues or vents are not needed, it can be placed near principal outlets, reducing length of water pipes, decreasing heat loss and supplying hot water at the turn of the faucet.

For instant hot water at extremely low cost, install electric water heaters in every home you build.

ELECTRIC WATER HEATER SECTION  
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

CLARK • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM  
• MELVINATOR • MONARCH • NORGE • PEMCO • REX •  
SELECTRIC • THERMOGRAY • THERMO-WATT •  
UNIVERSAL • WESTINGHOUSE

A House Wired For An  
ELECTRIC RANGE Is Already

*wired*  
for an  
*Electric*  
**WATER HEATER!**



# PICTURE THE FUTURE OF *Electric Ranges!*



1 OLD ALBUMS (1900-1905) picture the beginning of the Electrical Age, when homeowners began *insisting* on wiring for "those clean, new electric lights."



2 THE "FLAPPER ERA" saw almost everyone demand Electric Refrigeration. Additional outlets for refrigerators and other appliances became a "must"



3 THE POST-WAR ERA will see the increasing demand for Electric Ranges mount to insistence. The Post-War homes will *have to be* wired for Electric Ranges.

**BEFORE THE WAR**—the swing to the speed, safety and cleanliness of electric cooking was already established! 450,000 electric ranges were sold in 1940 . . . 780,000 in 1941 . . . with over 3 million now in use!

**AFTER THE WAR**—the increased demand is going to be huge! So plan now to wire the homes you're going to build, for Electric Ranges. Built-in, the cost of such wiring is negligible—the selling power tremendous!

For details on wiring costs and advantages, write for the booklet "WIRING AHEAD". Address:

ELECTRIC RANGE SECTION,  
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION  
155 East 44th Street, New York 17, New York

## *Wire Your House*

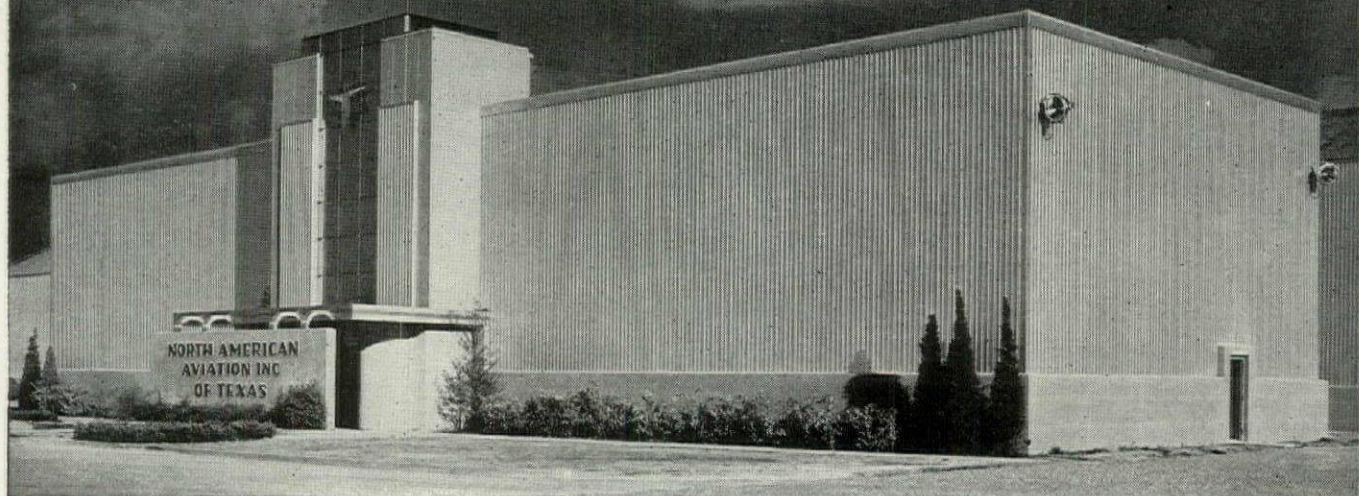
### FOR EASIER SALES



A-B STOVES • ESTATE • GENERAL ELECTRIC • GIBSON • HOTPOINT • KELVINATOR • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE



# Tomorrow's trends reflected ...in today's construction



Already, many architects and engineers are developing plans for postwar construction which call for the economical efficiency of automatic heat and power . . . which, in turn, means the use of liquid or gaseous fuels.

In this connection, TODD offers two important advantages: (1) A complete line of burners and air registers which meet practically every combustion requirement where liquid or gaseous fuels are used. (2) An installation tailored to fit any specification. If conditions call for it, TODD engineers will arrange for special equipment.

*TODD gives you the proper equipment . . . properly engineered!*

The efficiency of TODD oil and gas burners is in constant evidence . . . in manufacturing plants, schools, hospitals, hotels, office buildings, banks, stores and buildings of many other types—everywhere. TODD burners provide the utmost in flexible response to rapidly changing heat and power demands. Their use insures fuel economy . . . and exceptionally low maintenance costs. Records prove that TODD burners reduce the cost of a pound of steam!

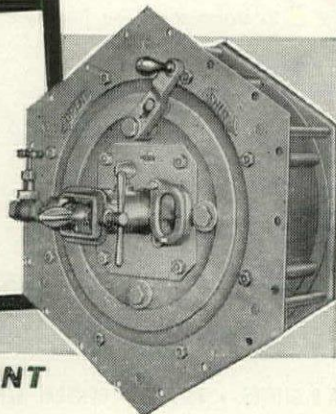
TODD engineers are available for consultation—without obligation. Call on them while planning heat and power specifications for postwar buildings . . . or designing the modernization of present facilities.



## TODD SHIPYARDS CORPORATION

(COMBUSTION EQUIPMENT DIVISION)  
601 West 26th Street, New York 1, N.Y.

NEW YORK \* BROOKLYN \* HOBOKEN \* BARBER, N. J. \* SO. PORTLAND, ME.  
GALVESTON \* HOUSTON \* MOBILE \* NEW ORLEANS \* LOS ANGELES  
SAN FRANCISCO \* SEATTLE \* TACOMA \* BUENOS AIRES \* LONDON



**ON THE FIRING LINE OF AMERICA'S WAR PRODUCTION FRONT**





# UNDER THE NATION'S ROOF

June, 1944

The "KEEP OFF" sign is being removed from the roof of the future. Architects more and more are designing to make valuable roof areas truly and literally "functional".



Hospital roofs with sun deck and recreational areas for convalescents; apartment roofs with real gardens and pools; city schools with sun-bathed play areas on spacious roof decks . . . these typify the trend to make the roof more useful than its basic "keep the rain out" purpose.



Such use of roof areas is not fantastic or "freak" thinking. There are many successful examples in use today. It's all in the "know-how". Ruberoid has developed sound, practical, tested specifications. They divide themselves into four types:

GARDEN ROOF - on which grass, flowers and small shrubs can grow year after year with no more attention than those on your lawn. Made possible by effective RUBEROID design of drainage and flashings. Cost is little greater than conventional promenade tile.

PROMENADE ROOF - a simple, practical, efficient method of installing clay promenade tile without the mess, weight and expense of a mortar bed. Entire application is confined to one trade, so there will be no divided responsibility. Particularly adapted for playground roofs on hospitals, schools, office buildings, etc.

HEAVY TRAFFIC ROOF - a husky, tough, concrete surfaced roof on which factory trucks may be used constantly, on which oil drums may be stored and where any kind of activity (that would not damage a good concrete sidewalk) may take place year after year. The whole trick is in knowing how to pour the slab and what to put under it. Cost not excessive.

LIGHT TRAFFIC ROOF - a permanent roof surface of black mastic material—requiring no expansion joints and very little, if any, annual maintenance. Relatively low in cost and adapted only to light foot and hand truck traffic. Gives excellent results as an inexpensive playground roof for schools.



Write your nearest RUBEROID office for complete specifications.

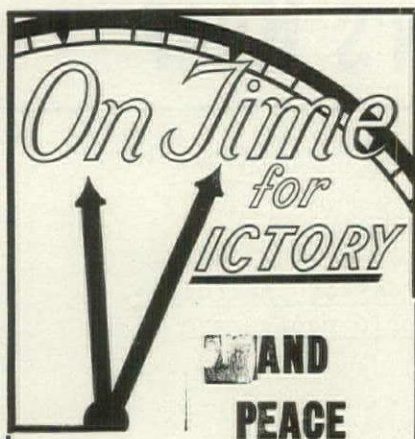
**The RUBEROID Co.**

*Asphalt and Asbestos Building Materials . . . Industrial Insulations*

For up-to-the-minute information on your roofing and building problems consult our nearest sales office:

NEW YORK (18)—500 Fifth Ave. • CHICAGO (1)—307 North Michigan Ave. • BALTIMORE • ERIE • MILLIS (Boston) • MINNEAPOLIS • MOBILE





While we are devoting 100% of our effort to illumination on ship and ashore to help win the war, we look forward to Peace and the increased service we can then render.

Our research, engineering, manufacturing and application facilities have been accelerated.

Our staff is unimpaired. Our vision of what lighting will be after the war is an inspiration.

Let's all pull together to get it over with, soon.

*A. Ward Hendrickson Co.*

Lighting Fixtures  
Illuminating Engineers  
337 ADAMS STREET  
BROOKLYN, N. Y.

## LETTERS

(Continued from page 136)

hot and the box with it. So we set it too high. Now the box is OK again but suddenly a cold wave hits it and the whole box freezes up.

And then the idea of keeping the cold in: years ago G.E. made a small electric refrigerator for \$67. It opened on TOP. If you had a nice bowl of Tom and Jerry you would want to take the cover off and dip into it for a glass—not open the side and have it spill all over the floor because you want just a cup. Cold air spills out of the average electric refrigerator when the side door is opened to take out any little thing, just as the punch does—only the housewife doesn't see it except on her power bill.

Getting back to Topic One, at least the G.E. engineers, if they found a side opening box a MUST, put their heat machine on TOP. The others put it underneath, stove fashion, so the unit heated the box while the door was nicely fixed to drain the cold from it.

Now Mr. Wright, before you expose the Gallup Poll which has nothing to do with architecture, why not expose the engineers?

I saw a home made box (of wood and insulation) big enough to walk into. You went in by steps. First the 40° room for ham, bacon, candy, etc., then the zero room, then the quick-freeze 20° below room. It might have had a 60° room, too (but didn't), for butter you are going to eat soon, for meat to use the next day. I don't think it cost any more, built on the spot, than the very small \$1,500 boxes the dealers are selling these days.

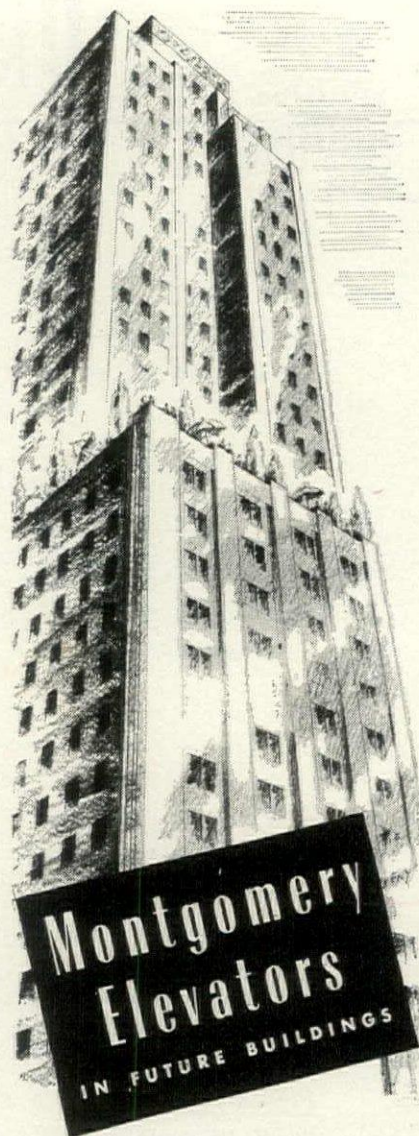
Do you want an electric toaster after the war? Or do you like your toast to taste of charcoal?

GERALD LOEB

Redding, Conn.

Despite its manifest disadvantages, our latest and most complete surveys of consumer opinion show that the general public is pig-headedly insisting on mechanical refrigeration and refusing to go back to the ice-box. As for crusading against this backwardness on the part of the buying public and refrigerator designers, this is no new idea to THE FORUM. As far back as September, 1942, we said "The shiniest prewar refrigerator is still an overly-deep, too-low box better fitted for hide and seek than for storing the numerous small items, and spills most of its valuable 'cold' out of the bottom of the opening every time you open the door." A number of designers are working on schemes for drawer type refrigerators, which solve both of these problems.

Obviously, this problem of kitchen ventilation is beyond the capacity of the refrigerator manufacturers to solve and at the moment it is one of the many responsibilities of the architect and builder that are only indifferently fulfilled.—Ed.



NEW BUILDINGS now being planned will utilize new materials and techniques. And where passenger and freight elevators are required, new problems will arise. For assistance in solving these problems you can depend on Montgomery. For nearly 50 years Montgomery Elevators have been giving dependable service in thousands of buildings throughout the country. Accurate records show that practically no major repairs have ever been required. Too, original cost of Montgomery Elevators is generally lower than that of other comparable makes. If you are planning a specific project, we invite your elevator problems.

**MONTGOMERY MANUFACTURES** a complete line of passenger and freight elevators, electric dumbwaiters and special equipment for vertical transportation.

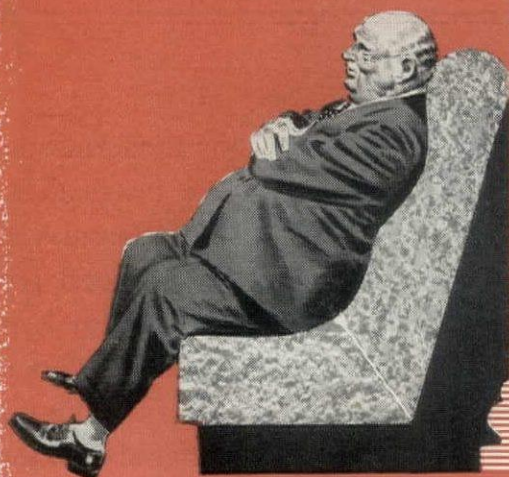


HOME OFFICE • Moline, Illinois  
Branch Offices and Agents in Principal Cities





**NOTHING TO SIT ON...**



**...IS SO RESTFUL AS Foamex\***

Every "functional" minded architect and interior designer should know *Foamex*.

It does the job of two old-fashioned materials, and does it better.

*Foamex* replaces springs and stuffing in seating and mattresses with one molded unit of buoyant latex foam.

Because it is both soft and resilient, *Foamex* can shape itself more perfectly to the sitting or reclining body, providing more complete support and more even weight distribution.

For the same reason it can't pack down hard

\*TRADE MARK

under you and cramp you tiresomely out of shape.

You can't make *Foamex* sag or lump out of shape either. *Foamex* is proving this under today's terrific pounding in train, bus, and plane seats.

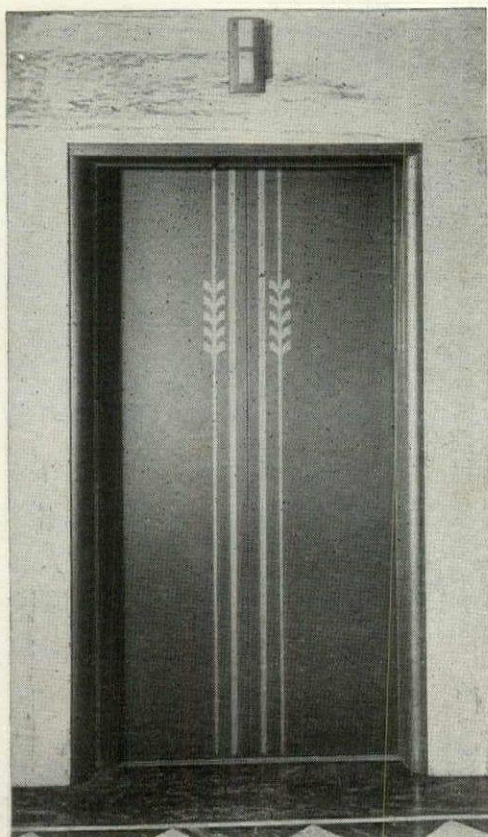
Of course you can't use *Foamex* now, except for war purposes. But you can plan its superb restfulness and functional simplicity into tomorrow's beds, chairs and sofas — especially the space-saving built-in types.

P.S. The ideal covering for *Foamex* seats — *Velon\** upholstery fabric. Makes smarter colors practical.

ANOTHER CONTRIBUTION TO A BETTER WAY OF LIFE by

**Firestone**





# HOW WILL IT RENT in a “BUYER’S MARKET?”



When this war is over, things are going to be different. People will no longer be satisfied with outworn and out-moded equipment. This desire for improvements will apply just as much to the rental of office space as it will to buying a home. People and Business alike will look for the newer and more efficient means of Living and Working. In a “buyer’s market” they will obviously choose the modern. One of the most effective ways of bringing old

buildings up to date, is Lobby modernization. This, of course, includes the installation of Dahlstrom Elevator Entrances. Because elevator entrances are generally the focal point of interest in any lobby, their design is important. To aid in this, Dahlstrom offers the assistance of its design and engineering staffs NOW, so that you may be better able to meet post-war client and prospect demands. A letter will get you started—write today.

*Illustrated above: Typical floor elevator entrances,  
Bank of America, 300 Montgomery St., San Francisco, Calif.  
Architects, The Capitol Company.*



# DAHLSTROM

METALLIC DOOR COMPANY, JAMESTOWN, N. Y.

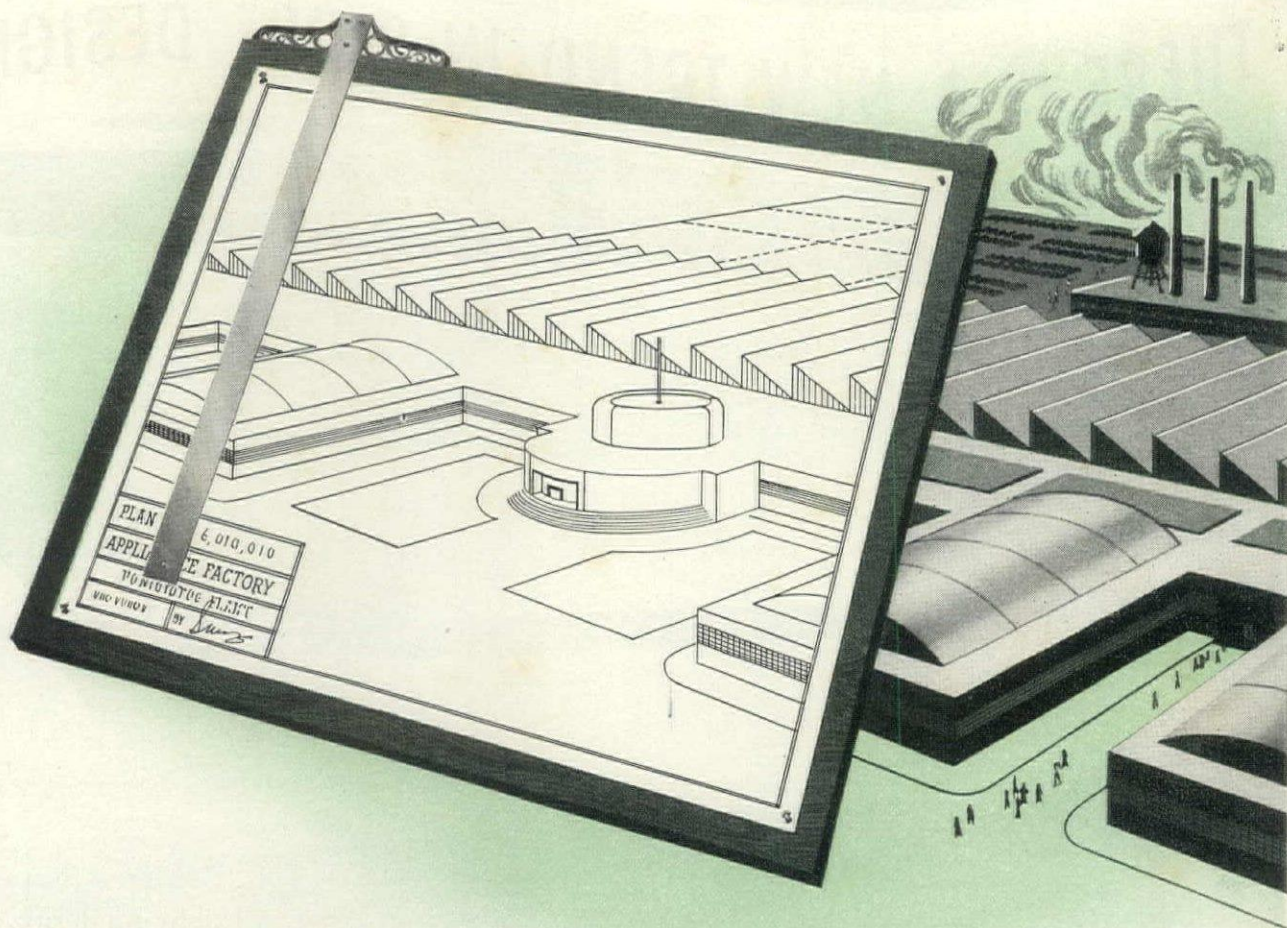
*Branch Offices: NEW YORK, CHICAGO, PHILADELPHIA, BOSTON, CLEVELAND, ATLANTA, SAN FRANCISCO*

*Representatives in Principal Cities*



**PHOTOGRAPHIC EXAMPLES** of many Dahlstrom Elevator Entrance installations in a wide variety of structures... both new and modernized. Write, on your letterhead, for a copy of this 100-page book.





## Tomorrow's "Production Miracles" are on Architects' Drawing Boards TODAY

Plans for post-war reconversion of war plants to competitive peacetime production occupy an important place in the thoughts of astute manufacturers.

Many an architect and engineer is busy on these plans. Undoubtedly you are, too, or soon will be.

Air Conditioning is a vital part of such plans—for its war-proved benefits of better precision control and higher worker efficiency.

In the post-war world, every factor which improves product and lowers cost will be employed. Modern Air Condi-

tioning is near the top of the list.

Modern Air Conditioning means Westinghouse—and its years of pioneering research and engineering experience.

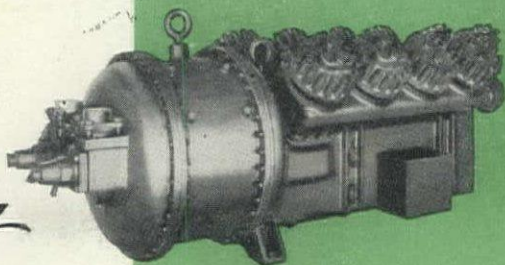
For essential war uses in factories, hospitals, airports, military bases, etc., Westinghouse Air Conditioning and Industrial Refrigeration Equipment is available today.

For executives, architects and engineers now planning post-war reconversion and modernizing, dependable data and competent application engineering assistance are ready.

Phone your nearest Westinghouse office, or write on your letterhead to Westinghouse Electric Elevator Company, 150 Pacific Avenue, Jersey City 4, New Jersey.

### HERMETICALLY-SEALED FOR DEPENDABILITY

Westinghouse pioneered the Hermetically-Sealed Compressor. Hermetically-sealed means light weight • small size • low maintenance and operating costs • high efficiency • long life.



# Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

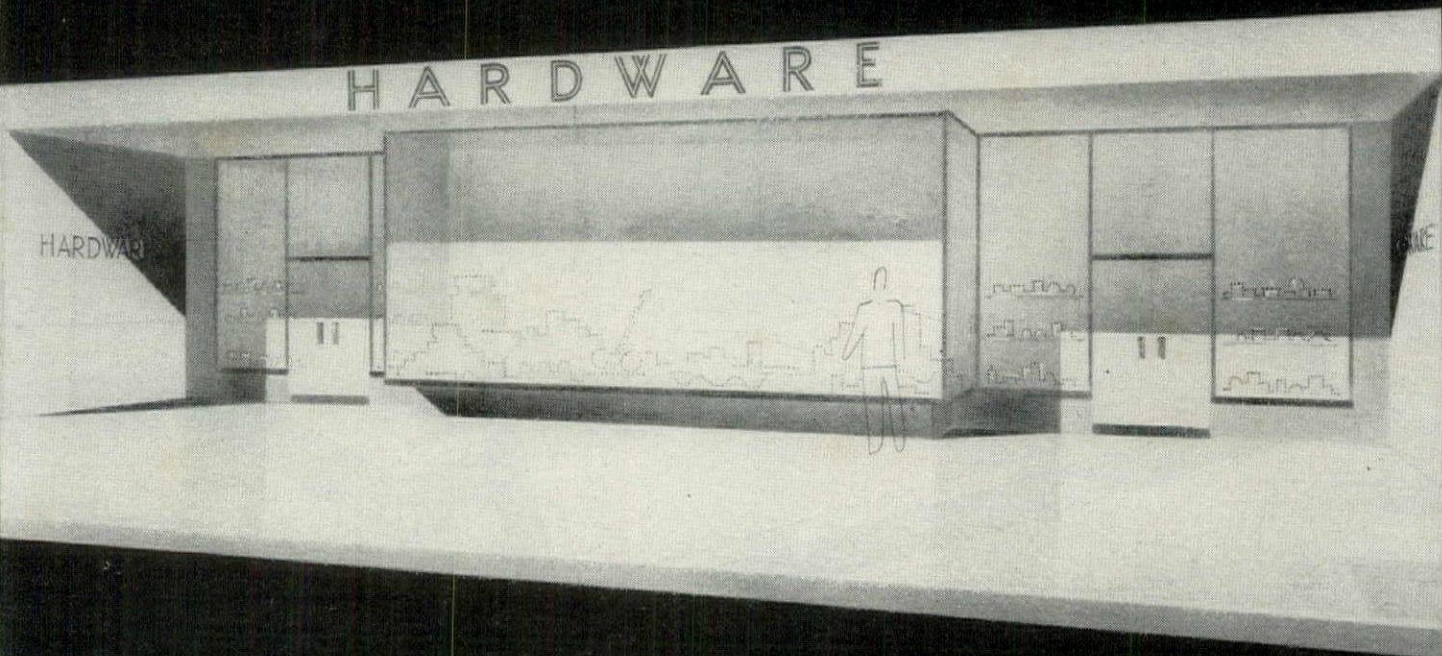
## *Air Conditioning*



**WESTINGHOUSE PRESENTS** JOHN CHARLES THOMAS • SUNDAY 2:30 EWT., N.B.C.  
"TOP OF THE EVENING" • MON, WED, FRI, 10:15 EWT., BLUE NET.



# THERE IS A NEW TREND IN STORE DESIGN



## HOLABIRD & ROOT'S conception of a hardware store

"The Hardware Store, serving people of low and average income, should be as simple and direct as the goods it sells. This simplicity and directness applies to the exterior as well as the plan. The large exterior overhang minimizes reflection in show windows and permits sheltered window shopping in bad weather. The ceiling, being on the same level outside and inside, gives the store itself the same importance as the show window. There is no barrier between the exterior and the interior. In the interior, no frills keep the customer from seeing everything easily and comfortably. The display counters can be moved at will, creating different arrangements for seasonal needs."

*Holabird Root*  
Holabird & Root, Architects

# FREE!

2 perspectives, plan and details of this design—on a 21 x 25-inch sheet. It is the third in a series of store designs by some of America's leading architects. Mail the coupon now.

For versatility, beauty and consistently high quality, Pittsburgh Glass and Store Front Metal are the choice of leading architects throughout the country. These products comprise a full line of materials for use in store construction . . . both exterior and interior. And they are available everywhere through a nation-wide system of branches and dealers.

Merchants in all leading retail fields are being urged by Pittsburgh Plate Glass Company to consult architects. Advertisements in 21 magazines suggest enlisting an architect's aid now to plan for postwar store building and alterations.

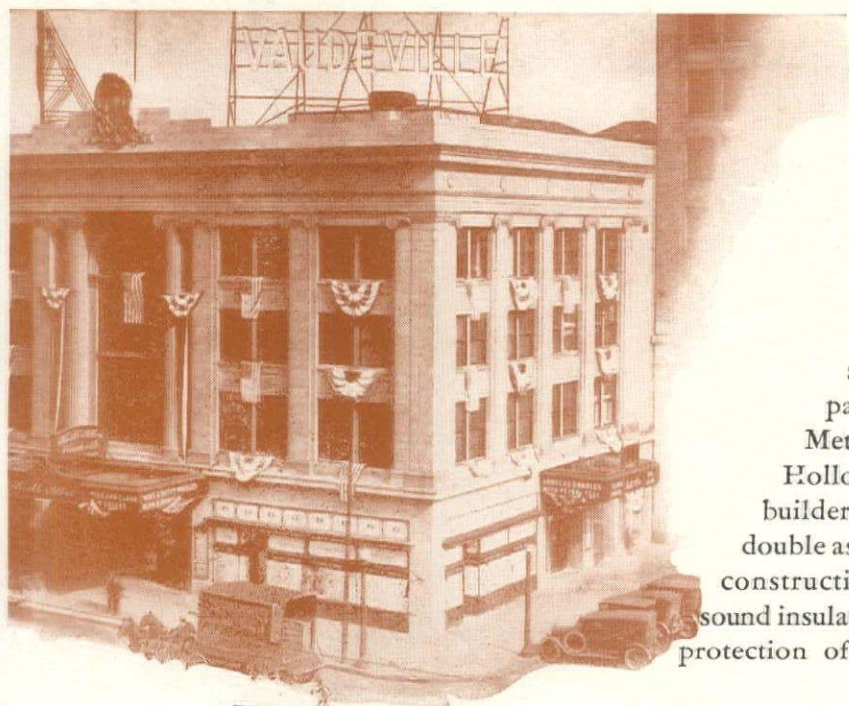
Pittsburgh Plate Glass Company  
2201-4 Grant Building, Pittsburgh 19, Pa.  
Please send me, without obligation, your sheet showing more complete drawings of the hardware store by Holabird & Root.

Name \_\_\_\_\_  
Occupation \_\_\_\_\_  
Address \_\_\_\_\_ State \_\_\_\_\_  
City \_\_\_\_\_

"PITTSBURGH" stands for Quality Glass and Paint

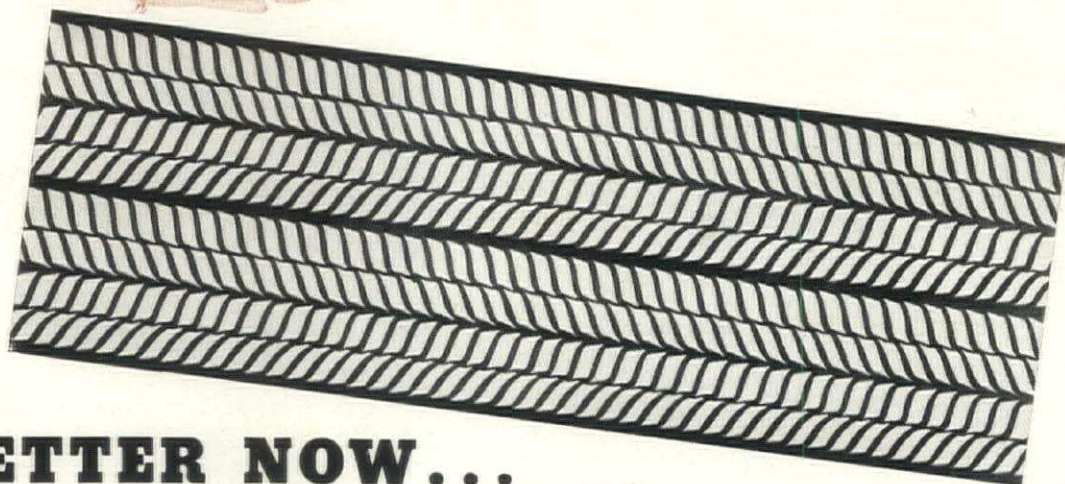
PITTSBURGH GLASS FOR STORE FRONTS AND INTERIORS





## GOOD THEN...

During America's great upsurge in construction during the past quarter-century, Truscon Metal Laths, Corner Beads and Hollow Partition Studs gave builders and building owners double assurance of strong wall construction, fire resistance, sound insulation, and maximum protection of building value.



## BETTER NOW...

Because we have met special technical requirements in the production of war materials during the past two years, and gained new skill and ingenuity in steel fabrication, it will be possible for us to announce improved metal lath and accessories when our war-production duties to America are fulfilled.

**TRUSCON**  
*Steel Company*

YOUNGSTOWN 1, OHIO

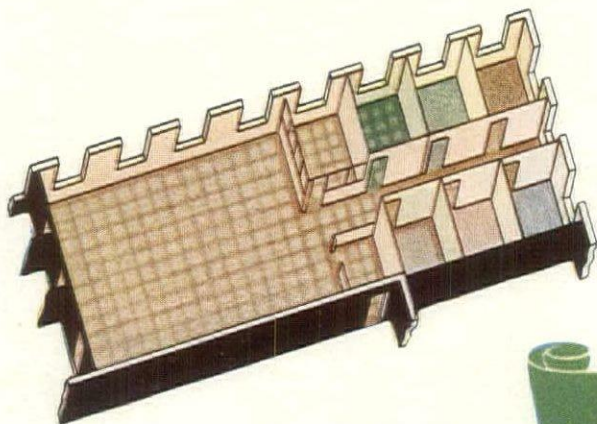
*Subsidiary of Republic Steel Corporation*



Residential Double-Hung and Casement Windows, Intermediate Casements; Detention, Donovan Awning Type, Maximair Louver Type, Projected, Pivoted, Double-Hung, and Continuous Windows (and Operators); and a Complete Line of Steel Joists, Metal Laths, Steeldeck Roofs, Reinforcing Products, and Steel Doors for Buildings and Hangars.

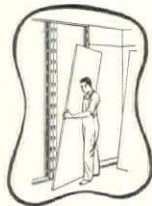


# For the Office



**THIS OFFICE GROUP** consists of a general office, six private offices with ceiling-high walls, one private office with free-standing walls, and a rail-height enclosure. (See plan at left.) The J-M Unit Office System—walls, ceilings and floors—was used throughout. Note that the outside building walls are finished on the interior with J-M Movable Transite Panels.

**Movable Walls.** J-M Transite Walls are strong, sturdy, durable. They provide a complete system of dry-wall construction, which can be taken down and re-located almost overnight with 100% salvage. Available for any height—even for low railings and counters. Made of asbestos and cement, they have a smooth, hard surface. Fireproof. Last indefinitely. May be left in original gray finish, painted or decorated.



## Johns-Manville



# of Tomorrow...

## The Johns-Manville System of Unit Office Construction

The complete interior—  
WALLS • CEILINGS • FLOORS

IN THE POST-WAR ERA, businessmen will demand offices that are quieter, more comfortable, more efficient than ever before. And because of the ever-changing demands of business, offices must be constructed so that alterations and rearrangement can be quickly and economically achieved.

In designing such an office, we believe that the Johns-Manville System of Unit Office Construction will help you accomplish these functional objectives. For this J-M Unit Office plan consists of . . .

- Acoustical ceilings of demountable units which provide for a flush-type arrangement of fluorescent lighting.
- Movable, salvageable walls—easily erected and dismantled.
- Resilient floors—composed of units which permit easy office alterations.

By using these three J-M Building Materials together, you achieve complete flexibility in rearrangement. They are durable and easy to maintain. Besides, you write one simple specification . . . you gain one manufacturer's responsibility.

\* \* \*

We invite your thorough investigation of the J-M System of Unit Office Construction. We believe it will help solve many of your future design problems. A new brochure, "Unit Offices by Johns-Manville," is available on request. For your copy, address Johns-Manville, at 22 East 40th St., New York 16, N. Y.



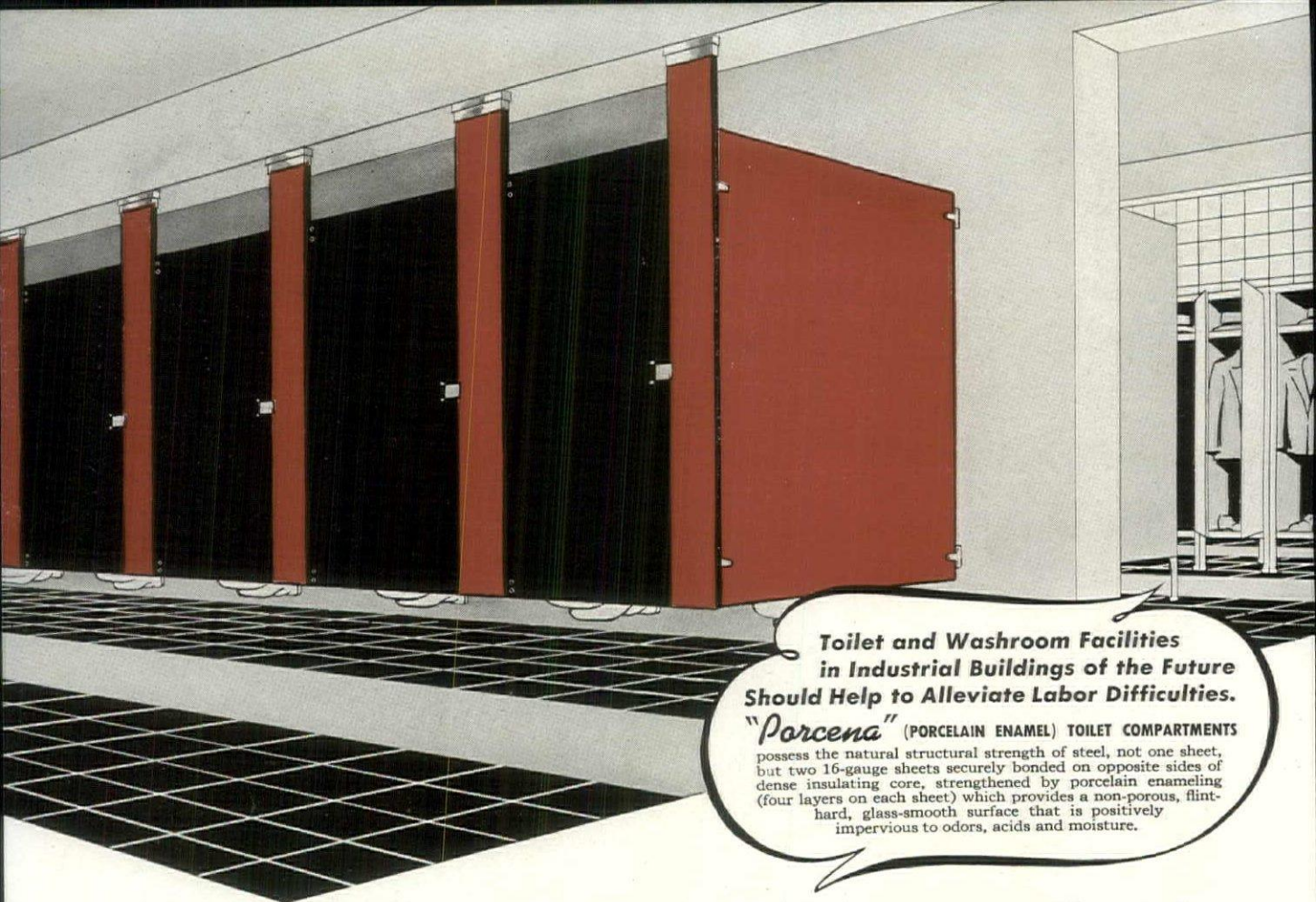
**Acoustical Ceilings.** Ceilings of the J-M Unit Office System are sound-absorbing acoustical units which permit hung ceiling construction, concealing air-conditioning ducts, overhead conduit, etc. Since the units are demountable, service equipment is readily accessible. Easy to clean, easy to maintain. High light reflection coefficient. Exclusive J-M method of construction allows use of flush-type fluorescent lighting with J-M Acoustical Ceilings.

**Colorful, Resilient Tile Floors.** J-M Asphalt Tile Flooring completes the J-M Unit Office System. Quieter and comfortable to walk on, they are easy to clean, easy to maintain. Made of asbestos and asphalt, they will withstand hard wear and give years of service. Manufactured in small units in a wide variety of plain and marbled colors, permitting a great many designs and patterns. The individual units make it simple to extend or patch the floor.



## Unit Office Construction





**Toilet and Washroom Facilities  
in Industrial Buildings of the Future  
Should Help to Alleviate Labor Difficulties.**

**"Porcena"** (PORCELAIN ENAMEL) TOILET COMPARTMENTS possess the natural structural strength of steel, not one sheet, but two 16-gauge sheets securely bonded on opposite sides of dense insulating core, strengthened by porcelain enameling (four layers on each sheet) which provides a non-porous, flint-hard, glass-smooth surface that is positively impervious to odors, acids and moisture.

## CEILING HUNG TOILET COMPARTMENTS Will Make Factories of the Future Better Places in Which to Work

Architects and engineers who design and plan industrial buildings can do much to remove the habitual gripe of employees regarding toilet facilities. Serious complaints about toilet and washroom facilities require prompt action if labor trouble is to be avoided, because to the American worker adequate toilet and washroom facilities are a basic necessity. Resentment and irritation aroused by untidy toilet facilities lower the productivity of employees.

Toilet compartments usually dominate a toilet room, influencing the toilet room environment. Common treatments of industrial toilet room interiors are certain to be unacceptable in industrial buildings of the future. Sanymetal Ceiling Hung Toilet Compartments are as new as will be the industrial building of the future. Such an installation has been found to promote orderliness and cleanliness and good will among employees.

Sanymetal "Porcena" Toilet Compartments for industrial buildings of the future will be fabricated of the ageless and fadeless material — porcelain on steel. Porcelain on steel is a glass-hard, stainless material that always looks new, does not absorb odors, is moisture-proof and rust-proof and resists the corroding nature of ordinary acids. The glistening porcelain enamel surface can be wiped clean as easily as any glass-smooth surface, thereby insuring a high standard of sanitation.

Sanymetal "Porcena" Ceiling Hung Toilet Compartments illustrated, as well as each of five other types of Sanymetal Toilet Compartments embody the results of 28 years of

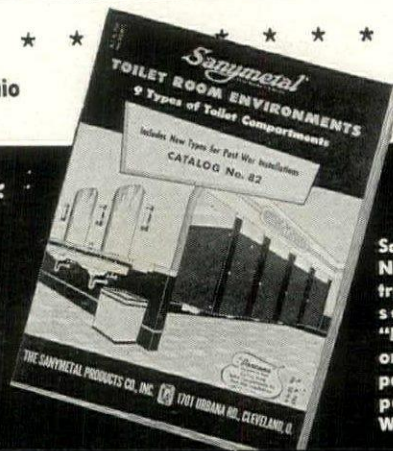
specialized skill and experience in making over 60,000 toilet compartment installations. Ask the Sanymetal Representative in your city for further information about planning suitable toilet room environments for any type of building.

Sanymetal offers six types of Toilet Compartments suitable for installation in buildings of the future — equally suitable for modernizing toilet rooms in all types of existing buildings . . . The design and construction details for Ceiling Hung Toilet Compartments, as well as the usual standing types, may be obtained from the Sanymetal Representative in your city . . . Refer to phone book, "Partitions" for his name or write direct . . . Use Sanymetal "Porcena" (porcelain enamel) Toilet Compartments in buildings of the future to be sure of strictly modern toilet room environments and to insure against obsolescence . . .

### Sanymetal Wartime Toilet Compartments of Asbestos-Board,

complete with door hardware and partition fittings are immediately available, ready to install. Three types — a type suitable for every type of building; illustrated and described in Catalog No. 82.

THE SANYMETAL PRODUCTS CO., INC., 1687 Urbana Rd., Cleveland 12, Ohio



Sanymetal Catalogue No. 82 contains illustrations in color of several types of "Porcena" (porcelain on steel) Toilet Compartments suitable for post-war buildings. Write for your copy.

**Sanymetal**  
\* Trade Mark Reg. U. S. Pat. Off.  
**TOILET COMPARTMENTS  
and Office Partitions**



**NOW YOU CAN SPECIFY...**



# Convection Heating

## FOR TOMORROW'S BUILDINGS

● In keeping with the modern design of the postwar buildings you are planning today, specify *modern convection heating*—with Modine Copper Convectors. Complete specification details are available *right now*.

Modine Convectors combine all the superiorities of steam and hot water heating systems with these added advantages—attractive appearance and an appreciable saving in usable floor space.

Smartly styled, but not at all obtrusive, Modine enclosures conceal compact, efficient copper heating units. Heating is fast and even—with a new, luxurious comfort, cleanliness, convenience and economy.

Whether recessed in the walls, or fully exposed... Modine Convectors harmonize completely with modern room interiors—a distinctive departure from the conventional radiator.

**modine**  
*Convectors*



You'll want to know exactly what Modine Convectors will be like... (dimensions and types)... so you can put them into your specifications now. Send for *New Catalog SA-44*.

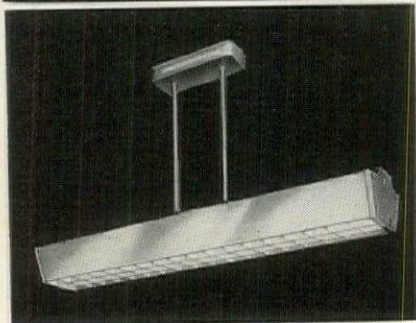


Look in your phone book for Modine representative's name—"Where to Buy It" section.

**MODINE MANUFACTURING COMPANY**  
1736 Racine Street, Racine, Wisconsin



Now Wakefield  
brings you the New  
**BEACON**  
Efficient fluorescent  
for office or drafting



Designed for high quality fluorescent lighting at lower cost, the BEACON is especially effective for lighting essential offices or drafting rooms. Provides smooth, shadowless light to help handle paper work faster and reduce eyestrain.

Maintenance is easy; no horizontal surfaces on which dust can collect. Hinged louvers simplify lamp replacement. Etched, ribbed glass on the side panels gives smooth, pleasing light; louvers diffuse down-light. Ballasts are only partially enclosed; this makes for cooler, better operation.

Available in stem suspension or close-up mounting for low-ceiling areas. See our catalog in Sweet's for details, or write us.



For 194X you can count on lighting fixtures by Wakefield... confident that they will incorporate all the latest developments of lighting research and engineering.

THE F. W. **WAKEFIELD** BRASS CO.  
VERMILION, OHIO

## PRODUCTS AND PRACTICE

(Continued from page 14)

existed. Masonry contractors consider this a practical brick. A special recessed concrete block for use at window jambs has also been developed.

Although development of the assembly details now being done by Project A62 is enormously intricate, it is no more involved than details with which the architect formerly wrestled every time he designed a building. When the details are finally figured out according to modular design, the architect will find his work in the drafting room greatly simplified. With every variation and possibility at his fingertips, he need only pick out the correct drawing instead of figuring the whole thing from scratch.

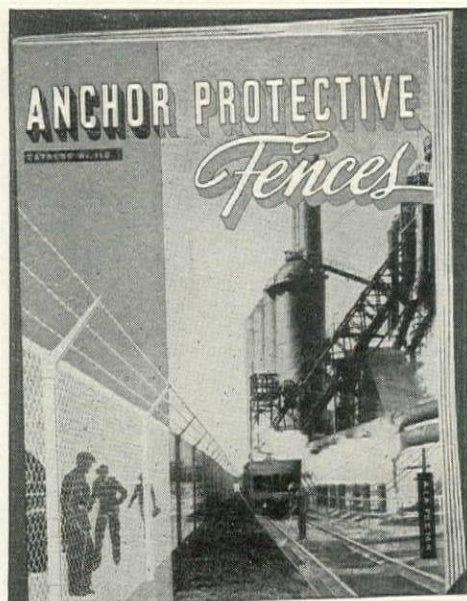
The building mason will also benefit from the modular system of design. His former method of laying out bricks to determine the correct fit can be completely shelved. The modular bricks will fit exactly according to dimensions on the plans. However, as mentioned before, the distinction between actual and nominal dimensions is most important. The mason will find that the actual foundation size must be smaller than the nominal size indicated on the plan. This is a relatively simple calculation to make. The problem occurred with former building plans and has never caused the mason much trouble.

### BUILDING'S BIG CHANCE

With an established common denominator of dimension, Building will have a unique opportunity for design improvement. Architects will find that harmony is much more easily achieved when all building measurements are related. And although details are standardized, this does not indicate standardization of the finished building. Individual design will not be lost.

Merely because it is unfamiliar the modular system may seem complicated at first. As a matter of fact it never does become quite as simple as playing with blocks. Window and door calculations remain difficult except when the 4 in. modular brick is used. But when has designing a building been easy?

With modular design, however, formerly insoluble problems will find an answer and improvements will constantly be worked out. The increased ease with which architects and builders can do their work will be a great time and cost saver. Manufacturers will at last have a realistic basis for figuring out the dimensions of their products. For the first time in its history the building industry will no longer be flying blind.



*free* TO ARCHITECTS  
Get this ANCHOR FENCE  
SPECIFICATIONS MANUAL  
for your A. I. A. File 14-K

THIS 44-page Reference Manual on Chain Link and Iron Picket fences and gates has been prepared especially for architects, engineers and others who have occasion to specify fence. Profusely illustrated with installation photographs and sectional drawings, it describes in detail the various heights, weights, structural features and applications of Anchor Fences. Included are sample specifications for fencing jobs.

Anchor Fences are made in all standard sizes and in a wide range of styles for every type of job: industrial, residential, or institutional. And Anchor's Nation-wide Erecting Service insures prompt, efficient installation anywhere in the United States.

Plan now to make Anchor Fences add "the final touch" to your post-war projects. Get the facts about Anchor Fences... see how they give extra protection, long life, low maintenance costs. Mail the Coupon below for your free copy of the Anchor Fence Specification Manual to complete your A.I.A. File 14-K. Or, for immediate information, consult your classified telephone directory for the address of your local Anchor Fence Sales and Erecting Service.

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SALES AND  
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Send me your free Specification Manual of  
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# ENGINEERED DUST CONTROL

**WILL BE A "MUST" IN POST PEACE  
PLANT CONSTRUCTION AND CONVERSION**

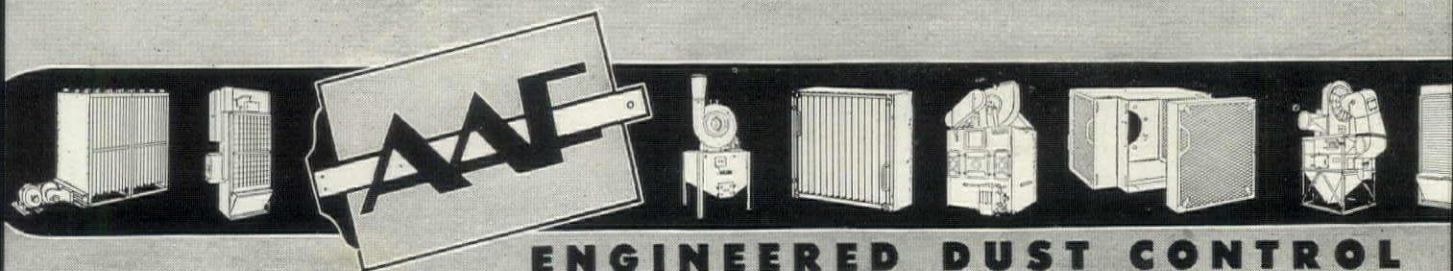
War production experience has still further emphasized the importance of industrial air cleaning and dust control. Practically every new plant constructed within the past two years has been equipped with air filters. Advantages of clean air have been so thoroughly demonstrated during this time that the use of air filters has become standard practice. The creation of new products, involving the use of new materials and processes has been responsible for important new developments in the science of dust control—developments that are proved and ready now for post-peace industrial application.

Our two bulletins "AAF in Industry" and "Designing an Air Filter Installation" will be of unusual interest and value to you now. Send for them—they're free for the asking. Other booklets and complete engineering data on the complete AAF line of air filters and dust control equipment are also available without obligation.

## **AMERICAN AIR FILTER CO., INC.**

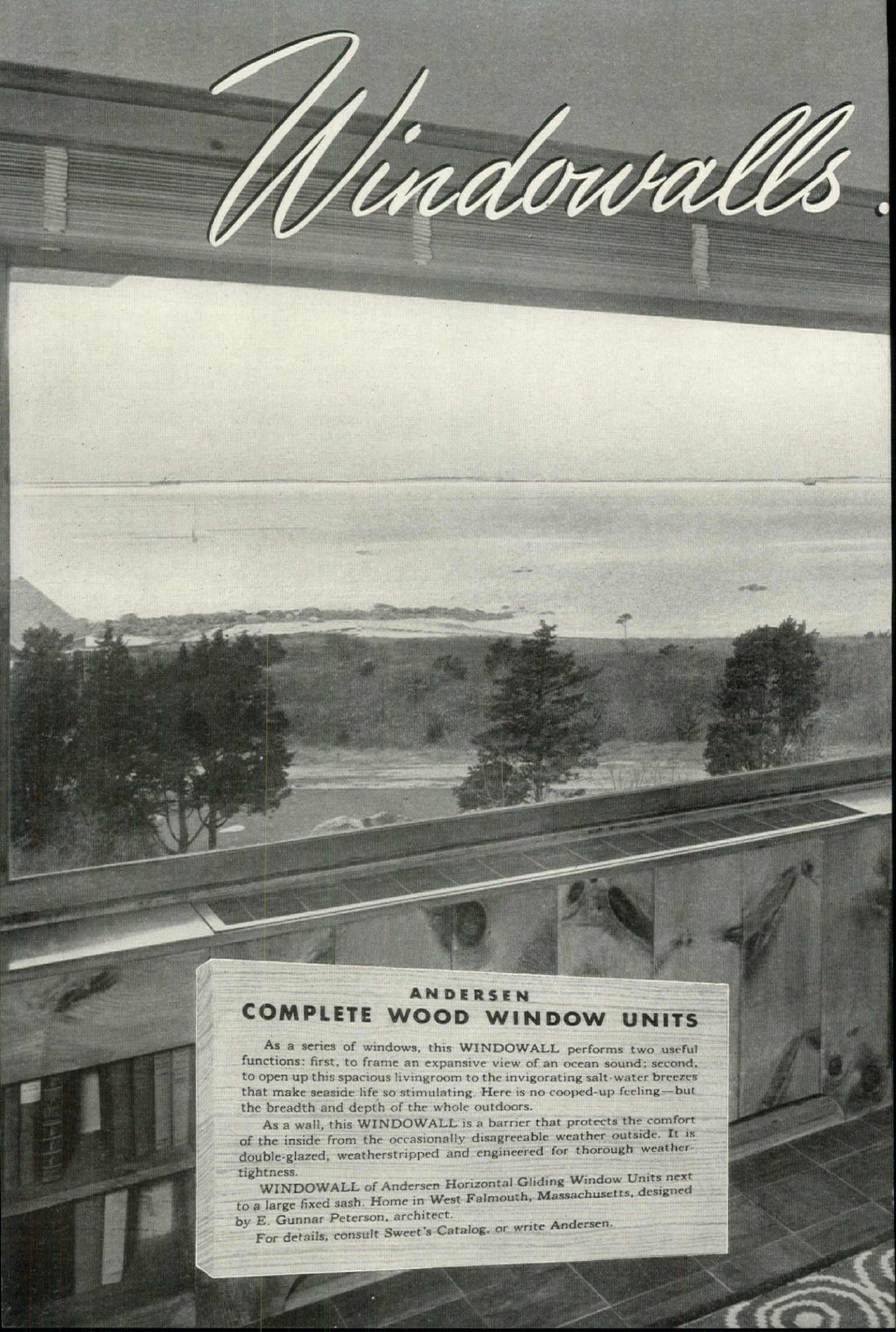
427 Central Ave., Louisville 8, Ky.

In Canada: Darling Bros., Ltd., Montreal, P. Q.





# Windowalls.



## ANDERSEN COMPLETE WOOD WINDOW UNITS

As a series of windows, this WINDOWALL performs two useful functions: first, to frame an expansive view of an ocean sound; second, to open up this spacious livingroom to the invigorating salt-water breezes that make seaside life so stimulating. Here is no cooped-up feeling—but the breadth and depth of the whole outdoors.

As a wall, this WINDOWALL is a barrier that protects the comfort of the inside from the occasionally disagreeable weather outside. It is double-glazed, weatherstripped and engineered for thorough weather-tightness.

WINDOWALL of Andersen Horizontal Gliding Window Units next to a large fixed sash. Home in West Falmouth, Massachusetts, designed by E. Gunnar Peterson, architect.

For details, consult Sweet's Catalog, or write Andersen.



**. SPICED WITH A SALT-WATER BREEZE**



*Andersen Corporation* • BAYPORT • MINNESOTA



Detailing  
that PROTECTS  
HUMAN LIVES

ALLOW  
HARDWARE  
SPACE

# 12 pages of TROUBLE- SAVING HARDWARE IDEAS for you!

Just a DETAIL  
but it saves  
Wear and Tear

DETAIL  
with an eye on Hardware

DETAIL Privacy  
into Toilet Stalls

DETAIL the  
CASEMENT WINDOW  
to suit the Hardware

DETAILING  
with an eye on the  
HARDWARE

## A GOOD RULE

Select your hardware first — then detail to suit it. American manufacturers have standardized to a great degree. By making your details to suit these hardware standards you will save your clients' money, expedite delivery, and eliminate many aggravating hardware problems.

Lockwood is looking forward to the big building boom after the war — and is anxious to co-operate with architects in saving time, trouble and money in planning the use of Builders' Hardware. Hence, the valuable file containing 12 pages of worth-while suggestions, for detailing hardware to avoid trouble and the expense of special hardware.

It tells, for example, the best way to detail for Door Stiles, Entrance and Screen Doors, Door Frames and Trim and nine other important detailing jobs where hardware is used.

This series has received very favorable comment by many architects. It is now ready for you in convenient file-book form. Just mail the coupon below — and your copy will go to you at once.

SWEET'S ARCHITECTURAL CATALOGS: Lockwood is the only Builders' Hardware Trim and Locks featured in the 1944 Edition.

LOCKS? USE  
**Lockwood**  
HARDWARE MFG. CO.  
Division of Independent Lock Co.  
FITCHBURG, MASSACHUSETTS

Please send me the File Folder containing the series of 12 Builders' Hardware Detail Sheets — without obligation, as advertised in June Architectural Forum.

Name.....  
Address.....



# FIAT

## Corner Shower

FOR FUTURE

{ **ECONOMICAL  
BATHROOMS**

**FOR ECONOMY OF SPACE  
FOR ECONOMY OF COST**

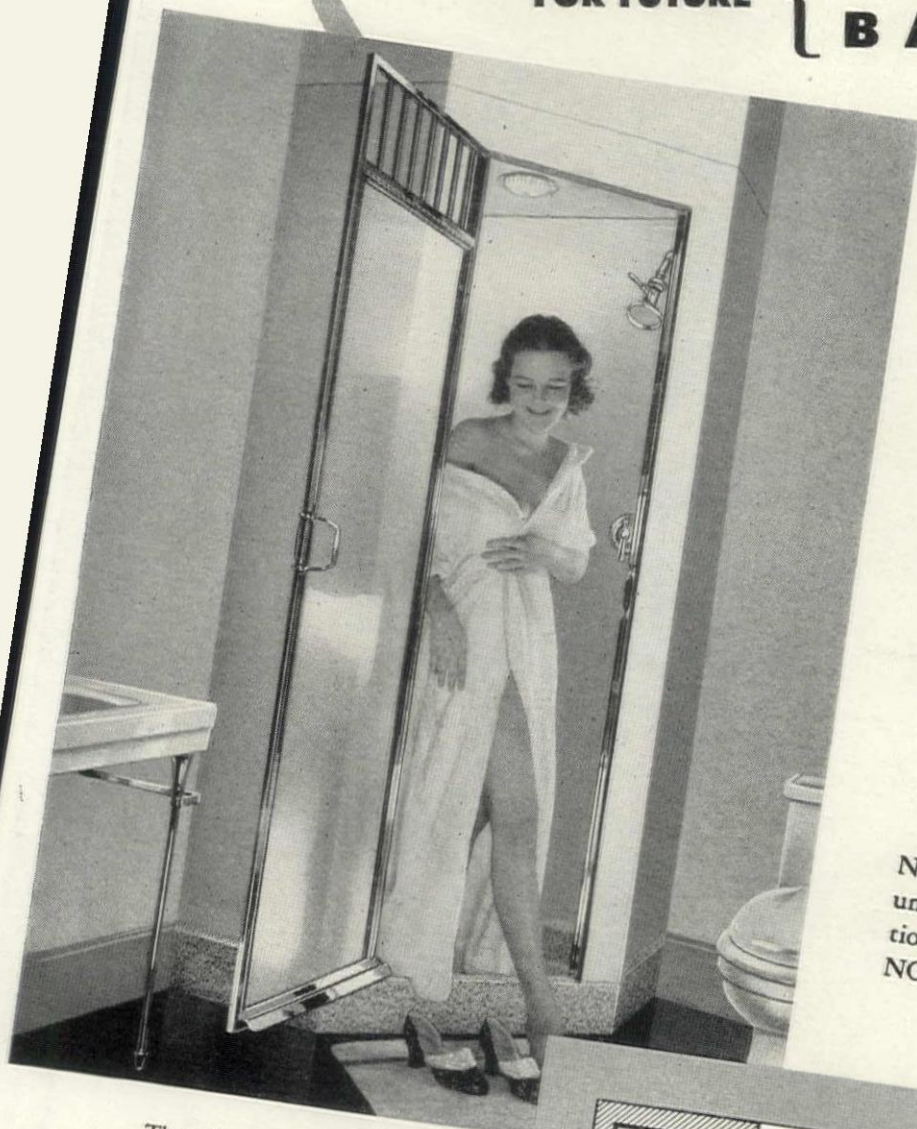
Fiat suggests the corner shower as the ideal type for economical bathrooms in small homes, or as the second bath in medium priced homes. Fiat's postwar line of shower cabinets will include a low cost corner shower as shown on these bathroom layouts. Architects, builders and contractors can plan future building on the basis of a Fiat standard size, exceptional value corner shower, constructed so as to be built in as an integral part of the bathroom.

**AVAILABLE NOW FOR  
IMMEDIATE DELIVERY**

NO. 85. The best shower made under wartime material restrictions. Full size 36" x 36" x 78".

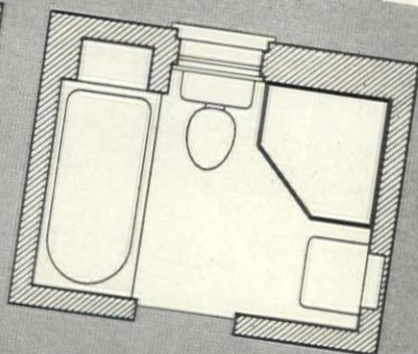
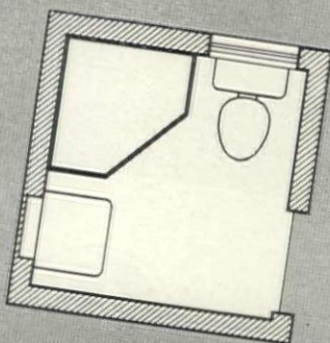
NO. 80. VOLUNTEER.

Size 32" x 32" x 75".



These bathroom layouts show the space saving possibilities of the Fiat corner shower. Even the smallest bathrooms can accommodate this type of shower cabinet.

Write for new booklet  
"Why Take a Shower Bath?"



**FIAT METAL MANUFACTURING COMPANY**  
1205 Roscoe St., Chicago 13, Ill. 21-45 Borden Ave., Long Island City 1, N. Y. 32 S. San Gabriel Blvd., Pasadena 8, Calif.

JUNE 1944



# Is a housewives'



## FOR VICTORY

Today, General Electric is working full speed to hasten the day of victory. You, too, can help, by buying War Bonds Now.



Everything Electrical for After-Victory Homes



# Rebellion in the making?

**W**OMEN HAVE BEEN hearing a lot about the "home of the future."

In movies, in magazines, in newspapers, they've seen homes with electrical appliances that mean better living, more leisure.

They are beginning to take it for granted that an electric range, refrigerator, dishwasher, automatic heating, and other modern appliances will be included as a part of the home *they* buy after the war.

Isn't it likely, therefore, that new houses including complete equipment will have first call on home buyers . . . that the housewife will rebel against houses offered for sale without the equipment on which she has set her heart?

## What does this mean to postwar building?

Doesn't it seem logical to design, build, and finance houses in accordance with this demand . . . to build this equipment *right into the house* . . . to install adequate wiring and sufficient outlets for the use of electrical appliances?

You know the advantages of a kitchen planned as a labor-saving, step-saving unit. Picture the added values of a modern electrical laundry, of automatic heating equipment.

"When peace comes," says Architectural Forum in a new article, "the competition for the consumer dollar will be keen. The builder who wins will offer a home fully equipped for convenient and economical living to critical prospects conditioned to the slick smoothness and perfect performance of cars, airplanes, radios, and television sets." Such a plan appears practical, not only

for the \$10,000-and-up house, but for the under-\$5000 house as well.

The idea isn't new. Many homes were designed, built, and financed in this manner before the war started.

## Family buying—postwar style

While the average home buyer will be as insistent as ever on full dollar value for his money, it stands to reason that he will spend money for the things he needs . . . has been needing for a long time.

Successful builders believe he will consider the added value in time-saving, labor-saving appliances well worth the few additional dollars a month added to the total cost of the home.

Moreover, experience has shown that the resulting savings in operating expenses usually more than offset any increase in monthly amortization payments.

## We'll be glad to help

The situation calls for houses planned from blueprint to mortgage with complete electric equipment.

Since we'll want to supply a good share of all this equipment, we've been studying this problem from many angles. We believe we're in a position to answer some of the questions that confront you.

As an architect, builder, or banker, you'll want to explore this continuing trend. We'll be glad to hear from you.

**GENERAL  ELECTRIC**

Home Bureau • Bridgeport, Conn.

TUNE IN: "The G-E All-Girl Orchestra," Sunday 10 P.M., E.W.T., NBC—"The World Today" news, every weekday, 6:45 P.M., E.W.T., CBS.



# Women are wonderful, but...



**1. This war** has proved that women are able to do almost any job men can do. But no women—and very few men—can develop the skill and strength needed for logging and other lumbering operations. That's why it's just about impossible to replace

the 23,000 U.S. and Canadian woodsmen who've gone into the armed forces or war plants. Over two-thirds of our wood supply is used for vital building needs, including ships, barracks, roads, etc. Most of us can't do a lot to conserve that timber.

But the other third goes into wood pulp, from which paper is made—and there is a lot all of us can do to conserve paper. The paper shortage is so severe that Uncle Sam urges every business and private citizen to do everything possible to help!



**2. Not only** has the supply of paper gone down—the demand has gone up. More than 700,000 items must be wrapped or boxed in paper for shipment to the Army. Ammunition takes a lot, too. Each shot fired from this 155-mm. gun uses  $\frac{3}{8}$  of a pound of paper in the propelling charge.



**3. Surprisingly**, one of the largest single users of paper is the American householder. The Government urges every householder to accept unwrapped packages when shopping, to do his best not to waste stationery, towels, tissues, napkins, and to go easy on all other uses of paper.



**4. All U.S. magazines** use but 4% of our paper, but they give you two chances to help. First, *share your copies with friends*. Second, *turn in old magazines, newspapers to salvage agencies!*

**LIFE**



# The Legion of Life...

An army within an army... the 75,000 doctors and nurses of the Army Medical Department have the job of *saving*, rather than taking life. The victory they are winning is magnificent beyond praise. Want facts?

In the last war, eight of every hundred wounded men died. Today, ninety-seven of every hundred wounded recover. And that is not the whole story, either... the tragic toll of men suffering amputation, prolonged hospitalization, recurrent operations and permanent disability is being drastically reduced.

The wartime products of *Connecticut Telephone & Electric Division* (field telephone equipment, electronic devices, and aircraft ignition components) are helping the Army Medical Department to practice its skill and devotion with greater promptness than ever before.

Here at home, *Connecticut Telephone & Electric* hospital communicating and signalling equipment (installed before the war) is also lending a helping hand. Civilian doctors, nurses, and volunteer aides in understaffed institutions are doing a job under trying conditions which too few of us appreciate. "Connecticut" equipment adds to their efficiency in hundreds of American hospitals.

After the war, needed hospital construction will be one of the most active and important elements of the nation's building program. "Connecticut" engineers

are planning even now to return to the hospital field with new and better systems for communications, signalling, paging and "electronic supervision".



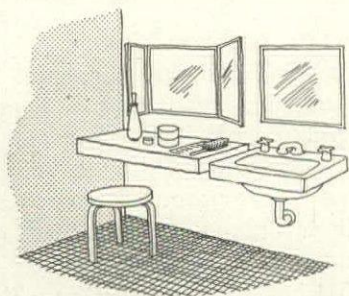
**CONNECTICUT TELEPHONE & ELECTRIC DIVISION**  
GREAT AMERICAN INDUSTRIES, INC. • MERIDEN, CONNECTICUT





## FAMILY STUDY

(Continued from page 100)



"Most women want a dressing table, requiring little space, built in the bath."

3) How is this related to occupation and to urban versus rural dwelling?

4) What role do purely emotional factors play in this?

For example, is a basic conservatism of character in any way related to conservative use of space? How stable is the "sense of space"? Does a person's feeling about a given space vary with fatigue or nervousness?

Convenience, *not at the expense of space*, was enthusiastically advocated, but rather than convenient planning, housewives tend to translate it in terms of electrical appliances, insulated stoves, bigger wash stands, etc.

Certain basic, significant differences between apartment dwellers and home owners also become apparent in this portion of the study.

Apartment dwellers:

- are more readily influenced by community patterns of thinking. They are more concerned about social status, less realistic about having a dwelling that will above all fulfill their personal desires. The physical dwelling has less intrinsic interest for them than social symbolism.

Home owners:

- have more definite ideas about a dwelling of the future and are more practical in visualizing its physical functions. They reveal a deeper interest in their present homes and are better able to integrate concrete suggestions presented to them with their own ideas about the future. They are to a lesser degree influenced by verbal suggestion and, for the most part, have



Yes, the Allied Nations are on the offensive now. But Mons and Ypres and Belleau Wood were no picnics in the other war. And the same battlegrounds may be as bitterly contested again.

Today, overconfidence is our worst enemy—a letting up in the war effort our greatest danger. No one is more anxious than we are to welcome a postwar world. But premature celebrating is the surest way to prolong the fight.

When the war *is* over, The F. H. Lawson Company will be back with you. And new designs, new materials, plus the traditional Lawson quality will make our postwar products well worth waiting for.

But a lot of water may go under the pontoon bridges before another Armistice is signed. And until that memorable occasion, let's remember the war is still on.

**THE F. H. LAWSON COMPANY**

CINCINNATI, OHIO



"Many women favor built-in drawers and cupboards in bedroom but fear barren effect."

had more experience with private houses.

These findings may indicate that home owners are more immediate in their values; that they are not as farsighted as apartment dwellers. For example, they are not nearly so concerned about carefully chosen, long range educational plans for their children.

Perhaps the most important finding of all, from the designer's viewpoint, expresses itself in a negative way. It is a consistently strong resistance to any radical change from the three basic living divisions of the home: the bedroom, living room and kitchen.

- Five out of six housewives approved the fundamental planning change of locating the toilet in a separate compartment.

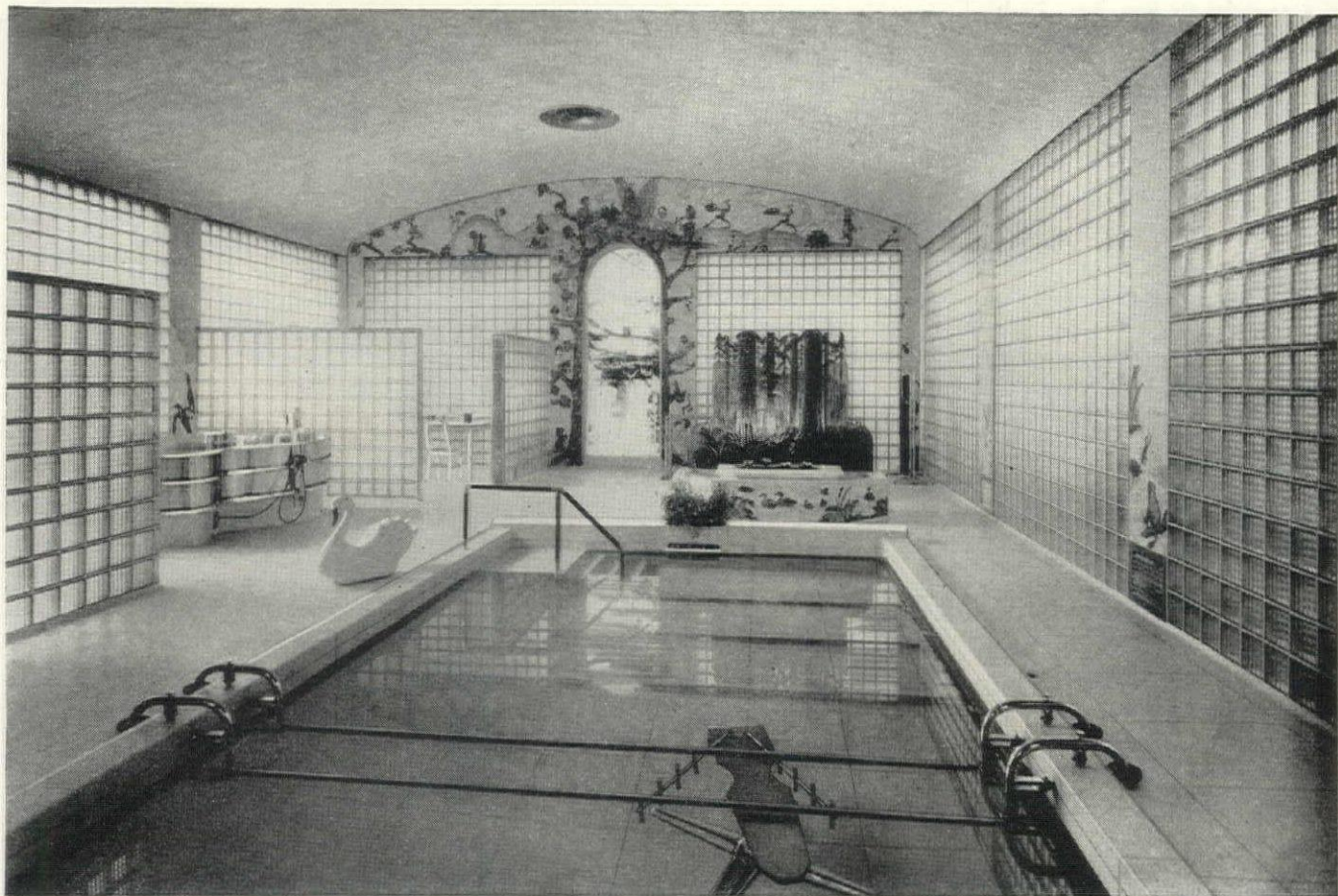
- Out of 33 women questioned, 31 emphatically rejected the idea of a combined living room and bedroom.

- Ten out of thirteen women disapproved of combining the living room and kitchen because they prefer to be alone while working in the kitchen.

**Lawson**  
BATHROOM  
CABINETS

128 YEARS  
OF QUALITY  
Lawson





SHRINE HOSPITAL FOR CRIPPLED CHILDREN, SAN FRANCISCO, CALIF. — ARCHITECTS, WHITEHOUSE & PRICE, ON ORIGINAL BUILDING

# "What a cheerful place THIS HOSPITAL IS!"

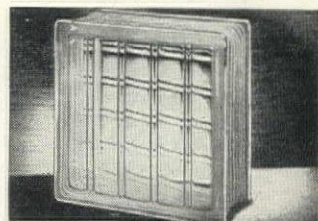
A truly beautiful hospital where everything is sunshine, sweetness and light! A hospital for crippled children—built by the Shriners of San Francisco!

The pool is a vaulted, sun-filled room paneled in structural glass of azure blue. The doors are of glass and are electrically operated. The special plate glass sections carry colorful decorations of charming fairy tale figures. And the walls of Insulux Glass Block provide shadowless, diffused

light — without objectionable glare.

The entire building fairly sparkles with light, as Insulux panels and partitions have been used on every floor.

Panels of Insulux Glass Block are both decorative and practical. In operating rooms, wards, corridors, laundries and kitchens! They are easy to clean and to keep clean, and they add much to the cheerfulness and attractiveness of the hospital.



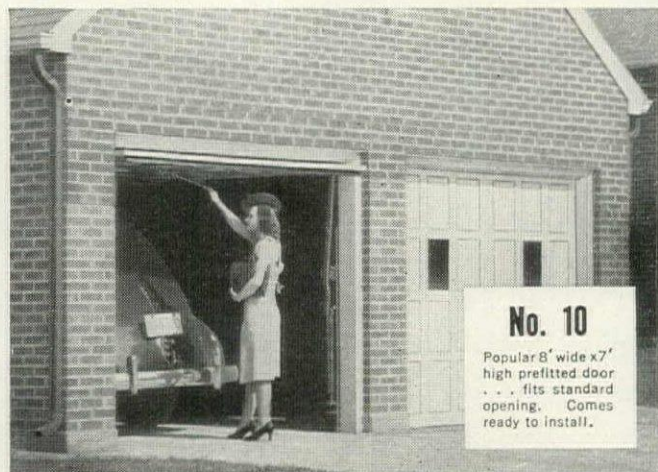
*Insulux Glass Block is a functional building material — not merely a decoration. It is designed to do certain things that other building materials can not do. Investigate!*

**OWENS - ILLINOIS**  
**INSULUX**  
**GLASS BLOCK**

For technical data, specifications and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. 38, Owens-Illinois Glass Company, Toledo, Ohio



# THIS **PRE-WAR** FAVORITE PROMISES TO BE A **POST-WAR** SENSATION



**No. 10**

Popular 8' wide x 7' high prefitted door . . . fits standard opening. Comes ready to install.



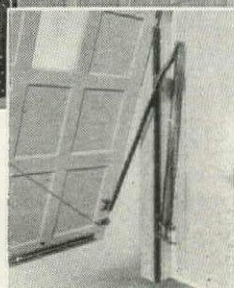
**OVER-THE-TOP**  
TRADE MARK REG. U.S. PAT. OFF.

**COMPLETE GARAGE DOOR UNITS**



**No. 21**

16' wide, 7' high one-piece, double-width Unit. Ideal for two-car garages, with no center post.



Heavy, heat treated, oil tempered steel springs give Frantz Door Units easy action. Simplicity of operating equipment assures quick installation and years of trouble-free service.

The Post-War garage door that is bound to fit right into your plans is a Pre-War creation. It's Frantz

"Over-the-Top" Door Unit No. 10, together with its companion sizes No. 7 and 21. Their popularity was sweeping the country when war restrictions came. "Over-the-Top" Door Units again will come prefitted, complete with hardware, and ready to install. They'll be made in three sizes to fit the majority of garage door openings. The two most popular sizes are shown above. The third is for openings 8' wide by 6'6" high. All will be attractive in appearance, easy to operate, simple to install, economical to own . . . will have many of the features which made Frantz the leader in overhead hardware for one-piece upward acting doors.

War production is taking our time today, but we can supply "Over-the-Top" Hardware for some types of installations. Write for full information.

**FRANTZ**  
*Guaranteed* **BUILDWARE**

FRANTZ MANUFACTURING CO., STERLING, ILLINOIS



U.S. Pat. 1,887,814

The exclusive interlocking grid core within the Rezo door provides constant air circulation adds extra strength and greater rigidity.

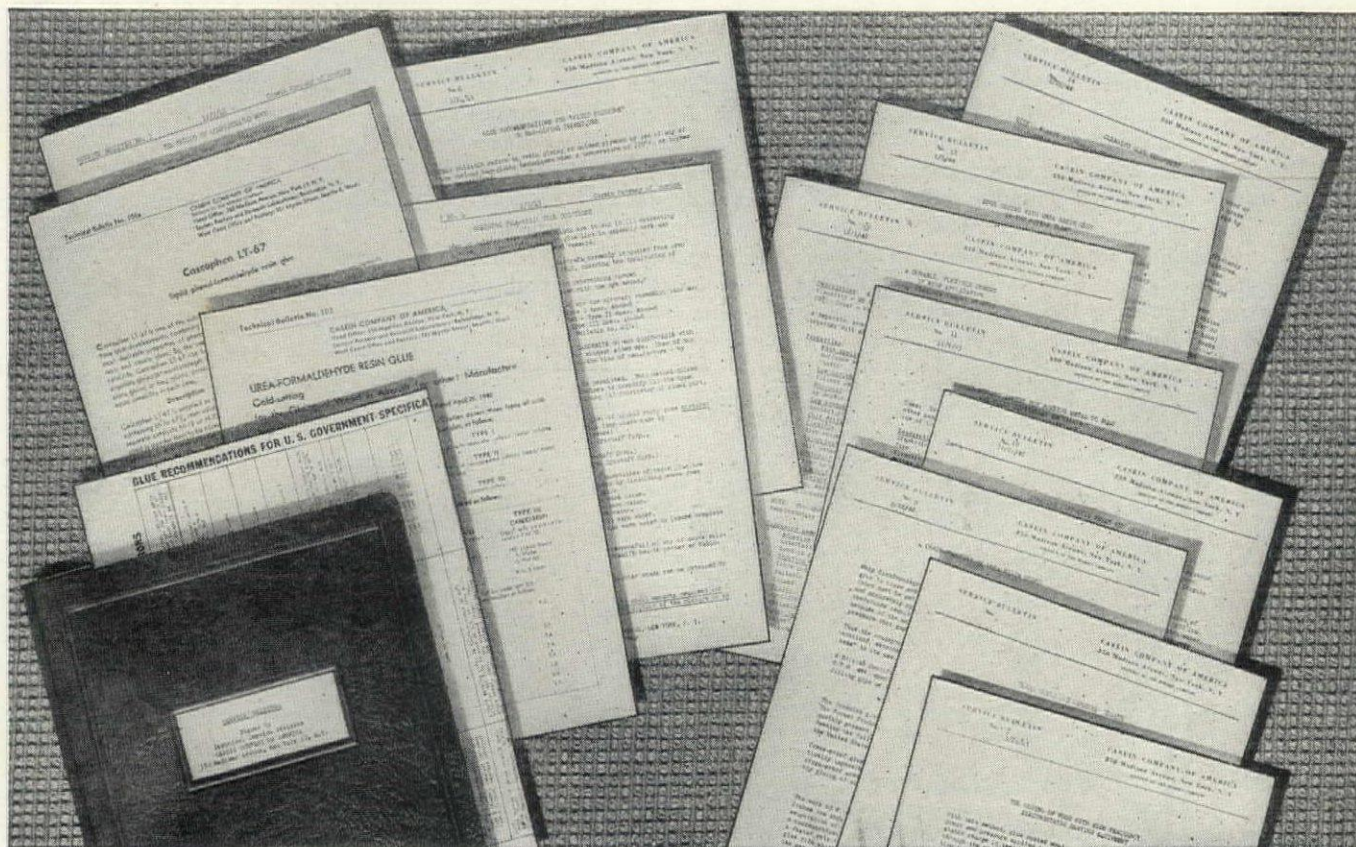
**the air-cell flush door with the greatest experience behind it**

Residential construction particularly multiplies the advantages to be found in Paine Rezo doors. In any home they become important decorative elements in themselves, add to the impression of spaciousness. Yet with beauty, they combine patented features in construction that mean no swelling or shrinking, nor future alignment troubles for the lifetime of the building. . . You can specify Paine Rezo doors with confidence, for Paine is no newcomer to flush door manufacture. Back of them is America's largest producer of flush type doors, with a record of nearly half a century of successful installations from coast to coast. Write today for an illustrated, factual bulletin.

Manufactured by the  
**PAINE LUMBER CO., Ltd.** *Oshkosh Wisconsin*  
ESTABLISHED 1853



# How to get NEWS about GLUES:



## —place your name on our SERVICE BULLETIN MAILING LIST

Here is the most complete and up-to-date glue-news service in the woodworking industry.

It brings you detailed data on each new glue and gluing technique developed by Casein Company of America Laboratories and proved by industrial use.

If you are not receiving these Service Bulletins regularly, write us today. Give full company name and address, also name of official to be registered for this free Service. We shall also send you a loose-leaf binder containing all current

Service Bulletins and other timely gluing information.

As new bulletins are issued, they will be automatically sent to you for insertion in the binder.

Address your request to: Technical Service Division, Dept. AF64 Casein Company of America, 350 Madison Avenue, New York 17, N. Y.

Remember—tomorrow's leaders will be found among those who keep in touch with today's developments. Write for your Bulletin Service—now.

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CASEIN UREA-RESIN PHENOL-RESIN

*Glues for Industry*

### Binders currently contain—

**Specification Chart:** 57 U.S. Gov't. "specs" and glues to comply

### Technical Bulletins:

**No. 103**—Cold-setting urea-resin glues

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**No. 4**—Coloring Urea-Resin Glues

**No. 6**—Bag-gluing Adhesives

**No. 7**—High Frequency Equipment

**No. 8**—Resin Glues and Workers' Health

**No. 9**—Craze-Proofing Urea-Resin Glues

**No. 10**—Spraying Resin, Casein Glue

**No. 11**—Casco Flexible Cement NT-442

**No. 12**—Casco Flexible Cement NT-475

**No. 13**—Urea-Resin Glue for Rotary Clamps

**No. 14**—Cleaning Glue Equipment

**No. 15**—Thinning Phenol Resin Glue

**No. 16**—Edge-Gluing, Laminating with Casein Glue



## FORUM OF EVENTS

(Continued from page 6)

### AWARDS

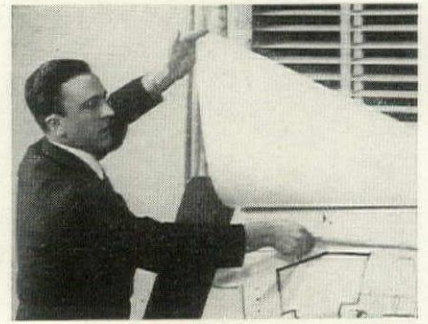
The Alumni Association of the American Academy in Rome has announced the winners of the prizes in the eighteenth annual Collaborative Competition for students of architecture, landscape architecture, painting and sculpture, in art schools throughout the country. The first prize in architecture and landscape architecture was awarded to Irving J. Maitlin; second prize to Jorge Bonino; third prize to Joan Nichols. The prob-

lem was a municipal Center for Appleton, Wis.

Chlothiel Woodward Smith has received the Guggenheim Fellowship Award for a study of South American regional and city planning.

The New York Chapter of the American Institute of Architects announces the award of its Arnold W. Brunner Scholarship for 1944 to Samuel Breines of New York City for his proposed project, "City Living". Its purpose is to acquaint the largest number of people with the concrete gains to be realized through planning and to make the processes and objectives of planning

more intelligible to the public. I. Aroztegui, architect of Montevideo, Uruguay and at present a post-graduate student at the University of Illinois,



AROZTEGUI AND WINNING DESIGN

explains his plans for the "television studio of tomorrow" which won him an award in the contest conducted by the Beaux Arts Institute of Design. Order winners included Miss Treva Wilcox and Miss Helen Ross of the University of Pennsylvania.

### AIA ELECTIONS

The result of the election of the Tennessee Chapter of the American Institute of Architects held at the annual meeting in Knoxville are as follows: Harry B. Tour, President; Guy H. Parkham, Jr., Secretary-Treasurer; W. P. Bealer, R. E. Hart, L. H. Bull and Lucian Dent, Vice Presidents.

### SUMMER COURSES

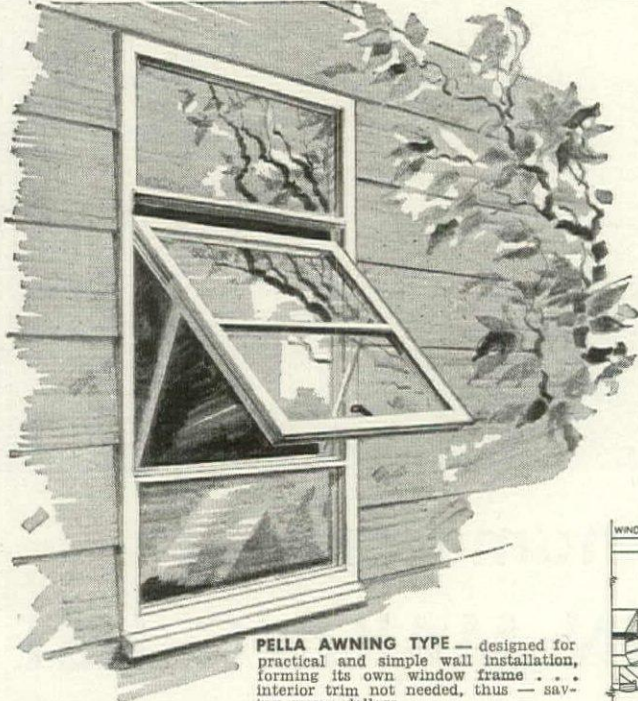
Black Mountain College will conduct its first Summer Art Institute from July 17 to September 16, offering courses, illustrated lectures, demonstrations, panels, discussions and exhibitions with the purpose of presenting various viewpoints, approaches and techniques of working and teaching in art. Among others, the staff will include Walter Gropius, Amedee Ozenfant, Jose de Creeft, Jean Charlot, Jose Louis Sert and Bernard Rudofsky.

Joseph Albers, of the faculty of Black Mountain College and formerly of the Bauhaus, will return to the Lowthorpe School in Groton, Mass., to conduct a four week summer course from June 19 to July 14. The course will be devoted to design, color and freehand drawing and is organized primarily for students who anticipate specialized training in design or planning and for teachers of art and design in schools and colleges. Further information may be obtained by writing to John A. Parker, Director of the Lowthorpe School.

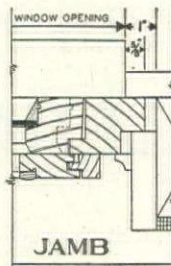
### COMPETITION

House & Garden magazine announces the opening of its competition, Awards in Architecture for 1944, open to all architects and architectural designers

(Continued on page 164)



**PELLA AWNING TYPE** — designed for practical and simple wall installation, forming its own window frame . . . interior trim not needed, thus — saving many dollars.



## LOW COST *Pella* "AWNING WINDOWS"

**For Standard 2x4 Frame...Thin Wall...Masonry Construction**

*Made by Makers of Famous Pella Casement Windows*

**No FRAMES  
SASH WEIGHTS  
BALANCES**

**White Pine Sash...Toxic Treated...** These extremely ingenious windows set right in the studding! They do not require any frames, sash weights or balances. Units come completely assembled so no fitting is necessary on the job... Flush type lock handle is an exclusive feature. Units can be glazed with standard size lights... Available with screen and storm sash—inside screen and storm sash are interchangeable; top hinged or channel guided. Pella "Awning" Windows comply with Federal Housing Authority Specifications... **WRITE FOR FREE DETAILS! Mail a post card TODAY! Ask for your FREE set of full-size details on Pella "Awning" Windows. Address Dept. 264.**

**IDEAL AND EASY TO ADAPT FOR SPECIAL JOBS LIKE THESE**



**MULTIPLE UNITS of Pella "AWNING" WINDOWS** made to your specifications are available when quantities warrant. Wide range of combinations possible. For schools, office buildings, etc. upper sash can be made to ventilate.

**"4-CYLINDER" HOUSE** designed by Arthur T. Brown, A. I. A. of Tucson, Ariz. incorporates Pella "AWNING" WINDOWS. Pella's broad, horizontal lines give house the appearance of greater size.

Patent No. 135609



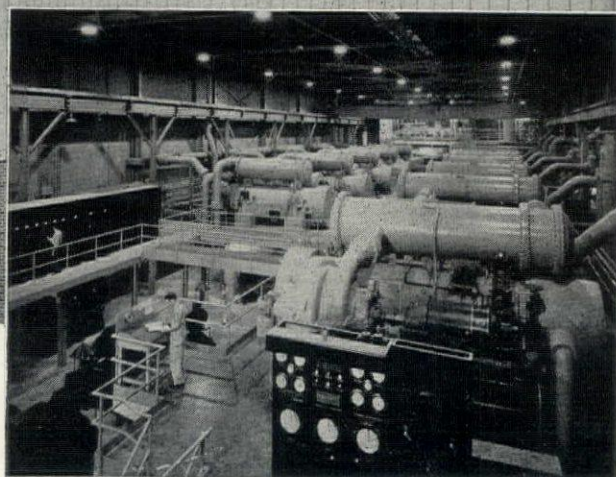
**ROLSCREEN COMPANY, PELLA, IOWA**  
Pella RolSCREENS \* Pella Venetian Blinds \* Pella Casements



# ONE OF THE WORLD'S LARGEST AIRCRAFT PLANTS



*Windowless, completely air conditioned plant of Consolidated Vultee Aircraft Corp. at Ft. Worth, Texas, designed and built by The Austin Company. At right are some of the refrigerating compressors. Condensers are on level below.*



## Tomorrow's Industrial Plant . . . Built and Operating Today

**T**HE Consolidated Vultee Aircraft Corp. Plant at Ft. Worth is one of the largest structures, and probably the most modern of its kind, in the world. It is nearly a mile in length.

Completed last year, the plant is today an outstanding example of a type of construction that industry will demand tomorrow . . . after the war. Working conditions in the windowless structure are fully controlled and include year-round air conditioning.

The advantages of air conditioning the building are apparent. A high level of operating efficiency is maintained despite extremes of outside temperature and humidity. Twenty-four-hour, year-round production has resulted in a record-breaking output of bombers and transport ships.

Health is safeguarded; absenteeism is low, and many employees express themselves as well pleased with their working conditions. Proof of this is that recruiting of personnel has been relatively easy.

The huge air conditioning installation was designed by The Austin Company. It includes a battery of 1075-ton centrifugal refrigerating compressors with an aggregate capacity of 12,000 tons. "Freon" safe refrigerants are used. Individual units are separately controlled, although the entire system is regulated from a central control board. Thirty-three miles of duct carry conditioned air to all parts of the plant and 36 fans are in operation; each fan circulating 55,000 cfm. An average inside temperature of 80°F. is maintained when the out-

side temperature is 100°F.

Here, today, is a picture of tomorrow's post-war factory building. In it, air conditioning is playing a vital part, for controlled conditions are helping to maintain a high level of efficiency among employees. The time is here—now—to think in terms of post-war plans. Build up your reference files—write for data on "Freon" safe refrigerants. Address *Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington, Delaware.*

*"Freon" refrigerants are widely used in heavy duty air conditioning and refrigerating units. They are the world's safest refrigerants.*



# FREON

REG. U. S. PAT. OFF.

safe refrigerants

\* FREON™ IS KINETIC'S REGISTERED TRADE MARK FOR ITS FLUORINE REFRIGERANTS



## SIX STEPS OF PROTECTION IN THE PUBLIC INTEREST

... (1st of a Series)

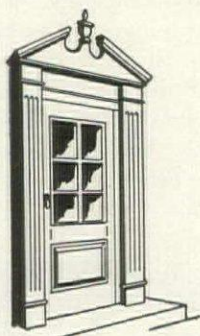


.....“Don’t expect me  
till late, dear—  
I think we’ve found it!”

For years, laboratory lights had burned late while research chemists toiled and delved. And then—on a cold, blustery night in 1937—the great moment arrived. At last, a method had been found for measuring the efficiency of toxic preservatives for wood... a method that was to permit the establishment of definite minimum standards for treating woodwork such as windows, screens, doors and frames.

Protection in the public interest—protection of architect, builder and homeowner alike—is the purpose of the toxic minimum standards devised by NDMA. Administered by responsible authorities, these standards serve to enhance and improve the lasting quality of wood... add an extra measure of endurance to wood’s unequalled beauty, workability, utility and economy.

The NDMA Seal of Approval—available by license to all manufacturers and distributors who conform to the toxic preservative standards of the NDMA—represents these six steps of protection:



1. An efficient test for measuring effectiveness of toxic preservatives
2. Minimum standards governing the toxic preservative treating of woodwork products
3. A seal identifying products treated in conformity with NDMA Toxic Preservative Standards
4. Mill inspection of treating equipment and practices
5. Laboratory check-tests of preservative solutions
6. Educational effort in the public interest

NATIONAL DOOR MANUFACTURERS’ ASSOCIATION  
McCORMICK BUILDING • CHICAGO, ILLINOIS



## WHEN YOU HAVE TO BE SURE OF RESULTS

... You must use methods and material you can trust! You need a caulking compound that is moisture-proof, non-shrinking, and which you know will not become brittle under prolonged exposure. You have to be **SURE** of results. That’s the time to specify and use a **SONNEBORN** Caulking Compound. Write for details —Dept. F-13.

BUILDING PRODUCTS DIVISION

**L. SONNEBORN SONS, Inc.**

88 LEXINGTON AVENUE, NEW YORK 16, N. Y.

for **SURE** results in caulking  
and glazing count on  
**SONNEBORN**  
**CAULKING COMPOUNDS**



Stormtight Caulking Compound was used extensively in the cleverly planned Glenside Homes Project, Reading, Pa. Harry Maurer, Architect. James E. Mast, Chairman, Housing Authority. John A. Johnson Contracting Corp., Contractors.





## WHEN YOU CHECK UP ON YOUR PLANT'S PAY-ROLL SAVINGS PLAN FIGURES!

**T**hese days, things change with astonishing speed. The Pay-Roll Savings Plan set-up that appeared to be an outstanding job a short time ago, may be less than satisfactory today.

How about checking up on the situation in your plant? Checking up to see if everybody is playing his, or her, part to the full measure of his, or her, ability. Checking up to see if 'multiple-salary-families' are setting correspondingly multiple-savings records.

A number of other groups may need attention. For example, workers who have come in since your plant's last concerted bond effort. Or, those who have been advanced in position and pay, but who may not have advanced their bond buying accordingly. Or even

those few who have never taken part in the plan at all. A little planned selling may step contributions up materially.

But your job isn't finished, even when you've jacked participation in your Pay-Roll Savings Plan up to the very top. You've still got a job before you—and a big one! It's the task of educating your workers to the necessity of not only buying bonds, but of *holding* them. Of teaching your people that a bond sold before full maturity is a bond robbed of its chance to return its full value to its owner—or to his country!

So won't you start *checking . . . and teaching . . .* today?

**War Bonds To Have And To Hold!**

**LET'S ALL BACK THE ATTACK  
WITH WAR BONDS!**

*The Treasury Department acknowledges with appreciation  
the publication of this message by*

**THE ARCHITECTURAL FORUM**

*This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council*



## FORUM OF EVENTS

(Continued from page 160)

practicing in the U. S., who submit blueprints of floor plans and elevations, a perspective drawing, an outline of the problem and a construction outline. Only designs for actual clients will be considered; houses to be built when restrictions are raised and materials available. Entries must fall under one of the following classifications: 1) house for private owners, seven rooms or over, 2) house for private owners, six rooms or less, 3) house for real-estate community, seven rooms or over,

4) house for real-estate community, six rooms or less. There is no restriction on the number of designs submitted. Prizes amounting to \$2,000 in war bonds (maturity value) will be awarded; first prize \$250; second prize \$100; twelve honorable mentions of \$50. The contest closes December 31st, 1944—material may be submitted at any time during the year. Further information available by writing to the Architectural Editor, *House & Garden*, 420 Lexington Ave., New York 17, N. Y.

### ANNOUNCEMENTS

ROBERT L. DAVISON, who has been for the past thirteen years Director of

Research of the John B. Pierce Foundation, New York, announces the establishment of a new organization for housing research. The firm will operate under the name of Robert L. Davison Associates with offices at 299 Madison Ave., New York, N. Y., carrying on consultation, research and development work on new materials, construction methods, equipment and family requirements in the field of housing. Fourteen members of Mr. Davison's former staff have joined him in the new organization.

DAN COOPER, textiles and furniture, after more than twenty years on 57th St., has moved his showroom to 21 E. 70th St., New York City where he will continue to show in a more explicit way products of his own design and invention.

GEORGE B. CABOT, landscape architect, announces that he is now engaged in the general practice of landscape architecture with offices at 50 Beacon St., Boston, Mass.

JOSEPH L. WEINBERG, architect, announces the reopening of his office at 1227 Schofield Bldg., Cleveland, Ohio.

CLARENCE SMITH II, architect, announces the opening of his office at Five Ivy Street Bldg., N. E., Atlanta, Ga. ARTHUR F. FITZGERALD, until recently with the Chicago Plan Commission, has joined the executive staff of Robert Bruce Harris, Landscape Architect, 664 N. Michigan Ave., Chicago, Ill.

### REQUESTS FOR LITERATURE

Van Doren, Nowland and Schladermundt, 220 E. 42nd St., New York 17, N. Y., are interested in samples and descriptive literature of products which might be applicable to industrial design. Mail should be directed to Miss Virginia Paige.

Frank W. Woods, architect, has reopened his office at 605 Lincoln Rd., Miami Beach, Fla., and desires catalogs, samples, etc., from manufacturers.

Wilbur Henry Adams, industrial designer, has opened his Rural Workshops, R.F.D. 1, Wolf, Erie, Pa., and would like manufacturer's catalogs and samples of products pertaining to the building and manufacturing trades, particularly plastics.

### DIED

Carleton G. Cole, architectural interior designer, in Oakdale, N. Y. Since the war Mr. Cole had been in charge of interior work on naval auxiliary vessels for H. Newton Whittlesey, Inc. He designed the furniture for the Terrace Club and assisted Walter Darwin Teague in designing the State Apartments in the Federal Building at the New York World's Fair.



Few are the things in the postwar building field that can be predicted with absolute certainty. But among these few will be the wider demand for chemically protected lumber and for greater use of plywood and other glued lumber products.

Customers of tomorrow—trained to expect more from such war-born developments as termite-proofing of army and navy buildings and the sensational new military uses of plywood—will expect similar chemical-and-glue advancements in their new homes, farm buildings, and other structures built of lumber.

Monsanto Chemical Company and I. F. Laucks, Inc., have done their own postwar planning so that you may be in a better position to do yours. Formerly two separate organizations, Monsanto, a major producer of chemicals and plastics, and

Laucks, "America's Glue Headquarters," both are now united.

This means a breadth of experience and of research and production facilities in chemicals-and-glues previously unapproached in the forest-products industry. And that in turn means you can count on being kept fully apace with the great developments expected by the public in chemically treated lumber and in new uses of plywood and other glue-construction applications.

#### I. F. LAUCKS, INC.

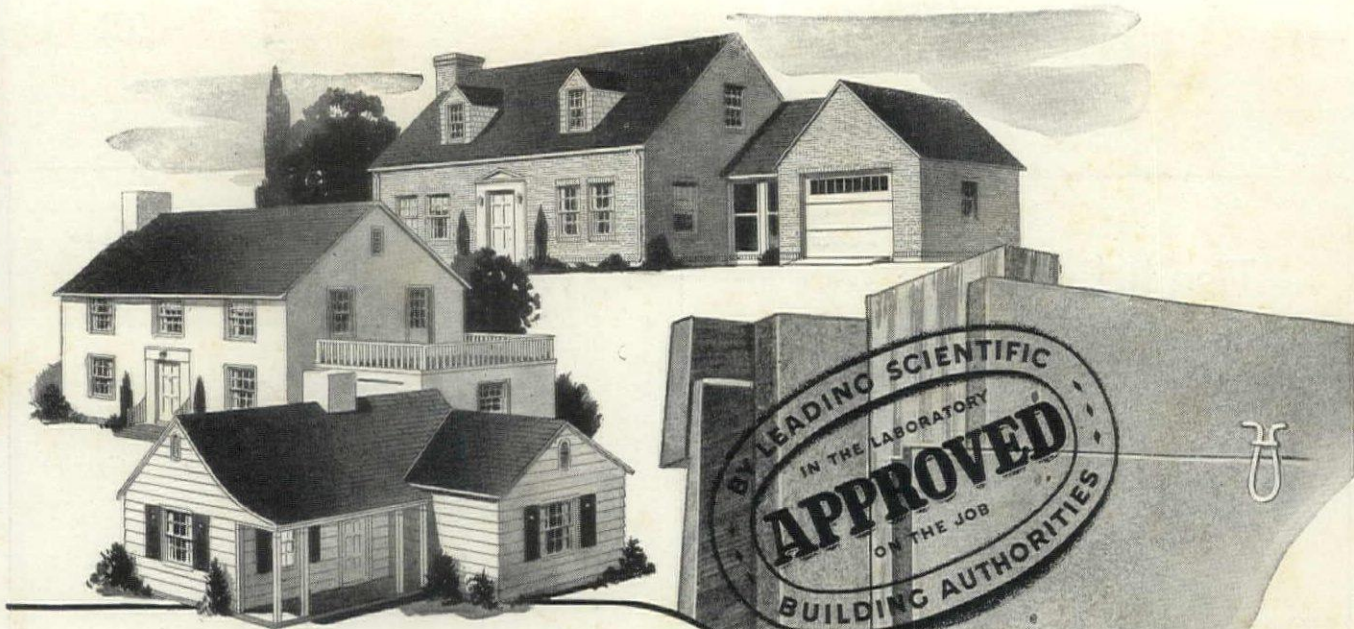
In U. S. — 911 Western Ave., Seattle 4;  
6 N. Michigan Ave., Chicago 2;  
859 E. 60th St., Los Angeles 1.

In Canada — I. F. Laucks, Ltd., Granville  
Island, Vancouver, B. C.;

Hercules-Laux-Merritt, Ltd., Stanbridge, Quebec

**I. F. LAUCKS, INC.**  
A SUBSIDIARY OF MONSANTO CHEMICAL COMPANY





**WOOD...STUCCO...BRICK...**  
 whatever the outer surface, Tomorrow's  
 Homes should be built with the Approved  
 Insulite Wall of Protection . . . .

AS LONG as this country retains its freedom, there will be many types of homes. Some prefer wood. Others insist upon stucco. Still others may want field stone.

In the homes you build tomorrow—no matter the style, or the exterior finish—modern standards of heat control and of air-conditioning will place *new demands upon walls.*

Walls must provide effective insulation. They must also be constructed so as to reduce moisture condensation within the walls to a minimum. You agree to that, of course.

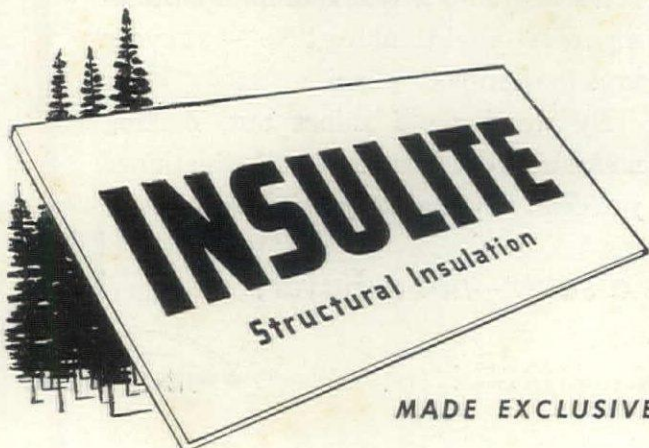
How to do it? By always specifying the Approved Insulite Wall of Protection. This wall provides:

**Double Insulation . . . Superior Bracing Strength . . . Protection against moisture condensation within the walls.**

The drawings to the right explain why. Also consult Sweet's Architectural File, Section 10, or write today for technical information on the subject.

## INSULITE

[ Division of Minnesota and Ontario Paper Company ]  
 MINNEAPOLIS 2, MINNESOTA



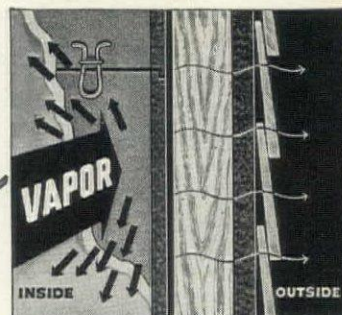
MADE EXCLUSIVELY FROM WOOD



• On outer-walls, Insulite Bilrite Sheathing. The large boards provide a wind-proofed, weather-tight wall. Bilrite Sheathing has a bracing strength four times that of wood sheathing, horizontally applied.



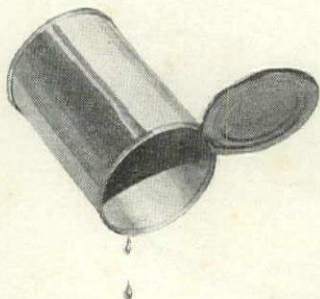
• On inner-walls Insulite Sealed Lok-Joint Lath, furnishes a *second* wall of insulation. The patented "Lok-Joint" provides a strong, rigid plastering surface, prevents joints from opening under trowel pressure.



• How moisture condensation is effectively minimized in the Approved Insulite Wall of Protection. Sealed Lok-Joint Lath with asphalt barrier against the studs effectively retards vapor travel. Bilrite Sheathing, being permeable to vapor, permits what little vapor escapes to pass naturally towards the outside.



## Use it up . . .



That's the thing to do in wartime. Eat every bite of food, save every scrap of soap, make a patriotic habit of stretching all the supplies in the house so they go further, last longer.

## Wear it out . . .



This year old coats, old shoes, are a badge of honor. They show you're sensible enough to know that one way to help win the war, to keep prices down, is to wear your old things out!

## Make it do . . .



Before you spend a penny in wartime, ask yourself, "Do I really need this? Or do I have something now that will do?" As you patch and darn and turn, you're keeping prices down.

## or do without!



When you put your money in War Bonds, savings, taxes, insurance—you're putting your money to work fighting the war and building a sound, stable nation for the peace to come.

**It's your money** you're saving when you help keep prices down. For it's buying too much when there's too little to buy that sends prices up. And when prices go up—and keep going up—your savings, your future, are in danger.

How can you help keep prices down?

*See that prices go no higher . . . Be a saver—not a Buyer!*

By never spending a thin dime you could turn into a War Stamp. By thinking twice—and thinking "No"—at every urge to open your purse.

By wearing old things out, making makeshifts do. Remember, it's the things you *don't* buy that keep prices down!

A United States war message prepared by the War Advertising Council; approved by the Office of War Information; and contributed by this magazine in cooperation with the Magazine Publishers of America.

**HELP  
US  
KEEP  
PRICES DOWN**



THE

EMMANUEL EVANGELICAL AND REFORMED CHURCH  
ROCHESTER, N. Y.

Heating Contractor, W. J. Farneng  
Wholesaler, The Hunting Company

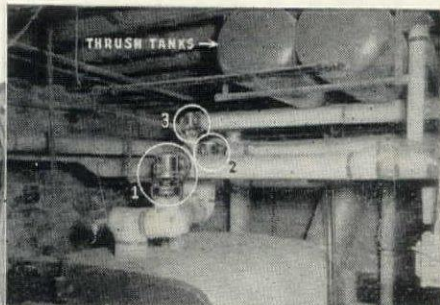
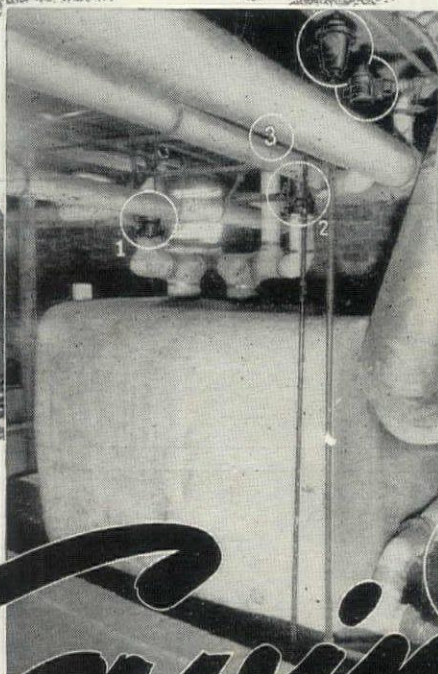
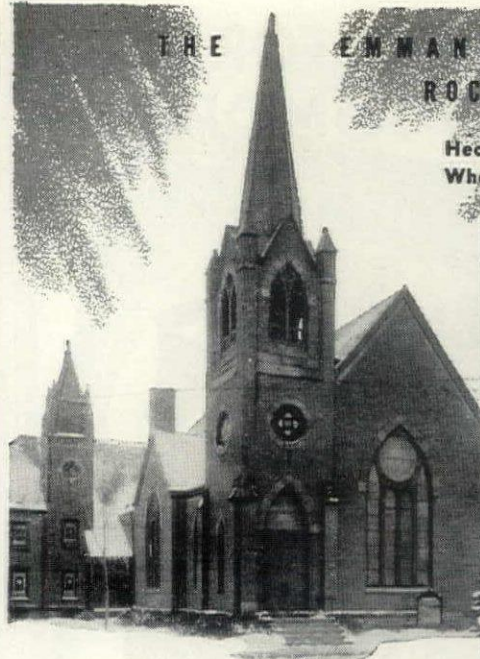


Illustration above shows Thrush Flow Control Valve for each zone and Thrush Tanks.

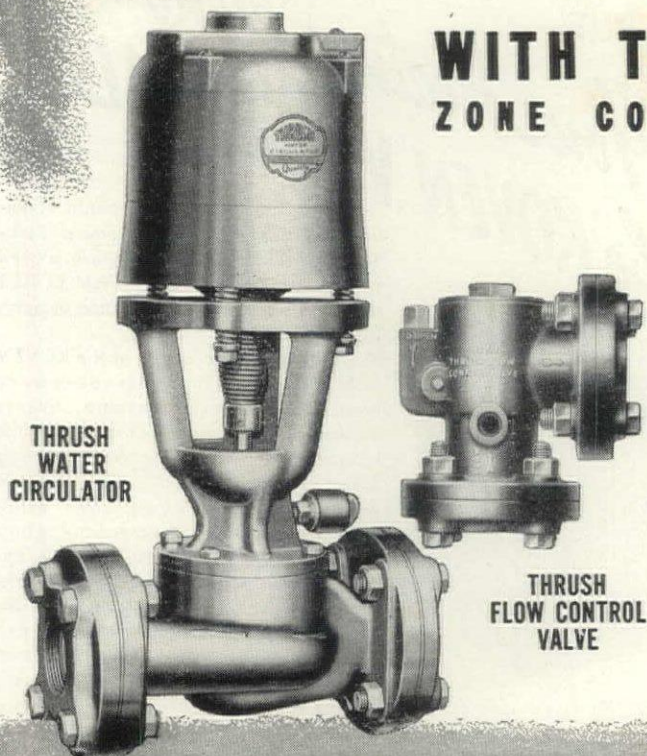
Illustration at left clearly shows three zones on boiler. Three Thrush Water Circulators at bottom right. Flow Control Valves are shown at the top, also Thrush Pressure Relief and Pressure Reducing Valves.

MORE HEATING  
COMFORT PLUS...

A FUEL

*Saving*  
of 37%

WITH THRUSH *Forced Circulating*  
ZONE CONTROLLED HOT WATER!



THRUSH  
WATER  
CIRCULATOR

THRUSH  
FLOW CONTROL  
VALVE

WHY heat the entire church every time just a part of it's to be used? With simple, inexpensive, automatic Thrush equipment, you can zone any hot water heating plant so that just the part needed is heated and the extra fuel is saved! The Emmanuel Church heating system has three zones, the Auditorium, the Sunday School Rooms, and the Recreation Rooms. The Board reports more real heating comfort and an actual saving of around three hundred dollars a year on fuel since it was installed four or five years ago. That's big money in any heating budget! Churches and apartment houses in your community would like to know about Thrush Zone Control, too. Ask your wholesaler about it, or write Dept. H-6.

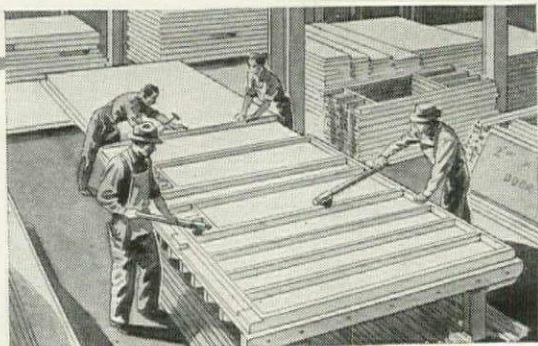
H. A. THRUSH & COMPANY . . . PERU, INDIANA



# PREFABRICATED? —OR PRECISION-BUILT?

Reg. U. S. Pat. Off.

*There's a major difference  
for the architect to consider*



PREFABRICATION started with the question—"How can we build a house with sectionalized, factory-built, standardized panels?" Precision-Built Construction started just the other way around—"How can we build sectionalized panels to execute *any design*?"

When you specify Precision-Building, *your client gets the home you design*—any size, any style, any place, and for any climate. It looks no different from the same house conventionally built, yet your client gets all the benefits of mass production and engineering technique.

The basic difference between Prefabrication and Precision-Building is due to the difference between Prefabrication's "standard jig tables" and Homasote\* Precision Tables. On each standard jig table, pre-cut materials are assembled into a standard panel of one design only. The table dictates the design. On a Precision Wall-Section Table, for example—any wall can be built, up to the total dimensions of the table. Nothing in the design needs to be standardized.

When you use Prefabrication, you build with *standardized panels*—usually in 4-foot widths. A logical simile is that you are building a house out of blocks. You can place the blocks anywhere you wish, but you cannot alter their original size or shape or design. When you use *Precision-Building*, you have no design limitations of any kind. You work as you are accustomed to working.

Homasote Precision-Built Construction is proved by \$8,000,000 of private homes and \$30,000,000 of Government housing already built. Write for the details.

\*Trade Mark

ANY SIZE . . . . . ANY TYPE . . . . . ANYWHERE



**HOMASOTE COMPANY**  
TRENTON, N. J.

# BLUEPRINTS FOR YOUR HOUSE *of* TOMORROW



## YOU MAY HAVE TELEVISED TELEPHONES

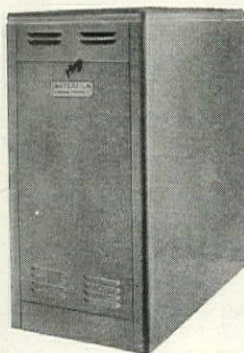
Imagine, actually seeing the person you are telephoning to! Post-war television improvements may make this dream a reality.

BUT -

*Your Heating Plant will  
be KOVEN WATERFILM*

The marvels of modern invention may make tomorrow's home a "Push-Button" paradise but in the future, as well as today, a KOVEN WATERFILM BOILER will still offer the best assurance of heating comfort.

The patented construction of the KOVEN WATERFILM BOILER assures you of quick heat...even room temperature...plenty of domestic hot water...and greater operating economy. This fast steaming boiler is made especially for automatic firing for oil, stoker or gas and is available in various sizes. Its compact size and modern design make the KOVEN WATERFILM BOILER popular for both home and industrial use. The sectional series for apartment house or industrial plants can be taken through a 2 foot door thus eliminating rigging and alteration costs. Call or write KOVEN today for complete information,



DE LUXE MODEL  
For Better Grade Homes

**WATERFILM BOILERS, Inc.**

154 OGDEN AVENUE

JERSEY CITY, N. J.

PLANTS: JERSEY CITY, N. J. • DOVER, N. J.

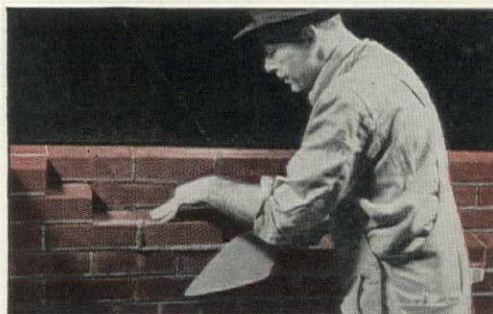




# BRIXMENT Makes More Plastic Mortar

● One of the most important characteristics any mortar can possess is *plasticity*. Within certain limits, plasticity is the greatest single factor not only in the *economy* of the brickwork, but also in its strength, its neatness, and its resistance to the passage of water.

One of the outstanding characteristics of Brixment mortar is its unusual plasticity. For twenty-five years, bricklayers all over the United States have agreed that the workability of Brixment is comparable to that of straight lime putty. This exceptional plasticity makes it easy for the bricklayer to secure neat, economical brickwork, with the brick properly bedded, and the joints well filled. And because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand and still make an ideally workable mortar.



Take some Brixment mortar and some 50-50 lime and cement mortar. Try shoving a full head-joint with each mortar. You'll find that with the Brixment mortar (top), it is much easier to shove the brick accurately into place, with a full head-joint, than it is to do the same thing with the other mortar (bottom).

**LOUISVILLE CEMENT COMPANY, Incorporated**  
General Offices: Louisville 2, Kentucky  
Cement Manufacturers Since 1830

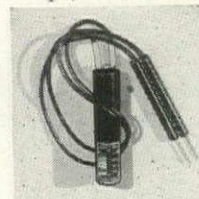


## BUILDING REPORTER

(Continued from page 18)

### VOLTAGE TESTER without lamps.

**Features:** Requiring no breakable lamps, this voltage tester is able to withstand harder than ordinary usage. Enclosed in a rugged fiber housing, it gives positive voltage identification and distinguishes between AC and DC current. Leads are 24 in. long, rubber



covered, and have 4 in. fiber grips. A peg and spring assembly prevents sharp bending and breaking of the lead wires. Sharp spear points on the ends of the leads make it possible to pierce the insulation of wires for testing without destroying the insulation. **Manufacturer:** Square D Co., 6060 Rivard St., Detroit, Mich.

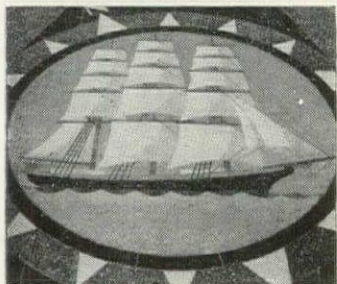
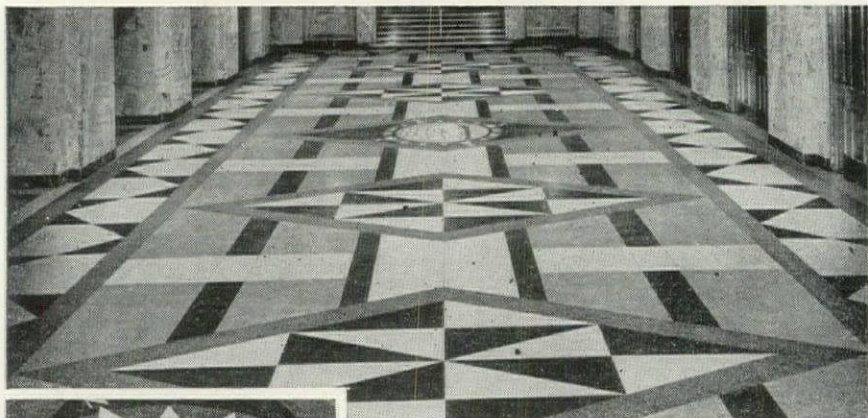
### ROCKLATH PARTITIONS save lumber.

**Features:** Non-load bearing partitions of Rocklath plasterboard and plaster, save construction time and eliminate the use of scarce materials. Rocklath 24 in. wide, and  $\frac{3}{8}$  or  $\frac{1}{2}$  in. thick may

be ordered in lengths up to 9 ft. 6 in. Partitions made of it will not burn, are strong and durable. Cores of the Rocklath partition fit into grooves of runner strips nailed on the floor and ceiling. Bracing clips attached to the partition before installation fasten to a brace which holds the partition rigid while a scratch coat of plaster is applied to both sides. Brown coat is then applied to the side opposite the brace. When plaster is partially dry, brace is removed and brown coat is applied to that side. Finish plaster completes the partition.

**Manufacturer:** United States Gypsum Co., 300 W. Adams St., Chicago, Ill.

## FINE TERRAZZO FOR SCHOOLS AND COLLEGES



Typical of the enduring beauty of fine Terrazzo made with Atlas White cement. The lobby of the Administration Building, Boston University. Architect, Cram & Ferguson; Terrazzo Contractor, De Paoli Mosaic Co.; both of Boston. The fine detail and rich delicate colors remain clear and unchanged despite the tread of many students. *Inset at left shows detail in center medallion.*

**T**he beauty of fine Terrazzo lies not only in its almost limitless possibilities for patterns and designs, but in the unfading clarity of its coloring. Just as an artist uses white canvas for his handiwork, so the artisans of fine Terrazzo use a matrix of Atlas White cement (plain or waterproofed) to provide the background which sets off the true color value of the marble chips. Tinted when desired, or used in its natural white, the matrix assures clarity and richness of colors against a contrast-

ing or harmonizing background.

The utility, low maintenance and economy of *Fine Terrazzo* are well known, for its matrix of Atlas White also gives it the durability of concrete even under the heaviest foot traffic.

See Sweet's Architectural File, 1944, Section 13-5 For further information write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

*The matrix is as important as the marble chips*

AF-T-2

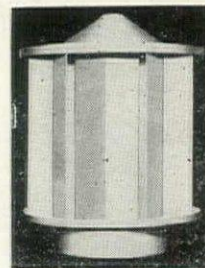


**ATLAS WHITE CEMENT**  
for FINE TERRAZZO

### WIND-ACTUATED EXHAUSTER eliminates down draft.

**Name:** Agitair Exhauster.

**Features:** This wind actuated exhauster gives positive ventilation regardless of wind direction or velocity. It is suitable for gravity and mechanical ex-



haust systems in marine, industrial and commercial applications. For marine use it is equipped with water-tight dampers. The Agitair Exhauster also functions satisfactorily

as a port-hole ventilator. It is weather-proof and light-proof and provides elimination of down draft. Rigidly constructed and welded, the unit has no moving parts. Many sizes are available and special finishes are applied for salt or corrosive atmosphere applications.

**Manufacturer:** Air Devices, Inc., 17 E. 42nd St., New York 17, N. Y.

### ELASTO-PLASTIC substitute for rubber.

**Name:** Marvinol.

**Features:** This new thermoplastic material, made of coal, air, salt and water, has demonstrated its superiority to both natural and synthetic rubber in inner tubes, surgical gloves, and certain aircraft uses. It can be processed on standard rubber-working machinery, in 10 per cent fewer man-hours than is required by the natural material. Manufacturing processes for Marvinol are also less complicated than those used to produce synthetic rubbers. It is 100 per cent reclaimable, has superior abrasion resistance, ability to withstand constant flexing and is impermeable to gas and liquids. Even at high temperatures, in strong sunlight or when contacted with dilute acid or alkaline solutions it remains stable.

**Manufacturer:** The Glenn L. Martin Co., Baltimore 3, Md.

(Continued on page 174)



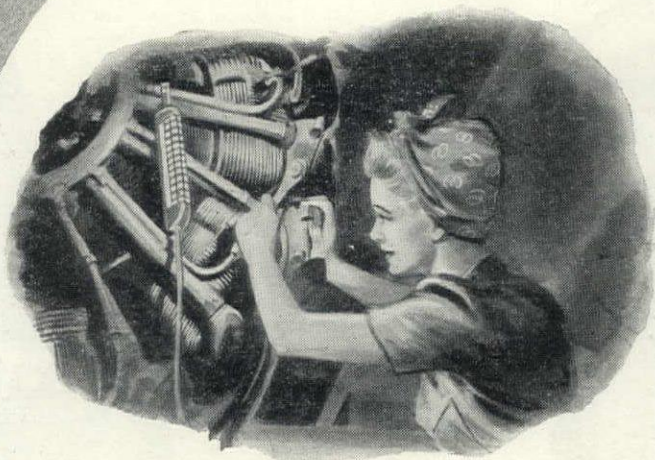
## *Right* — for a Bomber Line

You want the *right light* on the busy work stations of a bomber assembly line.

Glare-free, shadowless, cool against accidental touch, portable, compact—it must be all this and dependable too.

Sylvania found the answer in a tidy little portable fluorescent light which meets these requirements on all counts.

It is now producing these units for war-plant use under the Sylvania mark of quality, as assurance that they are made to only one standard—the highest anywhere known.



## *Right* — for a Boudoir

You'll want the *right light* in the homes you plan for tomorrow.

Glare-free, shadowless, cool, compact—and with all this, attractive in appearance and pleasingly truthful in the quality of illumination.

Sylvania's war-whetted skill points the way to this. It foretells fluorescent lighting for the home which will at once be decorative, efficient and wholly gratifying in the new quality of the light provided.

It will take victory to bring this lighting, but when it comes it will carry the Sylvania mark of quality to assure you of high merit right from the start. Sylvania Electric Products Inc., Executive Offices: 500 Fifth Avenue, New York 18, N. Y.



# SYLVANIA

ONE STANDARD—THE HIGHEST ANYWHERE KNOWN

BUY WAR BONDS

FOR THE DURATION

America's war program gets first call on all our products, resources and skill.

### RADIO TUBES



You'll find the Sylvania mark of quality on many a radio tube now in use or available for replacement. The fine work it identifies is also going into such war equipment as "walkie-talkie" sets and other battle-front communications equipment.

### ELECTRON TUBES



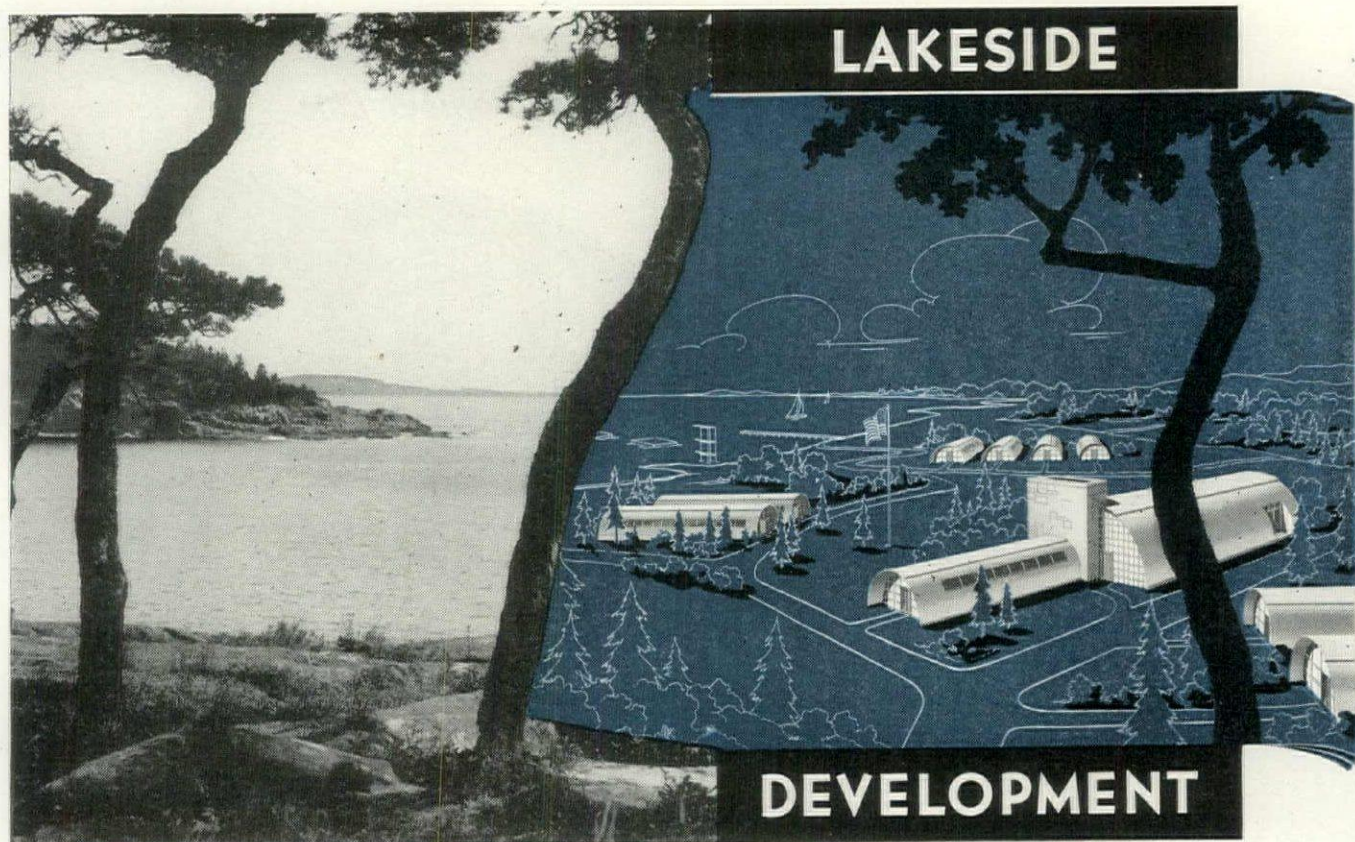
In the final analysis, electronics comes down to a matter of tubes. Sylvania's long experience in such precise work naturally brings this within our province. The Sylvania mark of quality is therefore found on many electron tubes performing important wartime work.

### LAMPS AND FIXTURES



You'll likewise find the Sylvania mark of quality on incandescent lamps, fluorescent lamps and fluorescent fixtures. Naturally, most of these wares go into war work. But the name is one to note well and remember as your sure future guide to the best there is.





The range of usefulness of Stran-Steel framing systems by no means ends with industrial and municipal buildings, multiple dwellings, group housing projects and other large units . . . but extends into the field of smaller structures—cottages, boat houses, cabins, summer houses and the like.

This light-gauge steel has certain characteristics which serve equally well in all types of construction. It forms a rigid framework which will not sag—resists termites and dry-rot—and is light-weight enough to handle easily in transporting and erecting. A special patented nailing groove for applying collateral materials, plus other unique advantages, makes possible economies of time, labor and materials. As a structural medium, it is flexible and adaptable—affording the architect wide latitude in design.

Current production of large and small military buildings combines with this company's broad peacetime activities to provide a fund of specialized experience on which the construction industry may draw in developing its postwar plans.

*Manufacturer of the U. S. Navy's  
Famous Quonset Hut*



# STRAN-STEEL

DIVISION OF GREAT LAKES STEEL CORPORATION, 1130 PENOBSCOT BUILDING, DETROIT 26, MICH.

UNIT OF NATIONAL STEEL CORPORATION



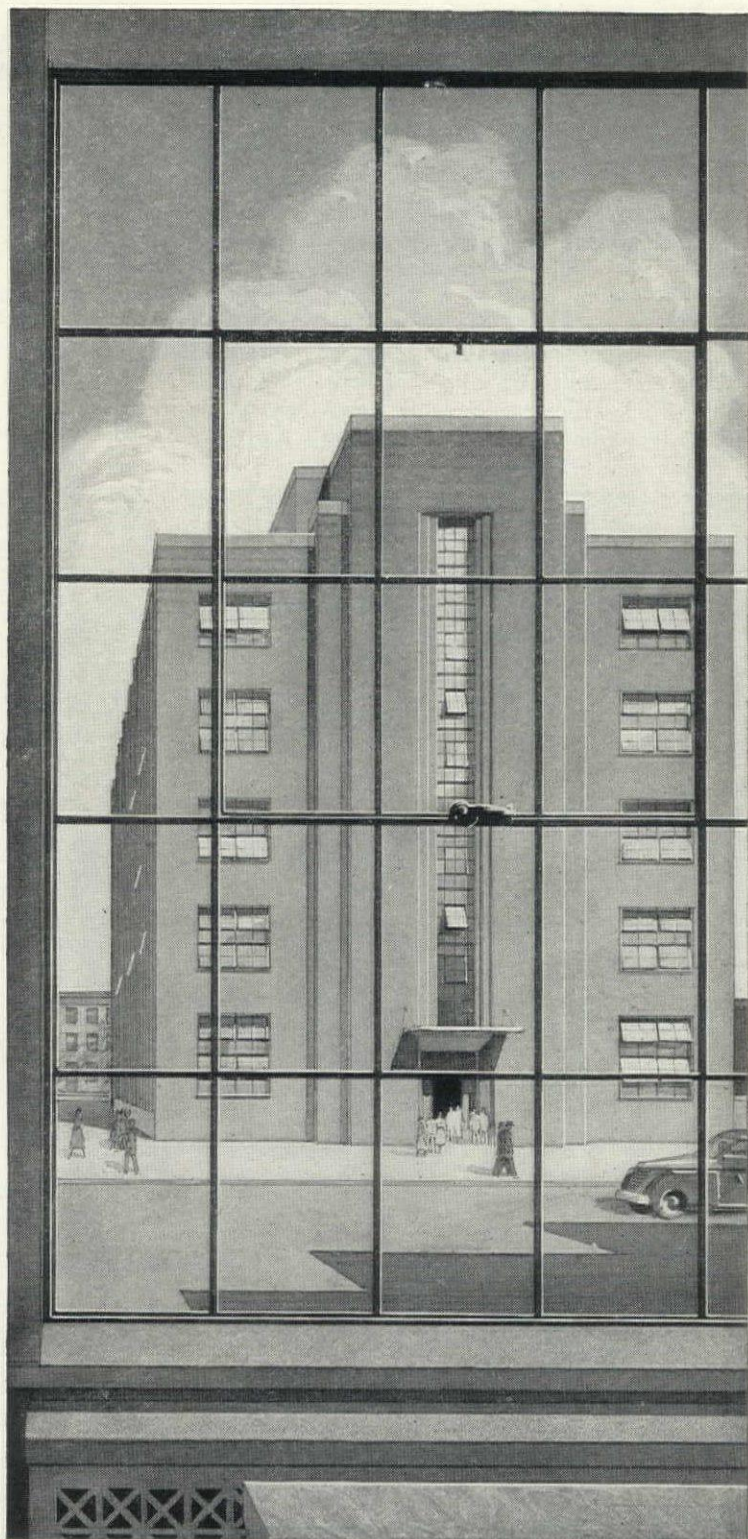
This entire building at the Pearl River Plant of Lederle Laboratories, Inc., is devoted exclusively to the manufacture of Penicillin. Built by Turner Construction Co.



*Laboratory buildings* equipped with Lupton Metal Windows and Doors receive all the benefit of abundant daylighting and controlled ventilation—prime requisite for vital scientific work. The trouble-free operation, weather-tight construction and flexible design of Lupton Metal Windows are the result of 40 years experience. For complete satisfaction, specify Lupton.

*See our Catalog in Sweet's*

MICHAEL FLYNN MANUFACTURING CO.  
E. Allegheny Ave. at Tulip St., Philadelphia 34, Pa.



# LUPTON METAL WINDOWS



## BUILDING REPORTER

(Continued from page 170)

### ASBESTOS-CEMENT BOARD for farm buildings.

Name: Coverall.

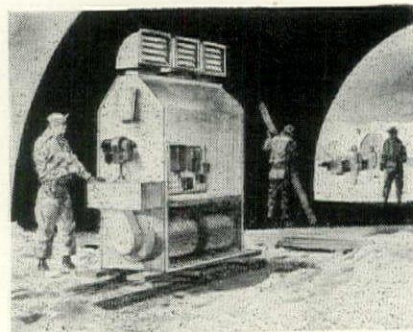
Features: Especially designed for repair, maintenance and new construction of farm buildings, Coverall board is impervious to moisture, fire, rust, rats and vermin. It is easily applied and its smooth surface requires no painting for protection. It does not warp, shrink or crack. Suitable uses include both interior and exterior con-

struction of barns, feed bins, hog houses, dairy barns, and basement walls. Available in sheets 4 x 8 ft., no priority required.

Manufacturer: Philip Carey Mfg. Co., Cincinnati, Ohio.

### HEATER for small structures and limited areas.

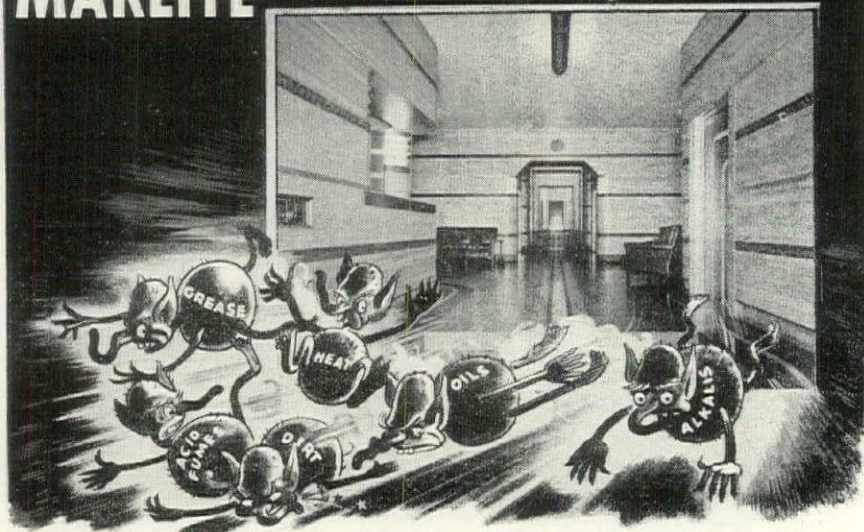
Features: Developed for small-scale heating, this direct fired heater is now providing warmth in steel igloos at advanced bases. It has capacities ranging from 300,000 to 850,000 B.T.U. output per hour. Besides being thermostatically controlled, the heater is con-



vertible to either gas or oil. Burners and controls can be removed and substituted as conditions require. The model uses only 5 1/4 x 3 ft. of floor space or can be suspended from the wall.

Manufacturer: Dravo Corp., 300 Penn Ave., Pittsburgh, Pa.

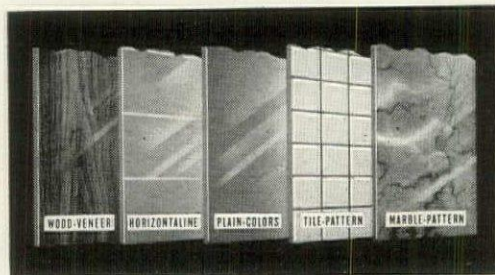
## MARLITE IN...BLURMITES\* OUT!



\*Blurmites—destructive agents, harmful to the finish of many interior wall, ceiling and counter surfaces.

Marlite's pioneer high-heat-bake finish writes "finis" to the destructive action of Blurmites because it seals the surface against dirt and moisture penetration!

Plastic-finished Marlite interior wall and ceiling paneling is attractive, durable and moderate in cost; quickly installed for new construction or modernization; easily cleaned—retains original beauty and luster for many years; never needs repainting or refinishing; wide choice of colors and patterns guarantees full-freedom of creative ingenuity.



### SEND FOR SAMPLE!

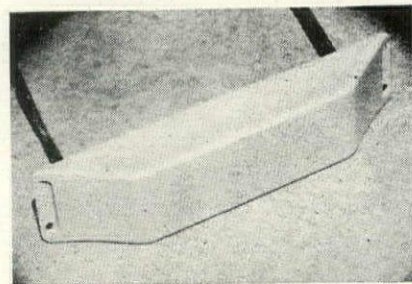
See actual samples of Marlite—the ideal material for installation in all types of rooms, in all types of buildings. Colors and patterns normally available (see illustration at right) promise ultra-modern interiors for the small home to the largest post-war commercial and industrial buildings and Marlite is immediately available on suitable priorities.

See Sweet's, Section 11, for complete information . . . or ask a Marsh Engineer to call!



**MARSH WALL PRODUCTS, Inc.**  
61 MAIN ST., DOVER, OHIO

PLASTIC-FINISHED WALL PANELS • FOR CREATING BEAUTIFUL INTERIORS



**BALLASTS** streamlined for mounting on new fluorescent fixtures.

Name: Tulamp 40 w. ballasts.

Features: Designed to fit the contours of lightweight fluorescent fixtures, Tulamp 40 w. ballasts are housed in streamlined drawn-steel cases. External mounting atop the fixture with leads out the bottom of the ballast case, makes possible installation atop a very narrow and shallow wiring channel in an exposed position. These streamlined ballasts comply with all local regulations concerning power factor, and do not differ electrically in any respect from conventional ballasts of corresponding ratings.

Manufacturer: General Electric Co., Schenectady, N. Y.

(Technical Literature, page 182)





# FACTS ABOUT THE FAMILY

*Sure you know about Kentile—the wonderful range of patterns and color combines possible, the durability of Kentile, all the reasons why it is a prime choice of architects. But how about the company making it? Let's get acquainted.*

**DAVID E. KENNEDY, INC.**

58 Second Avenue  
Brooklyn 15, N. Y.

## KENNEDY IS THE CONCENTRATING TYPE!

Some people may call it being simple minded but David E. Kennedy, Inc. believes in doing only one thing and doing it well. Of course we converted our cork machinery for the navy but, normally, we think about nothing except floors—and how to make them better.



## MORE SHOP TALK THAN SMOOTH TALK!

The David E. Kennedy field representatives can't compete with Bob Hope—but men who need information and advice on flooring find them fascinating. Every Kennedy representative is a practical floor man who knows floors from the *workman's* angle.



## AGE MEANS MORE THAN RESPECTABILITY!

In 1899 David E. Kennedy, father of the firm's present head, introduced cork tile, America's first resilient floor tile. This firm has been the industry's path-maker and standard setter ever since. Well, there isn't anything about a product more important than the experience and reputation of the maker.



**KENTILE**  
*Asphalt Tile*  
Trade Mark Reg.





# Sakes alive!

## NOBODY SEEMS TO KNOW WHEN THIS HOUSE IS COMFORTABLE...



Grandma's complaint will have a familiar ring to Architects and Builders. Central heating cannot satisfy all members of the family. But, after the war, you can specify PAYNE ZONE-CONDITIONING.

Pioneered by PAYNE, improved for tomorrow, Zone-Conditioning is *flexible*. Healthful circulation of filtered fresh air, gas-heated in winter, controlled by zones or individual rooms. ★ Not available now; we're concentrating on war production. But PAYNE Dealers have the facts for you. Remember Zone-Conditioning.

# PAYNEHEAT

NEARLY 30 YEARS OF LEADERSHIP

HELP BATTER THE AXIS . . . WITH BONDS



*When the Shooting is Over*


**ROPER**  
"America's  
Finest Gas Range"

● When America once again returns to peace-time living, a smart new Roper gas range will appear on the horizon.

And what a gas range! Distinctive, equipped with many new features, it will be an appliance you'll proudly specify to take its place with other modern equipment in the kitchens you'll be building.

GEO. D. ROPER CORPORATION, Rockford, Illinois, manufacturers of ROPER, "America's Finest Gas Ranges" for all gases including L.P. (Liquefied Petroleum) gas.

**ROPER**  
GAS RANGES

SPECIFY WAR BONDS NOW ★ A ROPER  GAS RANGE LATER

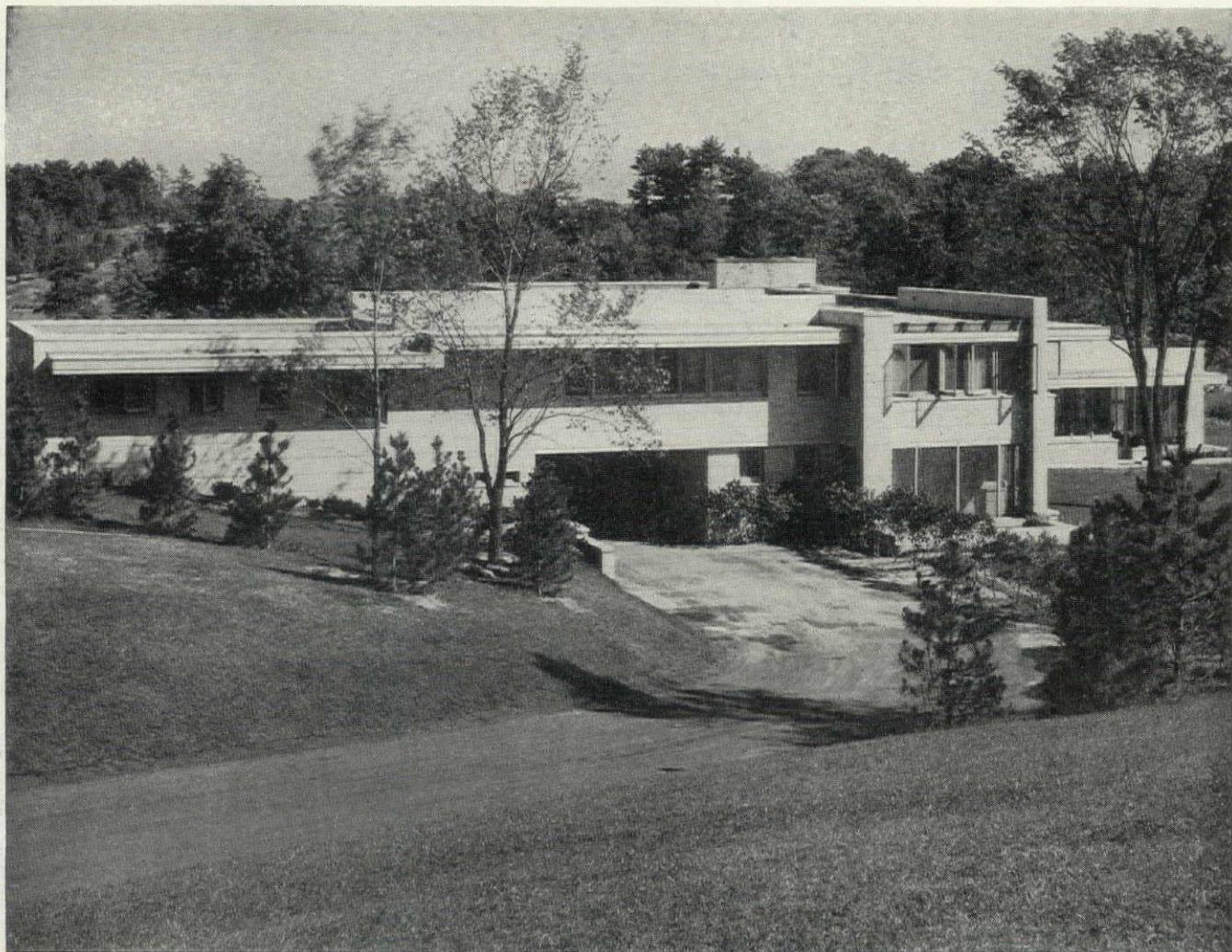
## ARCHITECTURAL DESIGNERS and INDUSTRIAL DESIGNERS

An established midwestern architectural engineering organization doing an international business requires several top men on large war and post-war projects.

Write Box X A. F.

The Architectural Forum  
19 West 44th St., N. Y. 18, N. Y.





Owner, Walter J. Kohler, Jr., Kohler, Wisconsin

Architect: W. F. Deknatel

Rofer: F. J. A. Christiansen Roofing Co., Milwaukee

## "Was the roof of tomorrow here yesterday?"

A well-known American architectural editor, in a recent speech, said that the home of tomorrow will be a much different place from the home of yesterday, but that it will be made up of individual features which have been present in one or another house in the past.

The great improvement in the house of tomorrow, he said, is that *all* the best features of the houses of the past will be available in a single house in the future.

Maybe the same thing can be said of the industrial and commercial buildings of the future. They will be much different from the buildings of the past . . . the war has brought many changes in building materials and building methods . . . but they will still

have the things which have proved best in the past.

Nothing that has developed in the frenzied construction rush of the war period has brought any roofing material which has proved better than the good old, tried-and-true coal tar pitch. The best advice still is to specify Koppers Built-Up Roofing constructed with Old Style Pitch and Approved Tarred Felt.—Koppers Company, Tar & Chemical Division, Pittsburgh 19, Pa.

# KOPPERS

*The industry that serves all industry*

**KOPPERS** *coal tar pitch roofing*

**KOPPERS** *coal tar pitch waterproofing*



# Solves a difficult problem in air conditioning multi-room buildings...

JOHN A. HOLABIRD F.A.I.A.  
JOHN W. ROOT F.A.I.A.

**HOLABIRD & ROOT**  
ARCHITECTS  
333 N. MICHIGAN AVE., CHICAGO 1, ILLINOIS  
ENGINEERS  
V.O. MCCLURG F.A. BYRNE

J. Z. BURGE  
WM. HOLABIRD  
J. C. SHERICK

Air conditioning for comfort is certain to occupy a position of first importance in post-war architecture. In the rehabilitation of old structures, in the building of new, its application will be a "must".

This will be particularly true of hotels. When guests are again able to choose their accommodations air conditioned rooms will rent first. The thousands of men and women who have experienced the comfort of living in properly conditioned rooms will not be content without it. The hotel without air conditioning will be second choice.

Emphasis is put on the word "properly" because certain types of air conditioning for living areas leave a great deal to be desired.

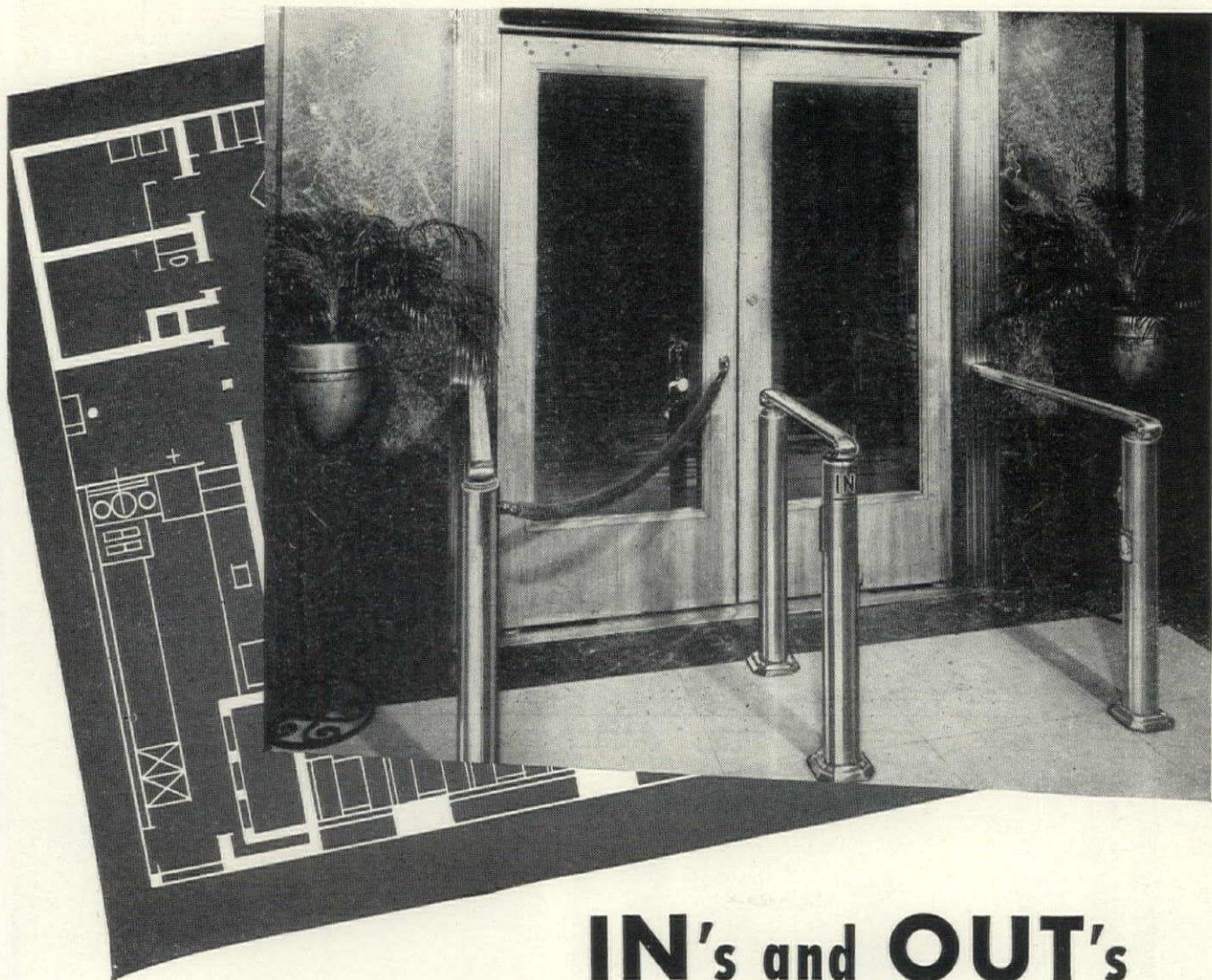
Fortunately it is now possible to obtain systems that condition the air of hotel rooms with outside air only. The only recirculation is in the room itself. This type system enables room occupants to live in comfort in any season. It also solves a difficult problem formerly encountered in the application of air conditioning to multi-room buildings — that is, it eliminates the large and unwieldy ducts that interfere with the architectural treatment of the rooms and seriously reduce rentable floor space.

Now it is possible, without resort to compromise, to fit a design precisely to any set of requirements.

*True & Sincere*

This message is presented by Carrier Corporation, Syracuse, New York, as a contribution to the information on air conditioning in post-war architecture.





## IN's and OUT's of Restaurant Planning

# STANLEY



The trade-mark that appears on highest quality Butts, Hinges and other Hardware Equipment for commercial, industrial and residential buildings.

**Stanley Magic Doors Open at Approach . . .  
Close After Passage . . . Reduce Dish Breakage  
. . . Assure Better, Smoother Service**

When your plans for postwar restaurants feature modern arrangements, you earn the owner's interest. And when one of these modern features – such as Stanley Magic Doors – provides for real cost-saving, faster, smoother service and more customers served per meal, you gain his enthusiastic approval.

Stanley Magic Doors, easy to install and dependable in operation, have thoroughly proved their time and cost saving advantages in restaurants. Actuated by "electric eye", they eliminate kitchen-to-dining room slow-down, and loss through breakage of dishes. They are the sign of streamlined service that promotes patron satisfaction.

Give Stanley Magic Doors a prominent place in your early discussions with prospective builders. Stanley will cooperate with you in preparing plans and specifications. Fill out and mail the coupon now.



The Stanley Works,  
Magic Door Div.,  
New Britain, Connecticut  
Gentlemen: Please send full information on Stanley Magic Doors for  
( ) Commercial ( ) Industrial Use.

Name.....  
Firm Name.....  
Street..... State.....  
City.....

SEE OUR  
CATALOG IN  
SWEET'S

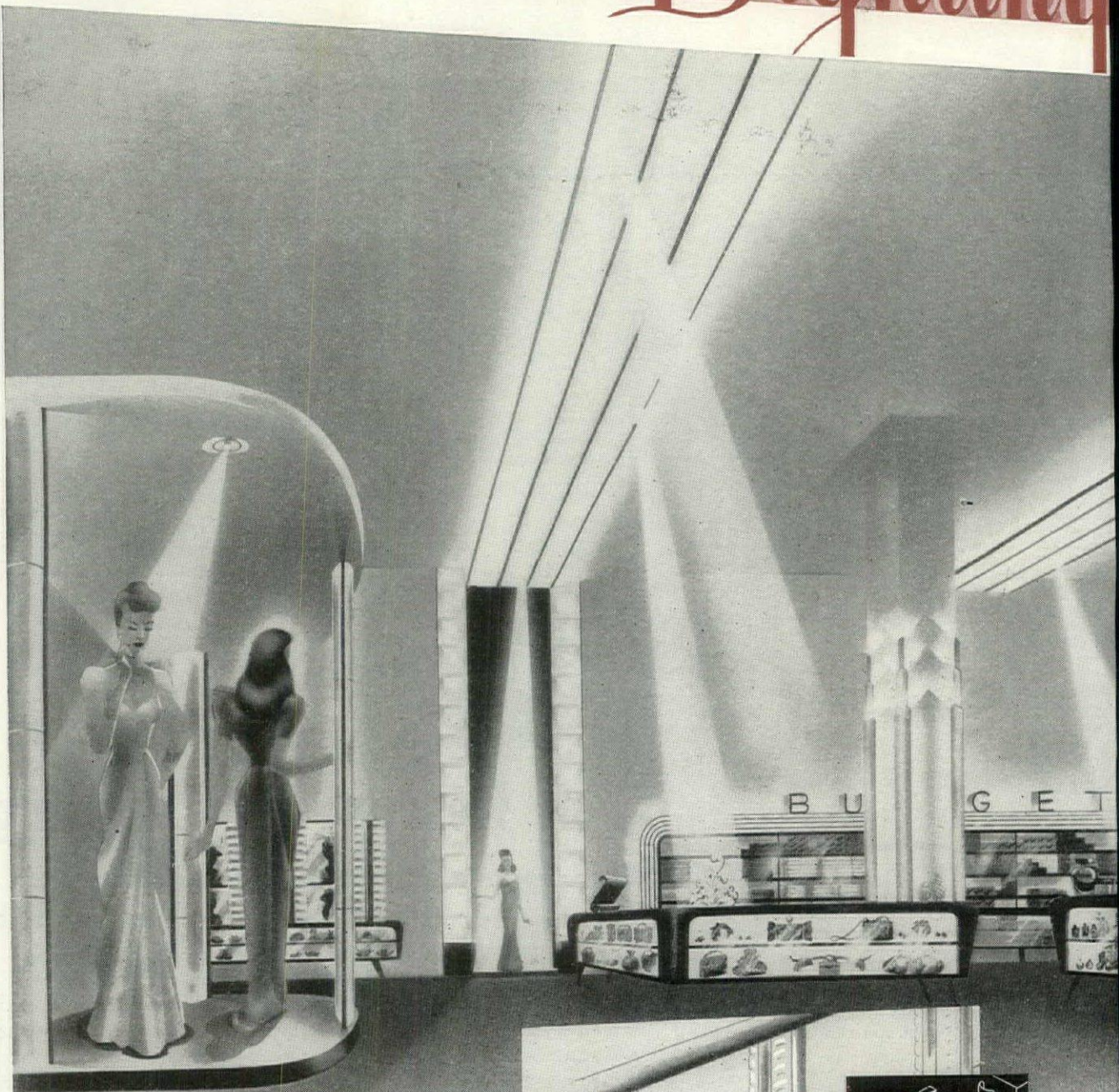
# STANLEY MAGIC DOORS

REQUIRE NO HAND TO OPEN



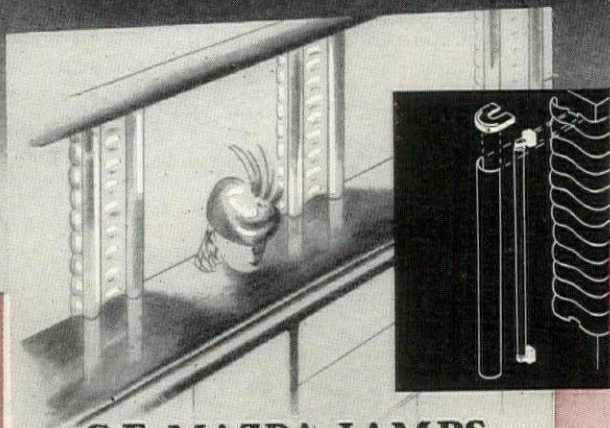
Light helps create both spaciousness and intimacy in this unusual store interior. Luminous ceiling areas, together with vertical light masses on the pillars and room end niche seem to push back walls and ceilings. While light from adjustable spots draws the eye to details of merchandise, helps create sales.

# "Lighting



Right, wall units like this, with shielded fluorescent lamps in front of corrugated reflectors, could give featured merchandise silhouette backlighting to provide effective selling display.

Hear the General Electric radio programs:  
"The G-E All-Girl Orchestra", Sunday  
10 p. m. EWT, NBC; "The World Today"  
news, every weekday 6:45 p. m. EWT, CBS.



G-E MAZDA LAMPS

GENERAL  ELECTRIC



# creates Atmosphere..."

## IN THE POSTWAR DEPARTMENT STORE

GENERAL ELECTRIC brings you another in its series of postwar lighting perspectives by outstanding architects and designers. Here are some stimulating ideas on store lighting developed by a well-known designer who knows stores, EGMONT ARENS.



*This is what Mr. Arens sees ahead:*

"In my opinion, modern store interiors will depend more and more on the architecture of light in which the decorative elements and fixtures will be subordinated to the lighting pattern to create atmosphere.

"Using light as a building material was an abstract idea until the 1939 World's Fair proved what amazing effects were possible. There this new art of architectonic display lighting was demonstrated on a large scale.

"This department store interior shows how a designer could use prefabricated sectional or unit lighting fixtures to build up spaciousness that invites customers and intimacy that provokes a buying mood . . . an irresistible combination for sales."

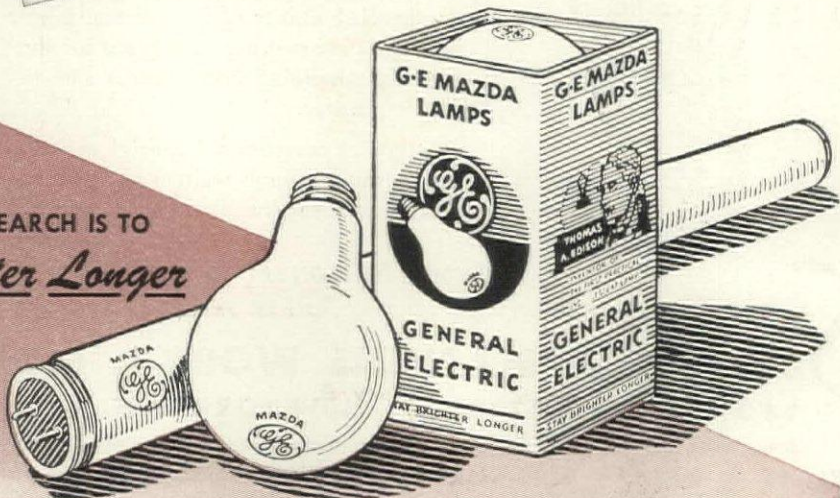


A NEW BOOKLET, "Lighting to invite more customers" will give you more details on Mr. Arens' ideas on building with light to add distinction to new stores and modernize existing stores. Write General Electric, Dept. 166-AF6, Nela Park, Cleveland 12, Ohio.

THE CONSTANT AIM OF G-E LAMP RESEARCH IS TO

MAKE G-E LAMPS *Stay Brighter Longer*

Make your war bond investment  
count to the full —  
BUY WAR BONDS AND HOLD THEM.





**WELDING & CUTTING.** *The Oxy-Acetylene Handbook*, 587 pp., 6½x9½. Comprehensive and authoritative textbook on basic oxy-acetylene welding and cutting procedures which can be used as a guide for teaching and as a reference book for plant management. Covering the entire range of the oxy-acetylene process it offers clear instructions for handling common commercial metals, and gives the fundamental principles of depositing and controlling molten metal. Other chapters include: how to set up, operate and care for oxy-acetylene apparatus; flame adjustment; how to identify metals; how to weld steel, cast iron, malleable iron, galvanized iron, aluminum, copper, brass, bronze, nickel, Monel, lead, magnesium; how to bronze-weld; how to do heating, bronze-surfacing, hard-facing, flame hardening, silver-brazing; how to cut steel; how to test welds; how to organize and lay out a welding shop, etc. The Linde Air

Products Co., Unit of Union Carbide and Carbon Corp., 30 East 42nd St., New York, N. Y. Price \$1.50.

**DOORS.** *Byrne Hangar Doors, Industrial Doors, Airplane Hangars, Crane Entrance Doors, Movable Steel Partitions*, 11 pp., 8½x11. This attractive booklet gives general information, advantages, structure, application and performance data on all types of large doors for airplane hangars, industrial buildings, and crane entrances. Explanations are also given of movable steel partitions, motorized slide doors, and motorized canopy doors in single leaf or multiple sections. Section drawings and elevations illustrate installations. Custom built doors are also shown, and a section is devoted to standard hangars of all types. Byrne Doors, Inc., 1150 Griswold St., Detroit 26, Mich.

**HEAT CONTROLS.** *Johnson Duo-Stats for Economy Control of Hot Water Heating*, 6 pp., 8½x11. A bulletin which presents the advantages of Duo-Stat controls and general information on how they operate for hot water heating systems. Different types of these pneumatic and electric weather-compensated controls are illustrated and described, and applications for each are discussed. Controls for zone heating are also covered. Diagrams and photographs illustrate typical controls and piping arrangements for zone control. Typical Duo-Stat control of oil and gas burners and stokers are also illustrated. Johnson Service Co., Milwaukee, Wis.

*Johnson Duo-Stats, Economy Control for Steam Heating*, 6 pp., 8½x11. This bulletin gives advantages of Duo-Stat controls, and general information on how they operate for steam heating systems. Different types of these weather-compensated controls are illustrated and described, and their application to zone control and to all types of firing devices are covered. Johnson Service Co., Milwaukee, Wis.

**TRANSFORMERS.** *Summary of Safety and Savings With All-Purpose Pyranol Transformers*, 15 pp., 8½x11. An illustrated catalog describing the safety of transformers insulated with inflammable Pyranol liquid. Savings in space requirements, installation time and initial and operating costs are also discussed. Photographs illustrate various installations, those that represent a cross-section of transformer application, and those that have survived fires undamaged. General Electric Co., Schenectady, N. Y.

**ASPHALT TILE FLOORING.** *Floors That Endure by Tile-Tex*, 10 pp., 8½x11. Illustrated catalog describing the manufacture, installation and features of Tile-Tex flooring. Specification data covers different size, thickness and type of materials, base and installations to be used for various requirements. Detail drawings illustrate different installations for molded bases and accessories. Complete color range of 62 plain and marbled colors is presented and many design patterns are suggested for pattern possibilities. Tuff-Tex, a greaseproof plastic flooring in tile form, is also described and illustrated. The Tile-Tex Co., Chicago Heights, Ill.

**FURNITURE TRANSFORMATION.** *Transformagic, A Gay Adventure in Restyling Old Furniture*, 64 pp., 5¼x8¾. An extensive array of ingenious and easy-to-do furniture-transformations is presented with simple step-by-step directions. A la Peter Hunt, garden pieces, outmoded bedsteads, chests and dressers are brought up to date with carpentry and gay decorations. Colorful pictures illustrate the method of turning old furniture into attractive useful objects. E. I. du Pont de Nemours & Co., Wilmington 98, Del.

**STAGE SWITCHBOARDS.** Illustrated booklet which contains interesting descriptions and data on current design and construction of stage switchboards. Advantages of the Hub-Regulite system of remote lighting control are explained. Among the advantages shown are small space requirements, portability, and reduced wiring costs. Also discussed are manually operated and remote control switchboards, ranging from one scene preset types to the large multi-scene boards. Hub Electric Corp., 2223 W. Grand Ave., Chicago 12, Ill.

**COLD CATHODE FLUORESCENT.** *Facts About Colovolt, the New Cold Cathode Low Voltage Lamp*, 7 pp., 5¼x8. Complete facts about the Colovolt cold cathode low voltage lamp are covered in this concise booklet. They include low voltage requirements, instantaneous starting, starting and operation in low ambient temperatures, lamp-life expectancy, and many other features. General Luminescent Corp., 638 S. Federal St., Chicago 5, Ill.

**VENTILATORS.** *The Allen Coni Vane Turbine Ventilator*, 6 pp., 8½x11. This booklet sets forth in simple diagrammatic form the basic functions, advantages and comparative efficiency of turbine ventilators. Design, construction features, specifications, and indicated applications of the Coni Vane Turbine ventilator are also covered, and a chart shows its rated displacement capacity. The Allen Corp., 9751 Erwin Ave., Detroit 13, Mich.

## REQUESTS FOR LITERATURE

Capt. Frank Booth, 10 Cumberland Road, Leeds 6, England, would like to receive catalogs on prefabrication.



**Experience...**  
**ANOTHER LEG TO STAND ON**

Consider Sedgwick—for two reasons (there are others, of course).

First—for more than 50 years Sedgwick has designed, manufactured and installed elevators and dumb waiters—drawing on each preceding year's experience to improve succeeding models.

And, second—since the "defense work" days Sedgwick has been designing and manufacturing airplane elevators, ammunition hoists, galley dumb waiters, between-deck elevators, and special lifting and materials handling equipment.

What does this mean to architects, engineers and builders? Simply this. Today's experience has taught Sedgwick much. Added to past experience, the results will take form in improvements in the design, construction and operation of postwar elevators and dumb waiters.

Sedgwick experience plus Sedgwick engineering ability can be of assistance when you are making your plans for the peacetime building boom that is sure to follow the war.

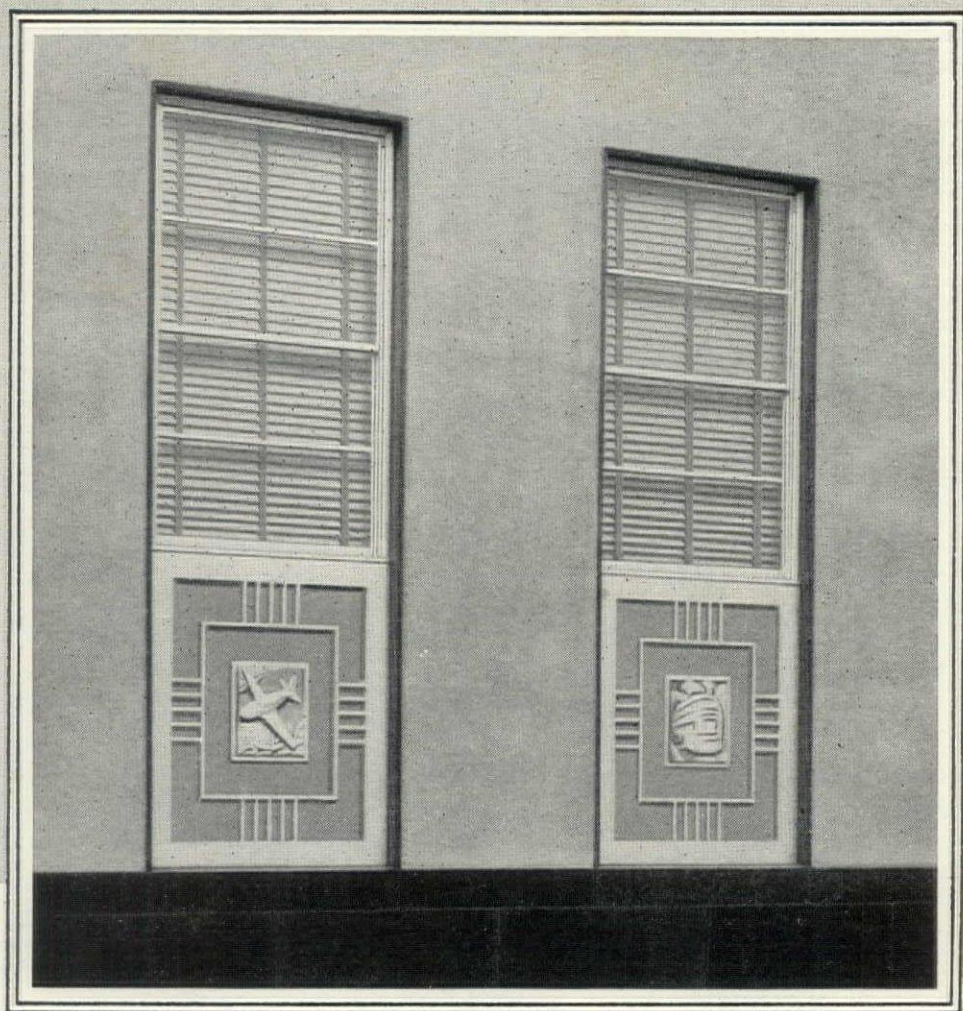
Sedgwick welcomes inquiries regarding elevators, dumb waiters and special lifts for postwar installation.

**"MEN WHO KNOW ARE SOLD ON SEDGWICK"**

**Sedgwick MACHINE WORKS, INC.**  
140 WEST 15th STREET NEW YORK 11, N. Y.  
Since 1893 designers and manufacturers of specialized lifting equipment  
**ELEVATORS • HOISTS • ROTO-WAITERS • MATERIALS HANDLING EQUIPMENT**



ADLAKE  
ALUMINUM WINDOWS  
AND SPANDRELS



# Windows... *in Harmony with GOOD Design*

**OUTSTANDING** architectural design may be only a little different from the ordinary. But those little differences are the very things which the extraordinary designer does not overlook!



## THE ADAMS & WESTLAKE COMPANY

ESTABLISHED IN 1857

ELKHART, INDIANA

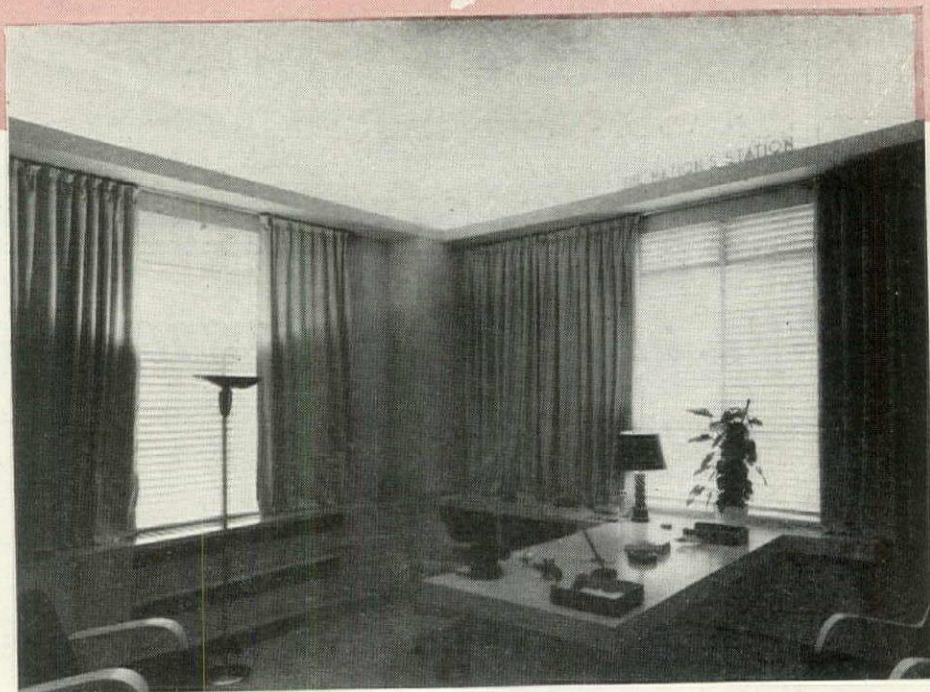
NEW YORK • CHICAGO

MANUFACTURERS OF ADLAKE NON-FERROUS METAL WINDOWS



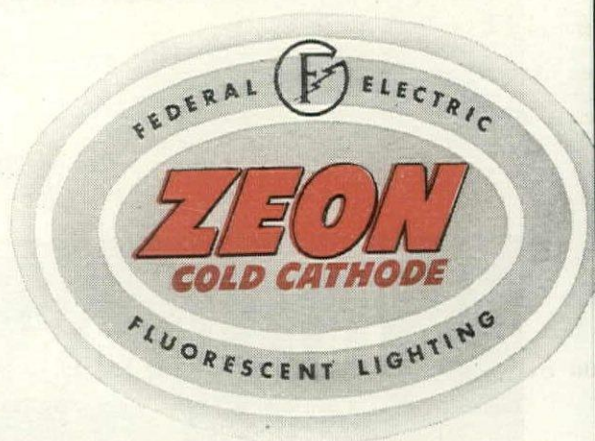
Do you know that there are two kinds of

# Fluorescent Lighting?



• For Better Light—  
Longer Life—Use  
ZEON Cold Cathode,  
Fluorescent  
Lighting.

- LONGER LAMP LIFE
- LOWER MAINTENANCE COST
- INSTANT STARTING
- CONSTANT LIGHT FLOW
- LESS HEAT
- LESS GLARE
- FEWER AUXILIARIES
- GREATER FLEXIBILITY







**C**HANCES are you thought all fluorescent lighting was the same, but lighting engineers will tell you there are two basic types—"Hot" and "Cold Cathode." Of the two, "Cold Cathode" is the best and a most important development because it brings to fluorescent lighting an entirely new conception of performance, economy and flexibility.

ZEON, the outstanding example of Cold Cathode fluorescent Lighting, is a development of Federal Electric Company, Inc., who for over fifteen years have been leaders in the field of gaseous discharge lamps.

The great number of successful industrial and commercial installations have established the high efficiency of this unusual light source. Higher levels of illumination at lower cost—lamp life averaging 10,000 hours or more—flexibility of any size, shape, or design of installation—are a few of the features that have made ZEON the choice of wise fluorescent lighting buyers.

Learn more of this better light source before you make a decision on any fluorescent lighting installation. Let experienced Federal Electric engineers work out your lighting problems with you. Their services are available for the asking.



LIGHTING

DIVISION

**FEDERAL ELECTRIC COMPANY, INC.**

100 SOUTH STATE STREET, CHICAGO (19), ILLINOIS • TELEPHONE VINCENNES 5300

Branch Offices: Cincinnati • Houston • Louisville • New Orleans • Dallas • Indianapolis  
Milwaukee • New York • Duluth • Kansas City • Minneapolis • Philadelphia

Subsidiary Company: Federal Brilliant Company, St. Louis, Missouri



Top Efficiency for Steam, Water or Vapor Systems

# PIERCE "Oil FIFTY"

... a designed-for-oil home boiler up to 10-room capacity

Product of extensive research and long experience with oil fuels, Pierce "Oil Fifty" stands high among today's leading boilers in heating efficiency and fuel economy. Size and shape of the heating surfaces are designed in relation to the flow of gases to give rapid absorption of the high heat production of oil fuels. The boiler is designed to accommodate a built-in domestic hot water heater for year-round use. Heavily-lined safe lock doors reduce heat losses. The inspection door is fitted with a Pyrex observation glass.

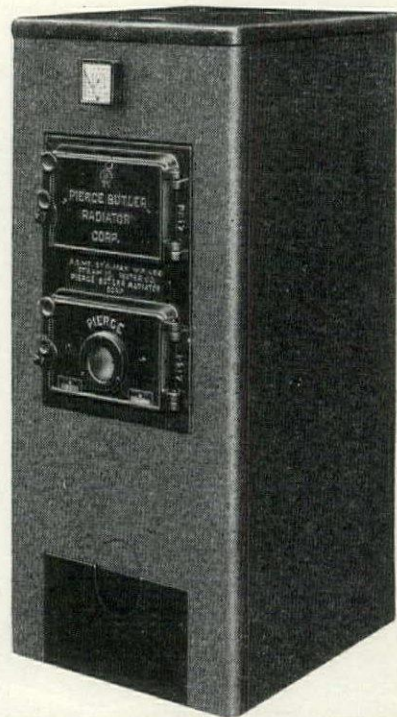
Five sizes of the Pierce "Oil Fifty" are scientifically scaled to the heat output needed by popular-size homes. Only a minimum space is required in your plan for this highly efficient heat machine. Specify for any system.



Write or wire for complete description and data.

**Pierce Butler Radiator Corp.**  
SYRACUSE 6, N. Y.

Member — Institute of Boiler and Radiator Manufacturers



FRONT NOW BUT ...

BARCLAY'S ON THE WAR



WE'LL BE HOME SOON

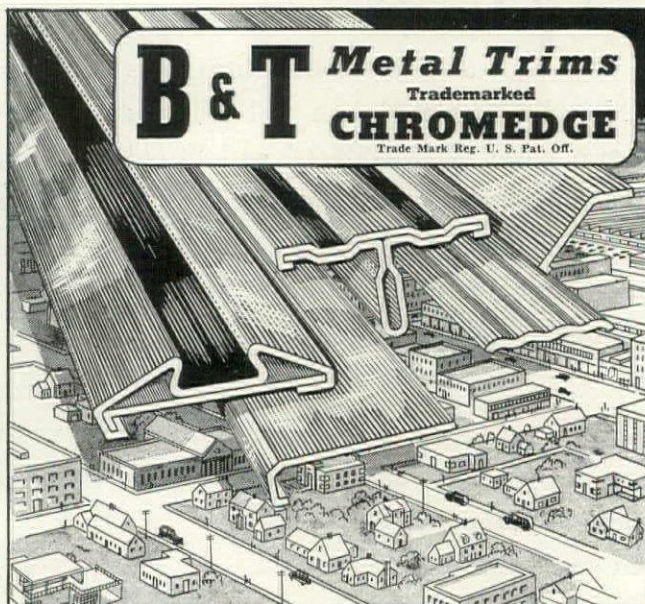
Kitchens must be clean and sparkling, easy to keep spotless. That's why you'll find Barclay — *The Plastic-Coated Wallboard* — in camps, barracks, naval bases, hospitals. That's why the postwar home kitchen will make even greater use of Barclay. For colorful, cleanable, durable walls and ceilings, put Barclay now in your V-day plans.

**BARCLAY MANUFACTURING CO., INC.**

385 GERARD AVENUE, BRONX 51, N. Y.

**B & T Metal Trims**  
Trademarked  
**CHROMEDGE**

Trade Mark Reg. U. S. Pat. Off.



**Covering the building field  
in decorative trim needs**

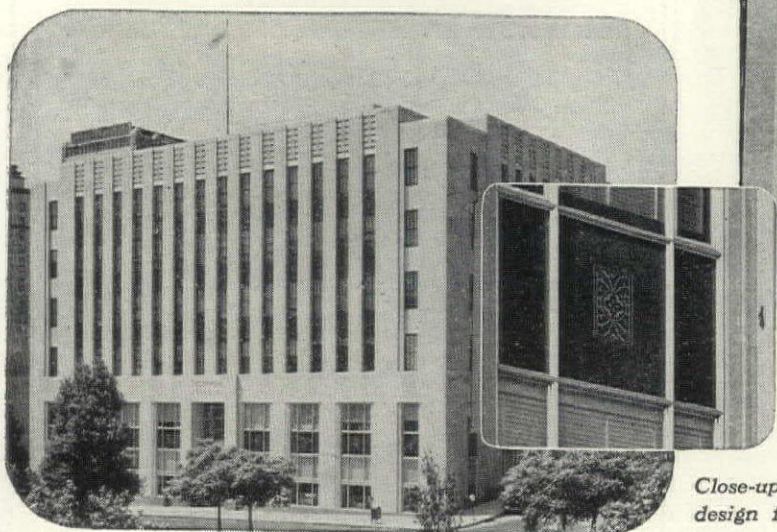
For every type of building—wherever modern floor and wall coverings are used—there is a *wide* selection of extruded and rolled B & T Metal Trims, trademarked Chromedge. And when B & T facilities are no longer required for war needs, they will be ready again to cover the building field, *with further improvements!*

**The B & T Metals Company**  
Columbus 16, Ohio



Seamen's Institute, Brooklyn, N. Y., →  
Henry V. Murphy, Architect. Sand-  
blasted Black Serpentine spandrels  
on street sides of building show ap-  
propriate maritime subjects.

Close-up of one of the deco-  
rative Black Serpentine span-  
drels, Seamen's Institute.



Chesapeake and Potomac Telephone Company Build-  
ing, Baltimore, Md., Taylor and Fisher, Architects. Note  
sand-blasted Black Serpentine spandrels in lowest row.

Close-up showing use of sand-blasted  
design for contrast and enrichment.

## Sand-Blasting Opens NEW VISTAS of Decorative Utility for BLACK SERPENTINE

The wide range decorative possibilities in sand-blasted ALBERENE Black Serpentine is demonstrated in the spandrels, designed for Catholic Seamen's Institute, Brooklyn, N. Y., Henry V. Murphy, Architect, and those for Chesapeake and Potomac Telephone Company Building, Baltimore, Md., Taylor and Fisher, Architects. These are typical of the many new treatments and interesting finishes that ALBERENE has developed for the enrichment of current and post-war buildings.

Wherever design calls for stimulating contrasts or accents, Black Serpentine is

preeminent... a most practical choice from the standpoints of economy and availability. So dense and tough is this stone that it may be cut as thin as  $\frac{7}{8}$ ", and its durable polish is lustrous but non-reflective.

A request on your business letterhead will bring samples, conveniently boxed, of Black Serpentine, Tremolite Green and our mottled blues and greens. Please address Alberene Stone Corporation of Virginia, 419 Fourth Avenue, New York 16, N. Y. Quarries and Mills at Schuyler, Virginia. Sales offices in principal cities.



# Alberene

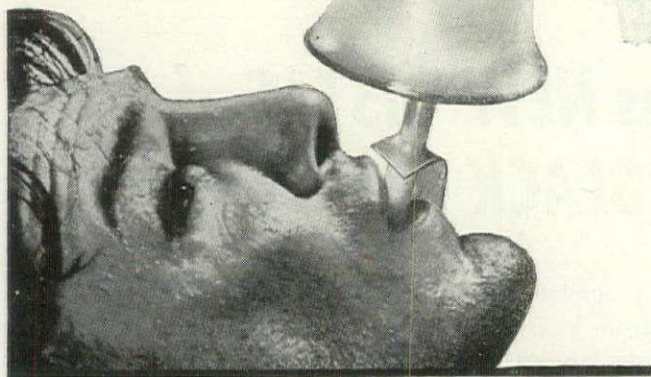
## BLACK SERPENTINE

PERMANENT, NON-REFLECTIVE, ECONOMICAL





## A life-giving drink of fresh sea water



PERMUTIT DESALTING BAG

INSTRUCTIONS

1. HANG BAG TO LINE WITH SEA WATER

2. ADD BRIQUET OF CHEMICAL. ROLL TOP OF BAG DOWN AND STRAP SECURELY.

3. ALLOW BRIQUET TO STAND FOR A FEW MINUTES. THEN KNEAD BAG WITH HAND FOR 10 MINUTES UNTIL BRIQUET IS BROKEN INTO FINE POWDER.

4. SHAKE BAG OCCASIONALLY FOR 20 MINUTES SO DESALTING MATERIAL IS KEPT IN CONTACT WITH WATER.

5. NOW SUCK CLEAR FILTERED DRINKING WATER THROUGH OUTLET TUBE.

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WATER CONDITIONING SPECIALISTS  
FOR MORE THAN 30 YEARS  
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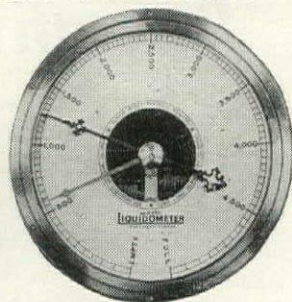
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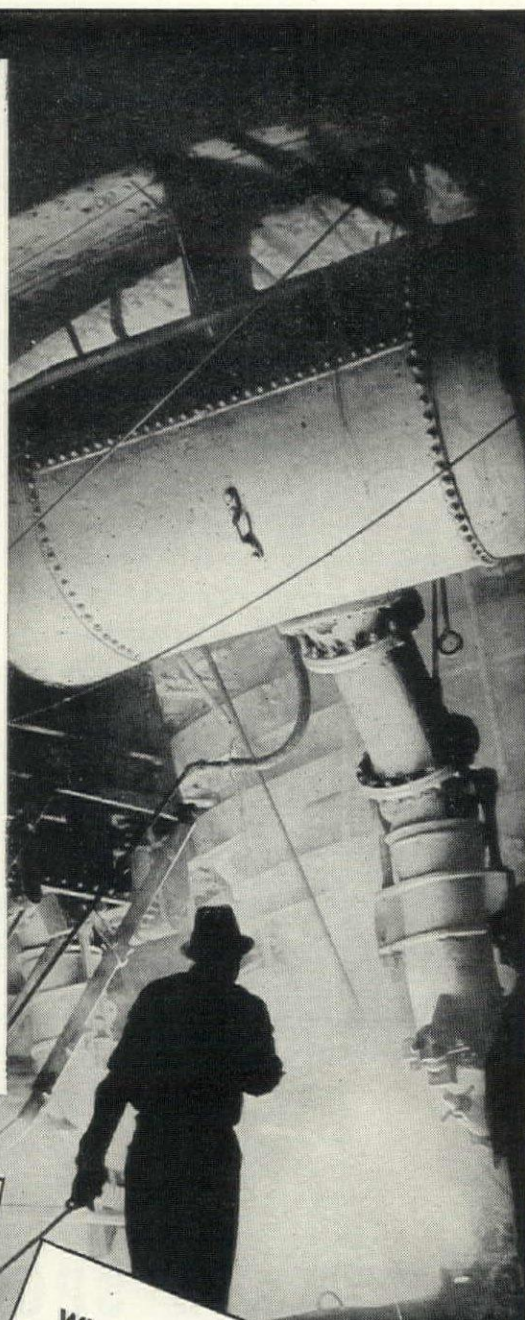
**What chemical value has bituminous coal?**



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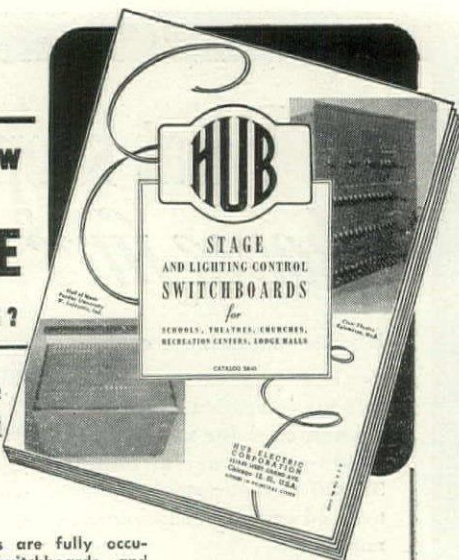
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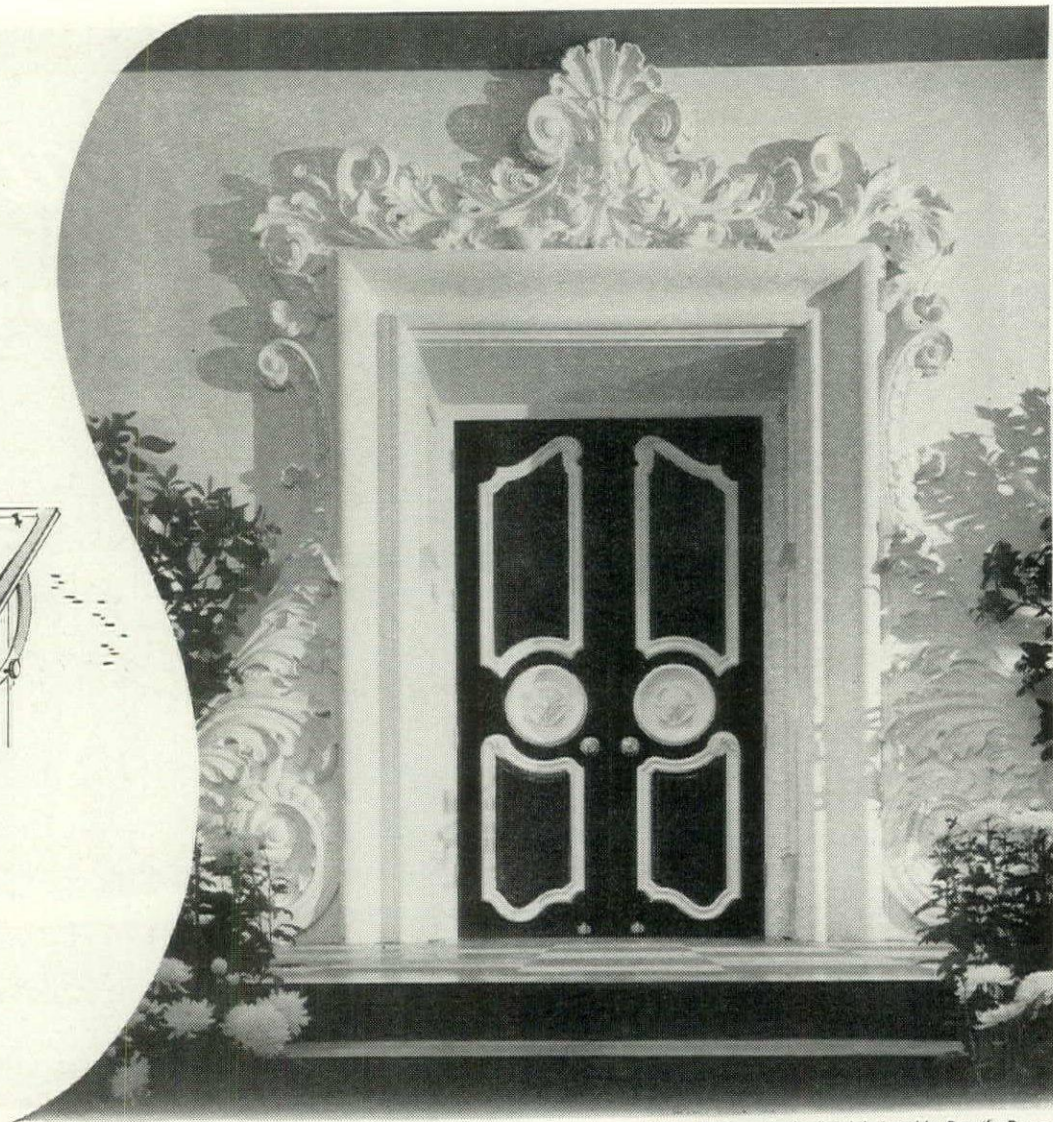
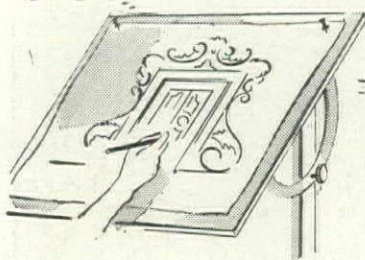
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After the war... it will be built of modular designed

# BRICK AND TILE





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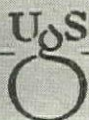
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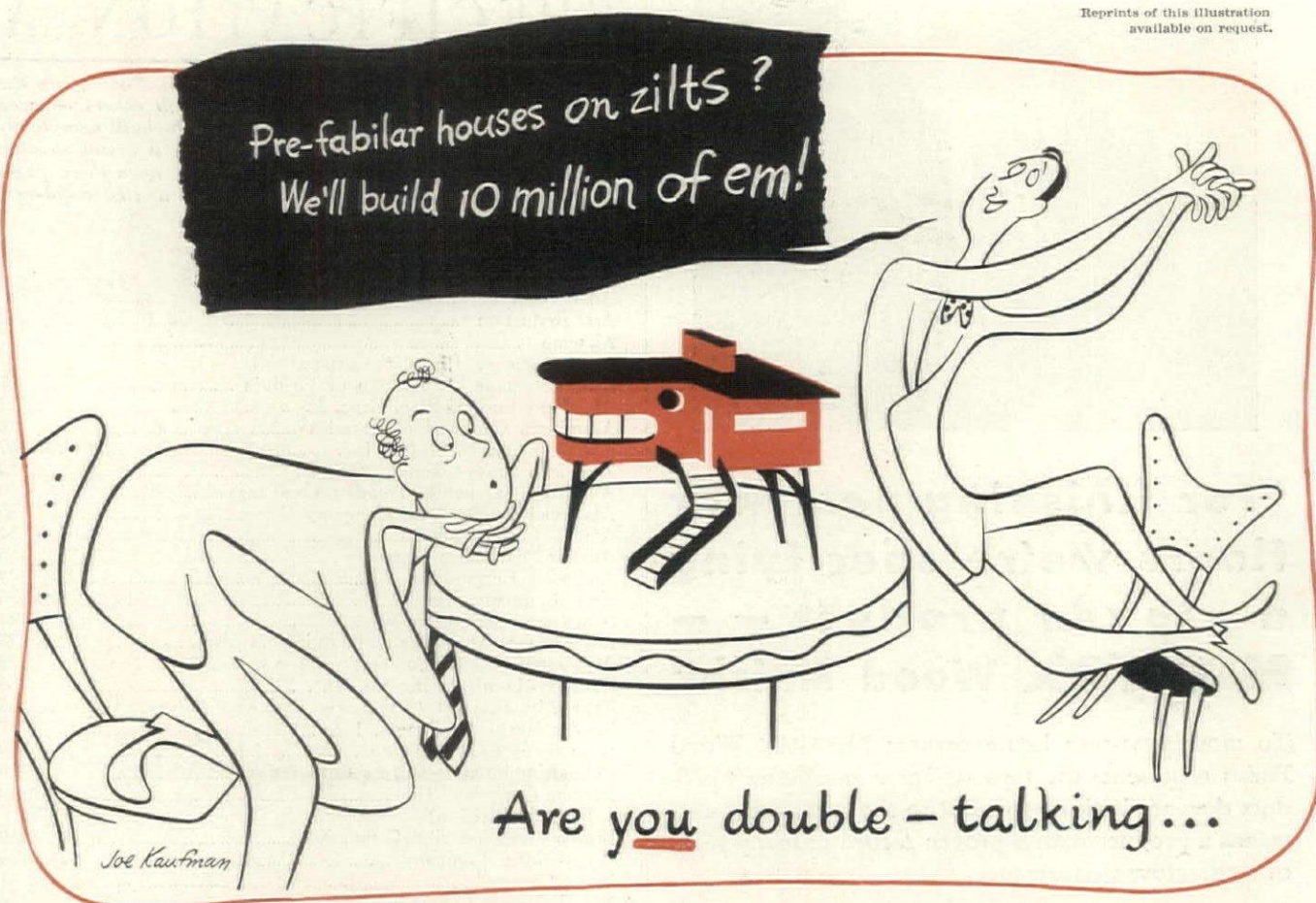
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or straight-thinking about that building boom?

**T**OP BUILDING MEN who ought to know say a lot of builders are just talking double-talk about that building boom.

**"America will need billions of houses after the war," these dreamers babble, "so—whoosh! the houses will be built."**

As if need alone ever built as much as a pup tent! The Chairman of the National Committee on Housing, Inc., Mrs. Dorothy Rosenman, puts it this way:

**"Ballyhoo will bubble out and leave the soldier without a job, real-estate operators without a tenant, the builder without a buyer. We must have a plan that can work and that can obtain public support."**

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\*Among the heads of these households are executives and engineers, government officials, mayors, bankers, architects, and 22 other groups of leaders who recently voted TIME "America's most important magazine."



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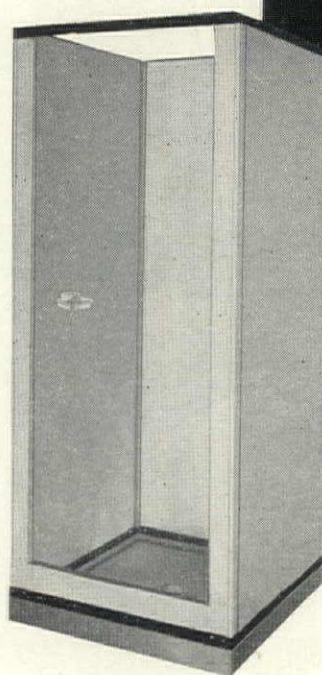
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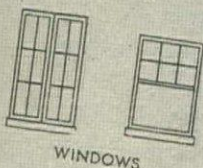
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STATUARY



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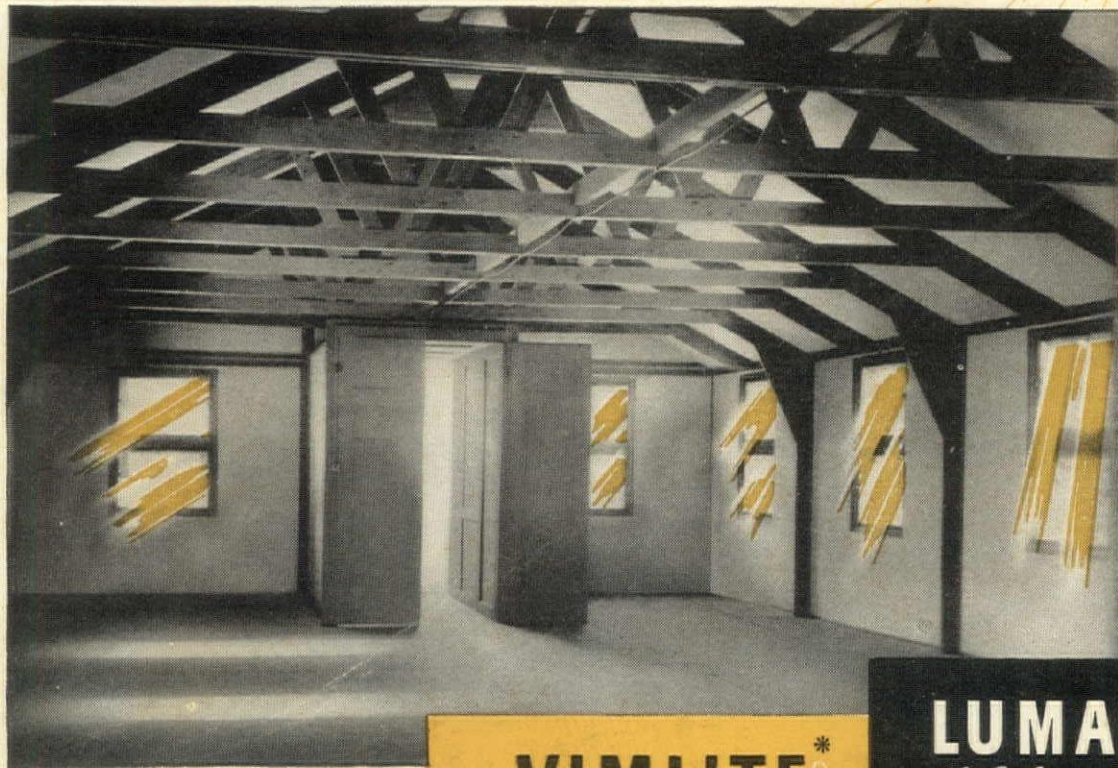
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Filed in Stacks

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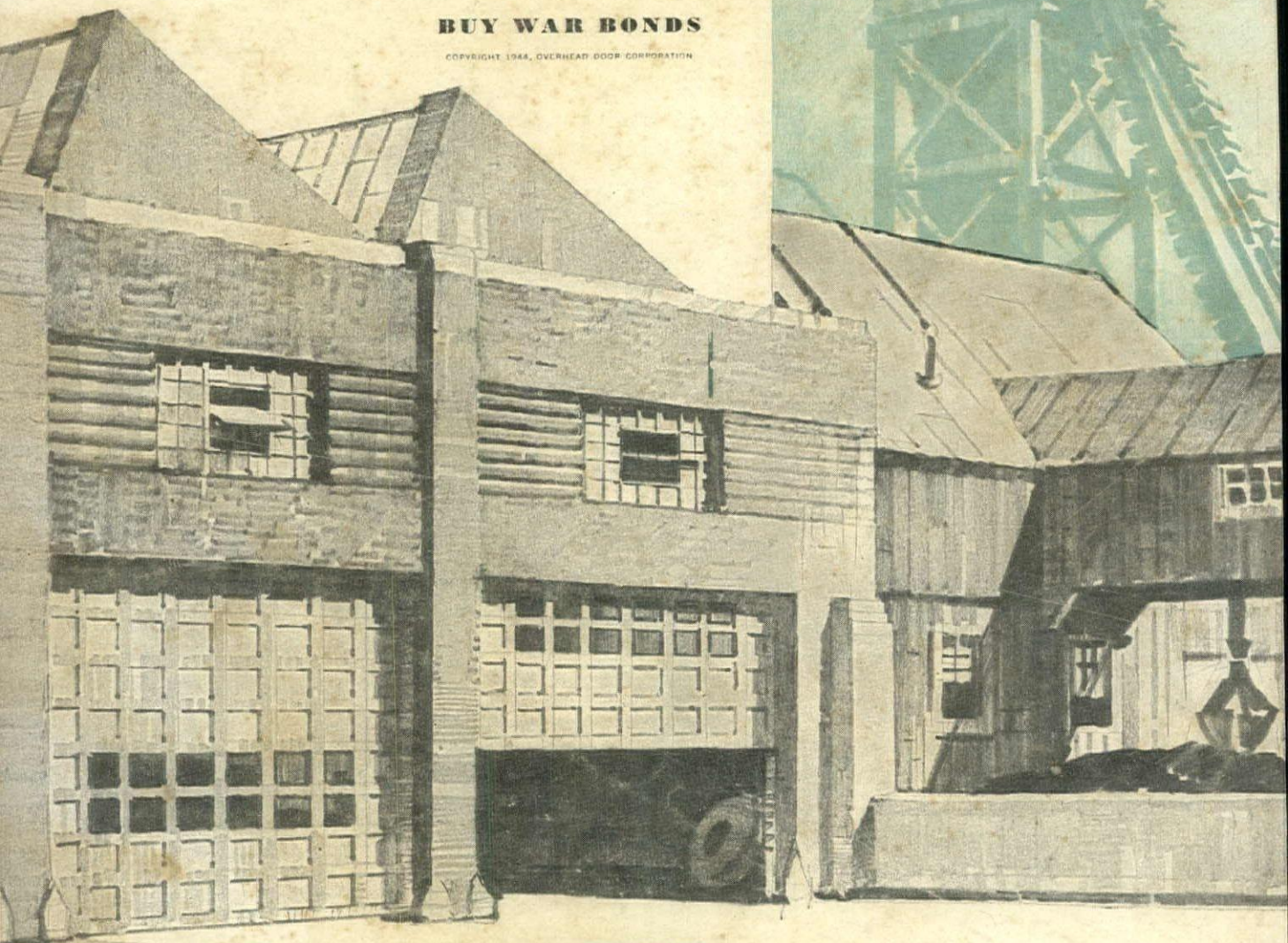
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